Economic Studies
at BROOKINGS

Tax Policy Center
Urban Institute and Brookings Institution

May 2014

Student Loans Rising

An Overview of Causes, Consequences, and Policy Options

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The authors thank Elizabeth Akers, Matthew Chingos, Donald Marron, and Russ Whitehurst for helpful comments. The authors also acknowledge generous research support from the Ford Foundation.

Introduction

As of 2013, outstanding student loan balances in the US exceeded $1.2 trillion, more than any other type of household debt with the exception of mortgages.[1] Following several years of rapid growth in outstanding loan volumes, student debt burdens have attracted increased attention in recent years. This policy brief reviews trends, issues, and policy options related to student loans.

Federal student loans offer several important benefits. They help students attend institutions of higher education and help families cover or defer the costs of attendance. However, like other loans, student loans need to be repaid, which can strain borrowers' income and affect other economic choices. From the outset, we note that isolating the impacts of student loan debt is a difficult exercise. Student loan debt represents debt undertaken to finance an investment in human capital. Simply comparing the financial and economic circumstances of households with and without student debt can be misleading if it does not also account for the additional earnings capacity produced by the education that was financed by that debt. Put differently, the key question is how the *combination* of the debt-financed education and student loan debt affect outcomes. To date, few studies have been able to measure both aspects of student loan debt, and thus have instead focused on either the effects of education or the impacts of student loan debt. In this survey, we focus on student loan debt, but the fact that the debt is financing additional education should provide important context for interpreting the results.

Background

The first federal student loan program was established in 1958, offering direct, low-interest loans to students, and debt cancellation for students who became teachers after graduation. Guaranteed student loans were created in 1965 via the Federal Family Education Loan Program. Over time, it became clear that the budgetary presentation of the two types of loans—based on cash flow—distorted the perceived cost relative to the actual cost and created artificial incentives to offer guaranteed loans. In 1990, this disparity was remedied so that, for both direct and guaranteed loans, the budgetary cost in the year the loan was initiated equaled the expected subsidy value of the loan. Since then, federal policy has shifted strongly toward direct loans. As of 2010, the federal government stopped guaranteeing new loans, although it still honors guarantees made before 2010.

The federal government currently offers several types of direct student loans. Stafford Loans are the largest source of federal student loans.[2] In 2013, the federal government issued $89.1 billion in Stafford Loans. Students who demonstrate financial need are eligible for subsidized Stafford loans, in which the federal government pays the interest while the student is in school, for the six months after graduation, and during periods of authorized deferment (for example, military service or unemployment). Other students receive unsubsidized loans and are responsible for all interest accrued, though payments may be delayed during authorized deferment periods. The interest rate is capped at 3.86 percent, although Congress has occasionally lowered the rate for short periods. Almost half of all Stafford Loans are subsidized (Edmiston, Brooks, and Shelpelwich 2012). Most students in the program have taken out a combination of subsidized and unsubsidized loans (Baum and Ma 2012). The maximum amount a student can borrow in Stafford loans in a given year depends on his or her dependency status and year in school. The lifetime cap on Stafford loans is $31,000 for dependent undergraduates and $57,000 for independent undergraduates (Smole 2013).

PLUS Loans are available to graduate students and parents of dependent undergraduates. In 2013, the federal government issued $18.9 billion in PLUS loans (Department of Education 2013). The interest rate on PLUS Loans is 6.41 percent. Borrowers may defer payment until the student leaves school, but are liable for accruing interest. Borrowers may take out PLUS Loans up to the full cost of education (tuition, room, and board, less other aid awarded).

Perkins loans are available to students who demonstrate high need and attend participating institutions. In 2013, the federal government issued $1 billion in Perkins loans. Perkins loans have a fixed interest rate of 5 percent and interest payments are covered by the government until 10 months after graduation.

Borrowers may consolidate student loans for repayment. Consolidated loans often have longer repayment periods and allow borrowers to pay a single interest rate, a weighted average of the rates on the loans being consolidated. Students may also participate in repayment plans based on their income.[3] The federal government also offers loan forgiveness programs for teachers, public service employees, civil legal assistance attorneys, and "service in areas of national need" (Smole 2013). Perkins loan recipients can also benefit from partial loan cancellation for each year as a full-time teacher or Peace Corp volunteer (Department of Education 2011).

Recent Trends

The volume of outstanding student loan debt more than tripled between 2004 and 2012. During this period there was a 70 percent increase in both the number of borrowers and the average outstanding balance per borrower (Lee 2013). Fry (2012) documents several important trends and patterns in student loan debt holdings, using data from successive cross-sections of the Survey of Consumer Finances.

Student loan balances reported by households grew markedly over the past two decades. As shown in Table 1, the overall share of households with student debt more than doubled from 1989 to 2010, with the share rising slowly from 9 percent in 1989 to 12 percent in 2001 before jumping to 19 percent by 2010 (Fry 2012).[4] Although the increase throughout this period is largely accounted for by increased prevalence of student debt among households younger than 35, all age groups showed an increase in likelihood of holding a student loan between 2001 and 2010. As of 2010, student loans were owed by more than 40 percent of households under the age of 35, 25 percent of households between 35 and 44, 18 percent of households between 45 and 54, and even 10 percent of households aged 55 to 64. The latter groups presumably represent parents or grandparents who have taken out loans on behalf of their children. In addition, between 2001 and 2010, the prevalence of loans rose significantly in all income groups (especially the 60th to 90th percentiles) and in all educational attainment categories (especially those with some college or who obtained degrees).

The median student loan debt outstanding, among households with student loans, has also grown significantly. Between 1989 and 2001, nominal median outstanding debt rose from about $5,200 to about $10,000, before rising to about $13,400 in 2010 (Fry 2012). By way of comparison, the consumer price index rose by 76 percent between 1989 and 2010, indicating that the inflation-adjusted median student loan balance among households with student loans rose by about 52 percent over this period.

A small share of borrowers carry exceptionally high balances, but most carry relatively low levels of debt. As of 2010, about 25 percent of borrowers owed less than $6,200 and three quarters owed less than $30,000. At the high end, 5 percent of borrowers owed $92,800 or more, likely either parents financing multiple educations or professional students in law, medicine, or business borrowing under the PLUS program.

Student loans have also grown as a share of income. As shown in Table 2, among *all* households in the lowest fifth of the income distribution, outstanding student loans are about 24 percent of income (Fry 2012). Given that only 16 percent of households in this group have any student loans, outstanding loan balances are quite large relative to income. Likewise, among all households in the next two quintiles, student loans represent 10-12 percent of income, but only one-fifth or less of those households have any student debt. Among higher income households, student loans are a smaller proportion of income.

Consistent with the rise in loans outstanding relative to income and assets in recent years, delinquencies also rose over the last decade. The two-year cohort default rate on federal student loans rose from 5 percent in 2004 to 9.1 percent in 2010 (Baum and Payea 2012.[5] Likewise, the share of borrowers who were 90 or more days delinquent was 17 percent in 2012, up from under 10 percent in 2004, and had risen in every age group over that period (Lee 2013).[6]

Causes of the Increase in Debt

The increase in outstanding student loan debt over the past decade can be attributed to a combination of several factors. On the demand side, the first is an increase in college enrollment, which rose by 27 percent from 2002 to 2011.[7] The second is an increase in college costs, though this is not as obvious as it might seem. From 2002 to 2012, inflation-adjusted (2012 dollars) college costs—defined as the sum of room, board and "net tuition" (tuition costs after subtracting federal, state, and private [non-loan] aid, as well as any discounts offered by the institution)—rose by 41 percent within public four-year institutions, by 9 percent for private four-year institutions, and actually fell 7 percent for two-year public institutions. Accounting for the number of students at each type of institution, average college costs rose by about 16 percent.[8] It is unclear how much of the increase in the cost of attending college is due to changes in public support for higher education and how much due to rising costs of providing higher education.

Taken together, the combination of 27 percent higher enrollment and 16 percent higher costs can explain at least three-fifths of the 77 percent increase in aggregate loan volume from 2002 to 2011.[9] Some of the remaining increase appears to relate to a change in the way students pay for college. In 2000, student loans financed 38 percent of net tuition, fees, room, and board whereas loans have grown to finance about 50 percent of net tuition over the last three years (Greenstone and Looney 2013). This, in turn, is accounted for by two factors: The proportion of students who take out loans has increased over time, and average borrowing per student debt holder has increased.

Others factors may be behind these trends. For example, there may have been a change in the proportion of loans going to students at professional schools, where

loan volumes (through the PLUS program) are generally larger. Likewise, the financial crisis and Great Recession no doubt played a role in recent years, as family earnings took a hit, which would have increased the demand for debt financing. Other changes to the composition of students—for example, increases in the enrollment of lower- or middle-income households—could also have impacted demand for loans.

Changes in the supply of loans may have complemented the rise in demand. In particular, there may now be increased availability of student loans due to changes in the laws protecting creditors or an increase in the number of for-profit colleges that may have increased the relative enrollment of students that have a higher propensity to borrow (Greenstone and Looney 2013).

While it is clear that higher tuition can raise borrowing amounts, it is also possible that increased borrowing may serve to boost tuition prices. Previous research has established that some portion of various forms of federal subsidies for higher education— including tax-based higher education incentives (Turner 2010), Pell Grants (Turner 2012), and federal funding (Cellini and Goldin 2012) —is passed forward to the schools, either in the form of higher tuition or reductions in other forms of aid, but that some of the aid is also passed through to students in the form of lower costs. These studies suggest, then, that federal subsidies reduce education costs. However, we are unaware of any study that credibly documents the impact of student loan subsidies on the price of college.

Economic Effects of Rising Student Loan Burdens

Rising student debt burdens can affect a variety of economic outcomes. For those enrolled in school, student loan debt may affect completion rates, choice of major, and student performance. Once students graduate, student debt can impact career choice and willingness to seek a graduate education. Lastly, student loan burdens can also affect financial decisions later in life, influencing decisions about home purchase and marriage.

An immediate impact of student loan debt can be seen in the performance of students while still enrolled in higher education. Rothstein and Rouse (2011) show that student debt has a significant impact on choice of major, pushing some students toward jobs with higher expected wages—such as those in engineering and economics. Students also widely report that the presence of student debt affects their studies. For example, Baum and O'Malley (2003) show that 40 percent of students with student loan debt reported that they did not return to school or transferred to a lower cost school due to student loan debt. Student debt can also affect students' mental health; Cooke *et al*. (2004) find that students in the UK with higher student debt experienced significantly higher rates of stress and anxiety.

Student loan debt can influence career choice and post-graduation employment decisions. Akers (2013), using exogenous variation in student loan debt levels driven by student aid formulas, finds that higher student loan debt causes a higher rate of employment among recently graduated women and appears to reduce the likelihood of attending graduate school. Her study finds no evidence, though, that student loan debt leads graduates to reject low-paying jobs. In contrast, Rothstein and Rouse (2011) find evidence that student loan debt drives graduates away from low-paying and public-sector jobs. Specifically, they find that each $10,000 in student loan debt reduces the likelihood that a graduate will find employment in the government, non-profit, or education sectors by about 6 percentage points, with especially strong impacts on graduates taking jobs in education. In another study, Field (2009) finds that the rate of placements in public-interest law are roughly one-third higher when law students are offered tuition waivers instead of loan repayment assistance. Minicozzi (2005) finds that student debt is associated with students pursuing jobs that pay higher wages initially, perhaps at the expense of wages in the future. Millet (2003) finds that student loan borrowers are roughly 60 to 70 percent less likely to apply to graduate school—after controlling for other factors—than non-borrowers.

Student debt can also influence homeownership decisions. The pace of the current housing recovery, for example, may be influenced by high student loan debt among the pool of potential first-time home-buyers, who typically account for a large share of overall home purchases (ElBoghdady 2014). High student loan burdens may disqualify students from taking on mortgage debt, and debt aversion may dissuade student loan holders from purchasing a home even if qualified to do so. Brown and Caldwell (2013) show a stark divergence between 2003 and 2013 in the credit scores—a key indicator of ability to undertake a mortgage—of student loan borrowers and non-borrowers (Figure 1). In 2003, there was essentially no difference between the two groups but by 2012, a 30 year-old with student loan debt has an average credit score that is 24 points lower than one without debt. They also show that over the past several years, as credit scores of student debt holders have declined and as student debt per borrower has increased, the home ownership rate of 30-year-olds with student debt has fallen by more than 5 percentage points relative to the home ownership rate for 30-year-olds without student debt. This is a substantial change, given

that the overall home ownership rate for 30-year-olds in their sample is below 24 percent. Andrew (2010) finds that increased student debt in the UK was responsible for part of a decline in homeownership among younger individuals.[10]

Student debt may also discourage retirement saving, by delaying the initiation of contributions to retirement plans, by reducing the level of contributions, or by increasing the demand for early withdrawals. Although we are aware of no study that explicitly determines a causal relationship in this regard, several studies are suggestive. For example, Cavanagh and Sharpe (2002) find that installment and credit card debt are negatively correlated with the likelihood of retirement saving and, conditional on saving, the amount of retirement saving contributions.[11]

Student debt can even affect quality and timing of marriage. Gicheva (2011), using instrumental variable techniques, finds a negative relationship between student debt holding and the probability of marriage for people younger than 37. Dew (2008) finds a negative correlation between reduced marital satisfaction and student loan debt, positing that increased stress related to consumer debt—including student loans—could diminish marital satisfaction. About 14 percent of borrowers surveyed in 2002 reported delaying marriage due to student loan debt, up from 9 percent 15 years earlier. Over the same period, the share of borrowers who reported that they delayed having children due to student loans jumped from 12 percent to 21 percent (Baum and O'Malley 2003).

In summary, there is some evidence showing that student loan debt can impact students during and after college. We emphasize that this evidence reflects just one side of the educational decision, and should be measured against the well-established gains to attending college.

Potential Reforms

Given the concerns about student loan debt, several policy changes have been proposed, generally focusing on one of three goals: reducing the after-tax cost of tuition; alleviating the debt burden on students, without necessarily changing the amount of money owed; or limiting federal support for educational institutions that do not adequately prepare their students for "gainful employment."

Proposals aimed at lowering the after-tax cost of tuition fall into two groups. One strategy is to provide tax credits for students and their families. This strategy includes the expansion and transformation of the Hope Tax Credit into the more generous American Opportunity Tax Credit (AOTC). Initially enacted in the stimulus legislation of 2009 and expanded in the fiscal cliff legislation of 2012, the AOTC offers a partially refundable 100 percent tax credit on the first $2,000 of qualified educational expenses and an additional 25 percent credit on the next $2,000; thus, the maximum AOTC benefit is $2,500 per year.

A second strategy for lowering the costs of education is to expand and improve the Pell Grant program. Pell Grants offer disadvantaged students an award of up to $5,645 towards higher education expenses; these grants are administered through educational institutions and do not need to be repaid. Some have proposed to expand the size of the maximum award. For example, the President's 2014 Budget aimed to increase the then-maximum Pell Grant from $5,550 to $5,975 (Department of Education 2013). Other proposals aim to improve the Pell Grant program to better serve beneficiaries and institute incentives for completion. For instance, one proposal aims to provide a $250 completion bonus for receiving an associate's degree and a $500 completion bonus for receiving a bachelor's degree (Baum and Scott-Clayton 2013).

The most prominent class of proposals aimed at easing the burden of student loan payments are income-based repayment plans. These plans adjust students' loan payments based on their reported income. While the current system allows for income-based repayment for students with low income relative to their debt, proposed reforms would make income-based repayment the default option. In addition, at least some plans would allow for a variable share of income to be devoted to loan repayment. For example, the Loans for Opportunity (LEO) program proposed by economist Susan Dynarski would shift student loan repayments to employer payroll systems, and vary repayment rates from 3 percent to 10 percent based on income (Dynarski and Kreisman 2013). As with the current income-based repayment plan, the LEO program would forgive any outstanding debt after 25 years. A second notable income-based repayment plan was proposed by researchers at the Economic Opportunity Institute. This plan would absolve students of debt, but commit them to income-based payments for a discrete period following graduation. Recently, a pilot program was established in Oregon that would commit graduates to pay 3 percent of their salaries over a 24 year period in exchange for tuition.

Regarding the third approach, the Obama Administration has proposed to address the high student loan burden by regulating schools with subpar outcomes for students. These set of regulations, known as "gainful employment," are aimed at penalizing vocational schools that graduate students into poor employment outcomes; failing schools would lose federal funding and eligibility to administer student loans. Schools would be measured

by whether student loan payments exceed 12 percent of annual earnings or 30 percent of discretionary income and whether 35 percent of student loan borrowers are in default of their payments. Under the proposed regulations, vocational schools and community colleges that do not satisfy at least one of these three criteria in three out of four years can lose access to federal funds—effectively forcing the institution to close.

The budget impacts of these proposals vary. In general, policies aimed at reducing the after-tax cost of tuition would increase the deficit, gainful employment regulations would reduce the deficit, and income-based repayment plans would have ambiguous effects on the deficit. For example, the Administration's score of its income-based repayment plan is small, but commentators have expressed concern that the cost will be substantially larger. Meanwhile, Dynarski and Kreisman note that their income-based repayment plan would reduce the deficit if implemented with some minor offsets, such as the elimination of the deduction for student loan interest.

Conclusion

Borrowing to finance higher education has increased markedly over the past two decades. These trends are associated with a variety of negative economic outcomes for households who hold the debt, but those outcomes must be weighed against the net increase in earnings the households receive from acquiring more education. A variety of policy options exist to reduce the overall debt burden of future students and to adjust repayment plans for those who already hold loans. Given the key role of higher education in modern economies, further analysis of these issues and options will likely yield important results.

Tables and Figures

Table 1: Percent of Households with Outstanding Student Debt, 1989, 2001, 2010

	1989	2001	2010
Percent of all households	9	12	19
Age of household head			
Younger than 35	17	26	40
35-44	11	12	26
45-54	7	11	17
55-64	4	5	9
65 and older	1	0	3
Highest education of household head			
Less than HS diploma	2	3	5
HS graduate	7	8	13
Some college	13	14	26
College graduate	16	17	25
Household annual income			
Lowest fifth	8	8	16
Second fifth	8	10	15
Middle fifth	8	14	20
Fourth fifth	12	14	23
90% - 89.9%	8	13	27
Richest 10%	8	11	15

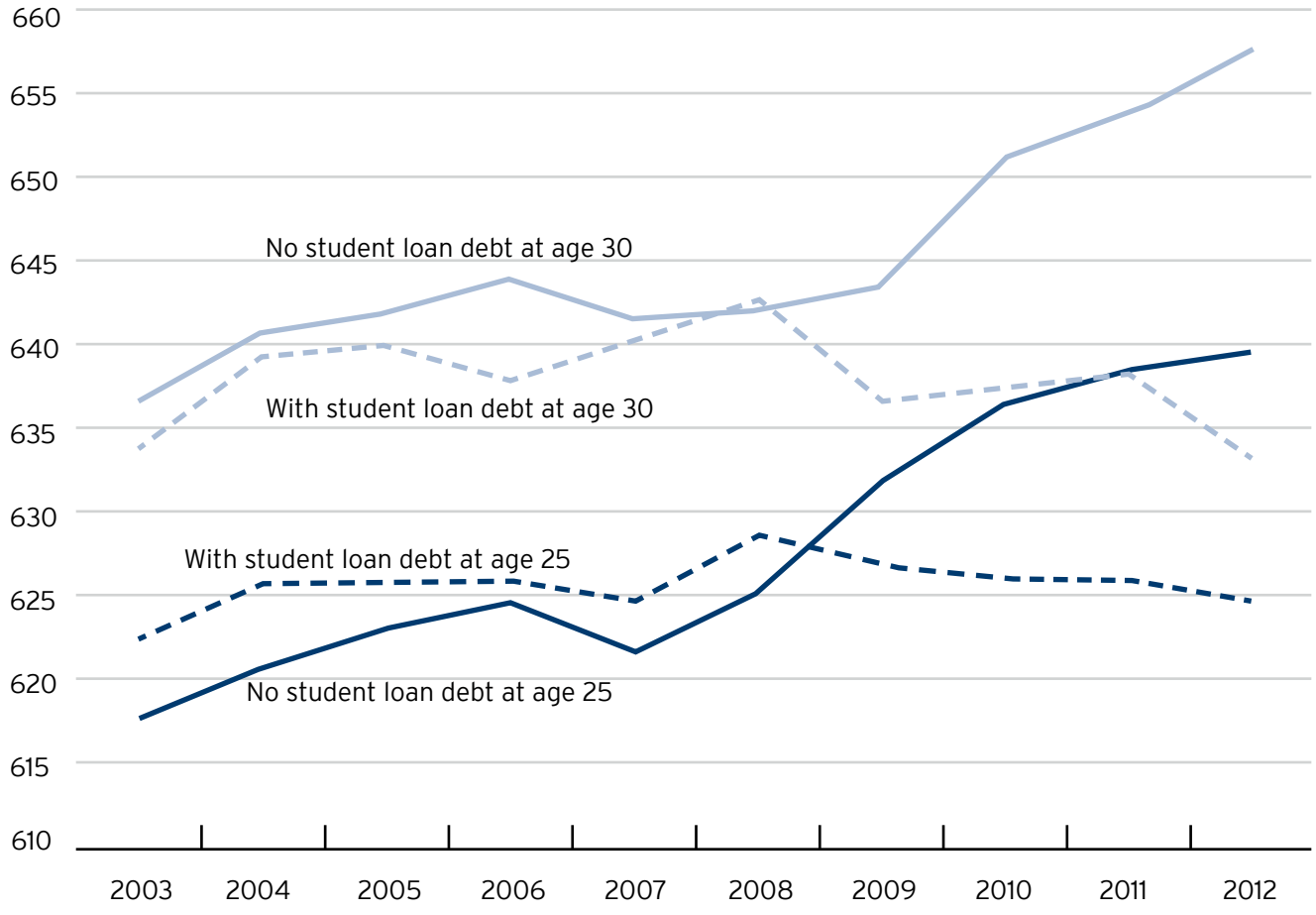
Source: Fry (2012)

Table 2: Outstanding Student Loan Debt Owed as Share of Household Income and Assets, by Household Income Group, 2010

Household Income Group, 2010	% of Income
Lowest fifth (less than $21,044)	24
Second fifth ($21,044 - $36,723)	10
Middle fifth ($36,724 - $59,623)	12
Fourth fifth ($59,624 - $97,585)	7
80% - 89.9% ($97,586 - $146,791)	7
Richest 10% (more than $146,792)	2
All Households	6

Source: Fry (2012)

Figure 1: Average Equifax risk scores for borrowers and nonborrowers at ages 25 and 30



Source: Brown and Caldwell (2013)

Endnotes

1. The New York Fed notes that "Student loans include loans to finance educational expenses provided by banks, credit unions and other financial institutions as well as federal and state governments" (Federal Reserve Bank of New York 2013).

2. The federal government offers a variety of subsidies and incentives for higher education. Pell grants are the largest federal education grant program, and are given to undergraduates who demonstrate high financial need. The maximum award is $5,645 per year for 2013–2014. For students who need further aid, the Federal Supplemental Educational Opportunity Grant program provides students with between $100 and $4,000. Students may also receive federal grants if they lost a parent to military service in Afghanistan or Iraq or if the student has committed to pursuing a career in elementary or secondary education. Federal work-study programs provide between $100 and $4,000 in subsidized wages for students to work in their communities. In recent years, many federal grant programs and work study have been limited by budget appropriations and rarely provide students with the maximum amount. Additionally, the federal government offers a variety of tax deductions and credits for education expenses, including the American Opportunity Tax Credit, the Lifetime Learning Credit, and deductions for tuition and fees and student loan interest, among others.

3. There are four major repayment plans that are based on income. These plans set monthly payments based on a combination of adjusted gross income, poverty guidelines, family size and outstanding loan amounts. For more information, visit http://studentaid.ed.gov/repay-loans/understand/plans.

4. Also, see Akers and Chingos (2014) for a discussion of student loan trends.

5. The rate had been much higher—in excess of 20 percent—in 1989.

6. Student loans can be harder than other types of debt to discharge. See http://www.debt.org/students/bankruptcy/

7. Snyder and Dillow (2013), Table 240.

8. These calculations are derived from Baum and Ma (2012). The 16 percent increase should be viewed as approximate, however, as it is based on enrollment data for 2000 and 2010 (Figure 19), but cost data for 2002 and 2012 (Figures 9 and 10). The allocation of students across the three types of institutions did not change substantially between 2000 and 2010.

9. That is, 1.27*1.16 = 1.47, so the two factors explain at least a 47 percent increase in borrowing, whereas overall borrowing rose by 77 percent. The increase in costs, however, may actually explain more than a 16 percent increase in borrowing for either of two reasons. First, an increase in college costs of a given percentage would cause an increase in borrowing of the same percentage if the sources of college financing—for example, family savings, work-study programs, federal aid and student loans— remain in the same proportion as costs rises. However, if there is a financing hierarchy, and students tend to fund marginal increases in costs with loans, then an increase in college costs of a given percentage would cause an increase in borrowing of a greater percentage. Second, as discussed further below, the increased prevalence of student loans and aid could itself be a factor driving up college costs.

10. However, not all of the evidence on housing is conclusive. Baum and O'Malley (2003) find no strong pattern between student loan debt and home ownership rates, though they report that earlier studies found results consistent with a $5,000 increase in student loans reducing the likelihood of homeownership by 1 percentage point. Elliott, Grinstein-Weiss, and Nam (2013) find that in recent years home equity was twice as high for graduates without student loan debt as compared to those with student loan balances; the authors however, find no relationship between higher (non-zero) amounts of student loan debt and home equity.

11. Hiltonsmith (2013) presents calculations suggesting enormous negative effects of student loan debt on lifetime wealth, but the counterfactual is not clear, and, as with other economic effects of student debt, a full analysis would include the positive impact of increased earning capacity owing to debt-financed education.

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