UNEQUAL OUTCOMES: STUDENT LOAN EFFECTS ON YOUNG ADULTS' NET WORTH ACCUMULATION



By William Elliott, Melinda Lewis, and Paul Johnson October 13, 2014





FOREWORD

The Assets and Education Initiative (AEDI) is a center at the University of Kansas's School of Social Welfare (<u>http://aedi.ku.edu/</u>). AEDI's mission is to create and study innovations related to assets and economic well-being, with a focus on the relationship between children's savings and the educational outcomes of low-income and minority children as a way to achieve the American dream.

This report is a companion to our report, *It is Not Enough to Say, "Students Will Eventually Recover"*. In that report, we synthesize evidence in support of our contention that student loans should not be the centerpiece of the U.S. financial aid system, particularly for low- and moderate-income students for whom financial aid is a critical bridge to higher education and, then, to later economic mobility. In that earlier report, we conclude that no one study or one piece of empirical data can definitively make the case for pivoting away from reliance on debt financing in higher education. That is still our assessment of the state of the policy debate. We offer this additional analysis as a sincere contribution to the unfolding financial aid conversation on the potential of the current financial aid approach to erode higher education's potency as a tool for facilitating equity and realizing the American Dream. We will continue to use the tools of empirical analysis, evidential review, and critical examination to examine whether an asset-based financial aid and a redevelopment of higher education policy can be part of an effort to catalyze economic mobility in the United States. We look forward to this ongoing dialogue.

With warm regards,

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ACKNOWLEDGMENTS

This report could not have been completed without the generous support of the Kaufmann Foundation.

The Kaufmann Foundation is not responsible for the quality or accuracy of the report, which are the sole responsibility of AEDI, nor do they necessarily agree with any or all of the report's findings and recommendations.

Preferred Citation

Elliott, W., Lewis, M., Johnson, P. (2014). *Unequal outcomes: Student loan effects on young adults' net worth accumulation*. Lawrence, KS: Assets and Education Initiative (AEDI).

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INTRODUCTION

EDUCATION AND THE PROMISE OF MOBILITY

Most people do not dream of going to college and becoming rich; that is, higher education is, for most, a path to the American Dream of middle-class financial security and upward mobility, not a perceived ticket to great riches. Generally, when people dream of being rich, they think of being a professional athlete, an actor, a singer, or entrepreneur, or winning the lottery. People may dream of getting rich, but it is not this illusion of quick fortune that animates individual actions nor characterizes the American ideal. Instead, Americans expect and work toward the opportunity to become middle-class through education, and it is this promise that underscores our vision of ourselves and our presumed 'contract' with the institutions that govern U.S. society. In recognition of the role that educational attainment plays in opening the door to this archetypal middle-class ideal, U.S. policy decided some time ago that children's work would be school work. Children and their parents believe that the reward for innate intellectual ability and expended academic effort will be a chance to reach, not ease and opulence, but security and upward progress. U.S. policy affirms that education is the primary path for achieving the American Dream. Therefore, quick climbs from rags to riches are presumed to be quixotic, fleeting, and not necessarily even desirable. In contrast, the denial of a fair shot to enter and stay in the middle class through education imperils the foundation on which our collective identity rests and threatens to rewrite the American narrative of 'success' through effort and ability, mediated through attainment of education.

As the nation has developed, we have expanded support for public schools, colleges, and universities, and, then, provided government subsidies to facilitate individual access to higher education. Seen through the lens of this equation underlying the American Dream, this educational expenditure is correctly understood as investments in economic mobility, a significant contribution toward our collective future prosperity, and a key element of the unwritten agreement between individuals and society, dictating who can get ahead and how. Critically, this relatively grandiose role for higher education policy and, specifically, financial aid, is not just theoretical but, indeed, informs Americans' expectations for their own lives. As the calculations on which this arrangement rests shift in the changing economy, and economic mobility appears increasingly elusive, the precariousness of this education/prosperity linkage may be at the heart of rising anxiety. Although economists and others assume that subjective calculations about how much people can expect to earn by the end of their lives play significant roles in decisions to attend college, which college to attend, and whether or not to borrow, in real life, people think in terms that are simultaneously more abstract and, yet, more immediate and even narrow. If people who complete college earn double what people earn who do not attend college, over the course of their lives, but they are still unable to live the middle-class lifestyle they expected when they went to college, or if they cannot start to live it until well into their 30s or 40s, education ceases in their minds to be a viable path to the prosperity to which they aspire, even if the calculation is still favorable 'on paper', at least ultimately.

In our recent report, *It is Not Enough to Say, "Students Will Eventually Recover"*, we reviewed evidence of how the student loan program has become a road block on the education path to achieving the American Dream of economic mobility. At the very least, student loans are pushing the rewards of education so far out into the future that its appeal as a path may seem far less alluring than it once did. For example, the average time that it takes to repay student loans grew from about seven years in 1992 to a little more than 13 years in 2010 (Akers & Chingos, 2014). So, the average young adult who graduates at age 22 will be 35 before they are out from under the burden of student loans. Delayed realization of expectations are only likely to continue to grow as Income-Based Repayment plans grow in popularity (Akers & Chingos, 2014), touted as a way for overburdened students to cope with the strain of their debt burdens. These programs, which have doubled in use over the last two years—growth which is itself a sign that there is a student debt problem in America—extend normal repayment plans from 10 years to up to 25 years. Compounding the problem is the fact that while young adults in the 1980s (ironically when student loans were just becoming the dominant means of financing education) reached the middle of the wage distribution at age 26, by 2012, young adults in the general population needed until age 30 to reach that milestone; for Black Americans, this economic security was not achieved until age 33 (Carnevale, Hanson, & Gulish, 2013). Of course, this delayed 'launch' of a strong economic foundation will have lifelong implications for individuals. Across the society, these figures are rewriting the story linking education, financial well-being, and the promise of America.

POOR PEOPLE NEED EDUCATION TO ACT AS AN AGENT OF ECONOMIC MOBILITY NOT ECONOMIC SECURITY

In this report, institutions that facilitate economic security are designed to help people maintain a certain standard of living, understood as the amount of goods and services one can consume. This is, in many respects, a lower aspiration than economic mobility or real well-being, both of which incorporate some measure of upward progress and true improvement in one's life chances. This constrained hope may reflect the new, post-Great Recession reality for the middle-class, who increasingly clamor only for institutions that provide them with the ability to maintain their current rung on the economic ladder, since this economic security is often lacking in today's 'risk-shifted' environment (Hacker, 2008). But, the poor need institutions that facilitate mobility, not that lock them in place. This means arrangements designed to facilitate well-being, not simply secure standard of living. Well-being has more to do with what people can do with goods and services, the real opportunity they have to move up the economic ladder, than how many goods and services they can consume (see Sherraden, 1991). As such, whether families are economically mobile or not might have more to do with their ability to accumulate assets than with their ability to earn higher incomes. The evidence increasingly suggests that these attributes are diverging for many Americans, and student debt may exacerbate the problem. For example, a new report by Pew Charitable Trusts (2014) finds that about 75% of young adults 30 to 40, Generation X, have higher incomes than their parents did but only about 36% have exceeded their parents' wealth. Those with student debt are particularly likely to fail to match their parents' wealth, even if they out earn them. So, higher incomes are not translating into more mobility, which is not to say, however, that income is not important. Income provides the all-important platform from which to build assets for launching oneself forward. In physics and in household economics, having a strong platform from which to launch is absolutely essential. As such, the potential of higher education to help one vault into higher earnings is critical. Income does not propel people forward but without it, it is impossible to launch. Indeed, the evidence from the past few decades of U.S. economic history reveal what anyone poised on a platform instinctively knows; without a strong platform, you will fall (Shierholz & Mishel, 2013).

From this perspective, standard of living is an important part of well-being, but insufficient for creating the conditions necessary for people to have the real opportunity to advance economically. Many income support programs that subsidize consumption can be understood as transfers directed at standard of living, while education has long been portrayed as an institution designed to facilitate economic mobility. However, at times, education has served more to maintain people in their current positions, particularly given the strong correlations between economic position and subsequent educational outcomes (for a review of this research see, Rauscher & Elliott, 2014).

With regard to the typical citizen, we posit that in order for economic mobility to occur, he/she needs to: (a) obtain the skills required to move into a higher class on the ladder and attain a job that pays at that skill level (i.e., human capital development), which most often requires an accumulation of savings to pay for college or willingness to assume debt; (b) find ways to use some of his/her wages to accumulate assets; or (c) receive transfers that place him or her at a higher level on the economic ladder (Elliott & Lewis, 2014).

Complementing our report, *It is Not Enough to Say, "Students Will Eventually Recover"*, which connected the dots from the growing literature about the dubious educational and disturbing financial and social outcomes associated with student loan dependence, in this report we provide new empirical evidence of how the student loan program actually works against the ability of education to act as an agent of economic mobility. In line with how we think mobility typically occurs, described above, in this report we highlight how the student loan system is stunting human capital development and the accumulation of assets:

- By helping to create a two-tiered education system that reduces economic mobility through skill acquisition, compromises academic progression and degree completion, constrains the educational attainment of low-income Americans by channeling them to institutions with poorer outcomes records, and inhibits their pursuit of advanced degrees.
- By hindering the ability of young people to use their income to accumulate assets, particularly as income is diverted to debt repayment over the lifetime, and at the critical young adult period, where one's failure to build an asset foundation may create a financial deficit from which it is difficult to recover.

These themes underlie this report, supported by new empirical analysis regarding the drivers and consequences of student loan debt, the summation of which suggest additional rationales for alternative policy approaches to higher education financing.

CHAPTER 1

EDUCATION, THE 'GREAT EQUALIZER'?

At least since Blau and Duncan (1967), we have known that education plays a central role in the relationship between socioeconomic background and individual life chances. While credentials increase opportunities and can translate into economic mobility, attaining those credentials is strongly dependent on prior socioeconomic standing. For example, Aud et al. (2002) finds that about 52% of low-income but 82% of high-income children in 2010 enrolled in a two-year or four-year college immediately upon graduating high school. Even these aggregate attendance statistics do not tell the whole story, since patterns of institutional selection also vary according to socioeconomic status, with real implications for later economic returns to higher education. According to the National Center for Public Policy and Higher Education (2011), 44% of low-income students nationally attend community colleges as their first college after high school, compared to only 15% of high-income students.

Inequity in educational attainment matters not just ideologically, clashing as it does with our understanding of who gets ahead in the U.S. and how. It also lays a foundation for disparate life experiences, particularly regarding labor market outcomes. These findings, then, simultaneously affirm the importance of higher education as a determinant of later prosperity and call into question the ability of post-secondary education to play an equalizing role in U.S.

society today. For instance, in March 2014, the unemployment rate for those with only some college (7%) was twice as high as for those with a master's degree (3.4%) (Bureau of Labor Statistics, 2014). Further, the median weekly earnings for those with a bachelor degree were \$1,108, compared to \$777 for those with an associate degree and \$727 for those with only some college (Bureau of Labor Statistics, 2014). This raises doubts about not only the equity of our educational path, but also its adequacy as a tool to catalyze economic mobility and greater prosperity. The high cost of college and rising dependence on borrowing to meet these demands have fueled pressure for alternative postsecondary trajectories. While often rooted in a sincere desire to preserve the viability of some postsecondary options for students otherwise deterred by the specter of student borrowing, many of these proposals would have the effect of reducing the educational attainment of disadvantaged students, with lifelong effects on their earning power and subsequent economic well-being. Indeed, despite the current cache of alternatives to four-year college (Giang, 2013), those completing their educations with less than a bachelor degree are most likely to work in the lowest-paid occupations and three times more likely to receive these low salaries as to be among the highest-compensated. Given the low rate of

If higher education is to be a conduit of economic mobility, U.S. policy, including in financial aid, must not only strengthen the connection between credential attainment and later labor market and financial outcomes, but simultaneously disrupt the relationship between prior socioeconomic standing and postsecondary educational prospects.

successful transfer between two-year and four-year institutions and, again, the extent to which even most students beginning at two-year schools hope to complete bachelor degrees, the wisdom and fairness of encouraging aspiring college students to start down a two-year path (Goldrick-Rab & Kendall, 2014), for example, must be questioned, along with any policies—including the current U.S. approach to financial aid—that disproportionately funnel students to one type of institution, based primarily on their financial situations (Weissman, 2014). If higher education is to be a conduit of economic mobility, U.S. policy must not only strengthen the connection between credential attainment and later labor market and financial outcomes, but simultaneously disrupt the relationship between prior socioeconomic standing and postsecondary educational prospects. There are real reasons to doubt that student loans can be fitted for either aim.

COLLEGE ATTAINMENT BY INCOME AND RACE/ETHNICITY

The descriptive statistics in Table 1, Appendix B point to potential inequities not just in who attends post-secondary education and who does not, but also in the type of institution attended, the credential obtained, and the advantages these degrees confer. Among low-income individuals who attend college in this sample, 73% have an associate degree or some college, while 23% have a bachelor degree, and only 4% have a graduate degree (see Figure 1). In other words, low-income students are almost three times as likely to have less than a bachelor degree as to attain a

four-year credential. Similarly, 38% of students whose parents did not graduate from college chose community colleges as their first institution, compared with 20% whose parents graduated from college (see Table 1, Appendix B).

Figure 1. COLLEGE ATTAINMENT By Family Income



The gaps only grow when looking at actual graduation, where advantaged students are twice as likely to have a bachelor degree as those with low-incomes and four times as likely to have a graduate degree (see Table 1, Appendix B). Among college goers, more than 60% of high-income individuals in this sample attain at least a bachelor degree, more than double the attainment of low-income individuals (see Figure 1). Hispanics and Blacks are far more concentrated among those with less than a bachelor degree than are White or Asian students. Seventy-two percent of Black and 74% of Hispanic students have less than a bachelor degree; 22% of each group attain a bachelor degree and very small percentages complete graduate studies (4% and 6%, respectively). In comparison, 50% of Whites and 61% of Asians have at least a bachelor degree (see Figure 2).

Figure 2. COLLEGE ATTAINMENT By Race/Ethnicity



Again, if these differential outcomes resulted purely from innate differences in intellectual ability, from distinct preferences for different educational experiences, and/or from logical consequences of different work effort, these inequities in educational attainment would be, if regrettable, largely consistent with the vision of the American Dream. Certainly, they would not significantly undermine the American narrative about what it takes to succeed economically, and, then, do little to erode American children's belief in their own futures. Instead, the unequal

origins of these gaps belie our belief in a fundamentally fair system for determining who gets ahead and how, particularly as they serve to perpetuate inequities in other dimensions of society, including the labor market. In this sample, 77% of those who are unemployed have an associate degree or some college, while only 5% of the unemployed have graduate degrees (see Table 1, Appendix B). Seventy-three percent of those working in the lowest-paying occupations, earning less than \$35,000 per year, have an associate degree or only some college, while only 38% of those earning \$60,000 per year or more are similarly credentialed (see Figure 3). These contrasts must prompt reconsideration of the role of higher education, today, as a catalyst for individual economic mobility and broader societal prosperity, particularly as our economy has not constructed a widely-available alternative vehicle for securing this upward progress.

Figure 3. COLLEGE ATTAINMENT By Occupation



Even when individuals overcome the obstacles created by their own economic disadvantage and/or the current policy landscape of higher education and education financing, many young adults today find fewer mobility 'payoffs' of their educational attainment. One constraint to mobility is stagnant or declining wages, which means that formerly middle-class jobs may no longer pay middle-class wages, thereby introducing greater risks of downward economic mobility, both within and among generations. For example, between 2002 and 2012 wages were stagnant or declining for the bottom 70% of U.S. families (Mishel & Shierholz, 2013). The problem is particularly bad for younger households. Median family income for families under 35 was \$35,509 in 2013, down 6% from 1989 (Norris, 2014). As a result, individuals find their human capital accumulation and productivity increasingly inadequate for securing wages capable of purchasing their expected standard of living, even if they exceed what their parents earned. In some cases, such jobs have been eliminated altogether, requiring individuals to compete for a scarcer pool of labor market opportunities or risk dropping out of the middle class entirely, as has happened for millions of Americans over the past decade. College graduates have not been immune to these economic realities. For example, while college graduates inarguably continue to outperform their less-educated peers on many economic and social measures, between 2000 and 2010 unemployment among college degree holders rose from 2.0% to 5.7% (Mishel, Bivens, Gould, & Shierholz, 2013). Research suggests that during the Great Recession the United States lost about 3.5 million middle-class jobs, and since the recession middle-class jobs have been only about 2% of the new jobs created (Condon & Wiseman, 2013). In some cases, poor regulation of postsecondary institutions can be blamed for some of the growing disconnect between educational attainment and labor market outcomes, as some institutions peddle low-value degree options that degrade earning potential and dramatically increase the risk of adverse loan outcomes (Carey, 2014).

Perhaps even more disturbing than the well-publicized cyclical and broadly-shared losses—or the egregious examples of abusive practices—is the unequal distribution of risk exposure in this economy. Because different groups of people face different economic conditions, the subjective calculations potential students must make are not the same. For instance, the college-educated unemployment rate is higher among racial minorities. Between 2000 and 2010 the unemployment rate for White workers with a college degree increased from 1.8% to 4.9%, but for Black college graduates it increased from 2.8% to 9.8% (Mishel, Bivens, Gould, & Shierholz, 2013). Similarly,

poor children who attend college may be forced to take a low-wage job that might be classified as working-poor upon graduating, due to inadequate social capital to convert into job opportunities; the pressing financial demands of student debt, which require quick employment; inability to secure internships or other relevant experience during college, due to work demands; limited job opportunities in their communities; or other factors associated with their lack of the often-invisible advantages that translate into economic options for more privileged graduates. Critically, there is little reason to believe that their educational attainment has allowed-or will allow-these individuals to move permanently out of poverty- either as defined by official statistics or as most Americans understand it colloquially. Without attending explicitly to the equity effects of the U.S. higher education and financial aid systems, there is real risk that a two-tiered education system will close off one of the only remaining, viable paths to economic mobility for low-income children: a post-secondary degree. If the sacrifices required for poor children to attain a post-secondary credential result only in low-wage jobs or continued economic hardship, we will, even unintentionally, be rewriting the script of what it takes to get ahead in America. We cannot expect children to successfully navigate around these landmines. They have little solid information on which to rely, and the risks are significant. Prospective college students today cannot rely on either earnings achieved by recent college graduates or their parents' economic experiences as accurate predictors of what they will be able to earn if they attain a college degree, or not and, anyway, these are not purely rational decisions. Even though economic times change, perceptions of the current economic climate, good or bad, weigh into the decision, as do the expectations mediated through the lens of the calculus of the American Dream. While the scales still tip decidedly in the favor of strong returns on college investment, the fact that this is the case, in part, due to declining fortunes of those with less education, suggests just how much we have reduced our aspirations (Burtless, 2014). Again, we must ask more of our student loan system than just helping students not to fall as far, or as fast, as their peers who do not make it to college. The U.S. needs a financial aid system that delivers on its promises.

CHAPTER 2

WHO HAS OUTSTANDING STUDENT DEBT?

Our recent report, *It is Not Enough to Say, "Students Will Eventually Recover"* calls, among other things, for a new metric by which to assess the damages wrought by student loan dependence. Contrary to popular belief (Sanchez, 2012), it is not only the extremely 'high-dollar' loans—still relatively rare—that should be alarming (e.g., Egoian, 2013). Indeed, since some of these loans are incurred by relatively advantaged students pursuing exceptional—and well-compensated—degrees, these outliers may be far less dangerous than the 'routine' assumption of several thousand dollars—or even a few—in debt by millions of Americans. What is increasingly clear, however, is that there is no 'safe' level of student loan debt. There is still much we do not understand about the relationship between student borrowing and educational outcomes. Clearly, analysis reveals negative effects on asset accumulation and subsequent financial well-being at levels even far below 'recommended' thresholds, revealing the limitations of any efforts to protect students by simply trying to avoid huge loans (Akers, 2014; Egoian, 2013).

In an effort to further quantify and better understand the dynamics associated with student loan usage, we present findings that indicate that, regardless of degree type, student loans are heavily used (see Table 2, Appendix B). Among young adults with an associate degree or some college, 50% report having outstanding loans. For young adults with a bachelor degree, this is 66%, and 78% for young adults with a graduate degree (see Table 2, Appendix B). It is not surprising that graduate degree holders are more likely to have outstanding student loans and, again, often significantly different employment prospects following graduation. Separating these loans could better inform the calculus about just how problematic this borrowing is, but, unfortunately, the current level of analysis of student borrowing fails to illuminate these distinctions. We do not know from these data whether these are loans exclusively used to pay for graduate school or whether graduate students have leftover loans from earlier school, and we do not know much about how the prospect of likely borrowing influences students' decisions about pursuing an advanced degree, especially for low-income students, including the timing and target of such education. However, there is some evidence to suggest that expansion of student loan access and limits might increase the likelihood that some students attend graduate school. For example, Kim & Evermann (2006) find that prior to the Higher Education Amendments of 1992, which increased federal student loan limits and eligibility, having student loans was negatively associated with attending graduate school. However, after, they found a positive association between student loans and middle-income students participation in graduate school.¹

Not only do a higher percentage of graduate students report having debt, they have more debt as well. On average, students with an associate degree or some college have \$8,148, bachelor degree holders have \$21,433, and graduate degree holders have \$55,716 of outstanding debt. While the advanced education their borrowing purchased is inarguably valuable, this outstanding debt comes at a price. All young adults with outstanding student debt have average monthly payments of \$62.77, bachelor students \$188, and graduate students \$367. These payments have to come from somewhere, and this is where we see a constrained ability to translate labor income into capital accumulation, given the need to divert wages to debt management. These effects may be magnified given the comparatively advanced age at which many students complete their graduate studies, which means fewer years in

¹ At first blush this seems to suggest that there may be a role for student loans in promoting graduate school enrollment; indeed, our critique has primarily been focused on the role of student loans in funding bachelor degrees. This might be similar to what we see in the case of minority students at the bachelor's level. Research indicates that some minority students are averse to taking out student loans and end up never attending college at all for fear of overextending themselves with debt. But those who attend take out more loans than their White counterparts. This may be because they lack other family resources and are forced to rely more heavily on student loans if they want to complete their degree. It might be the same kind of phenomenon with regard to graduate school, where young adults who go on for a graduate degree are the type who, lacking other family resources, will take out more loans to get the education they feel is needed. Alternatively, it might be that these young adults see the expansion of student loans to master's level education as an endorsement by society that this is the path that people should take, or that they are pursuing education at a different point in their lives when they are more reliant on student borrowing. Clearly, more research is needed to fully understand this phenomenon.

which to recover financially before the negative effects of constrained asset development are felt. Equally important and harder to quantify may be the psychic toll having such payments can have on young people's beliefs about such things as their ability to start a family, buy a home, and save for retirement, especially if they perceive that they are unable to match their parents' achievements at their age or, even, those of their less-educated peers (Pew Charitable Trusts, 2014).

STUDENT LOAN USE BY RACE/ETHNICITY

Students of color rely disproportionately on student borrowing. Nationally, about 81% of Black students borrow money, compared to 65% of their White peers (Kerby, 2013). And they borrow in greater relative amounts; a College Board study found that 27% of Black bachelor degree recipients had student loan debt of \$30,500 or more, compared to just 16% of their White counterparts (Baum & Steele, 2010). Students of color are impacted by their interactions with the student loan system in a variety of ways. In addition to being more likely to borrow and borrowing in higher amounts, they are disproportionately borrowing at higher interest rates, often in the private loan system, which exposes them to greater risk of repayment burden and associated default (Kerby, 2013). Revealing the limitations of the student loan intervention as a catalyst for educational attainment and later economic well-being, students of color also achieve lower levels of degree completion with their student loan 'investment' and experience poorer labor market outcomes even with comparable levels of color. Revealing the extent to which student borrowing may fail to support educational attainment, 69% of Black students who did not finish their college degree cite the high cost of tuition, compared to 43% of their white peers (Kerby, 2013).

In this sample, Blacks and Hispanics were more likely than Whites to have student loans, at all education levels (see Figure 4). For example, 82% of Blacks and 77% of Hispanics with bachelor degrees have loans, compared to 64% of Whites and 59% of Asians (see Figure 4). Most students depend on student loans to complete a graduate degree, regardless of race or ethnicity but, there is little evidence that students of color have any other alternatives to borrowing if they are to complete advanced degrees. Almost 90% of Black graduate degree holders in this sample have student loans (see Figure 4).



STUDENT LOAN USE By College Attainment and Race/Ethnicity

Figure 4.

Additionally, there is evidence in this sample that the increasing shift to merit aid (see Wall Street Journal, 2012) may not greatly reduce the need to borrow among high-performing high school students. At the baccalaureate level, 65% of students with a high school GPA at 3.0 or above have student loans, compared to 72% of those with lower grades (see Table 2, Appendix B). As would be expected, given prevailing trends in pricing and financial aid, students at private for-profit colleges are most likely to use loans, at least for associate and bachelor degrees, where 76% and 84% of completers, respectively, have student loans (see Table 2, Appendix B). This certainly aligns with growing public concern with the performance and costs of these for-profit institutions, and with their increasing prominence in the U.S. higher education landscape (Liu, 2011). This is not to suggest that less expensive colleges

are always the best bet, however; 57% of those attending public universities finish with less than a bachelor degree, disturbingly low completion rates which must, again, prompt reconsideration of the current policy innovations to reduce loan debt for students who begin at the least expensive state schools, some of which may result in delayed or interrupted path to degree.

While some hope that providing better information to potential student debtors (Consumers Union, 2013) may reduce the problems associated with student loans, data here reveal some of the many limitations of this approach. Significantly, the distribution of borrowers and non-borrowers is very similar for those in the lowest-paying occupations and the highest, indicating disconnect between student loan usage and later financial outcomes. As would be expected, the percentage of individuals borrowing increases with rising levels of education, but the pattern

within each educational level stays nearly constant. The scant evidence that borrowing vaults one to a higher earnings classification exposes the potential for student loan reliance and its associated repayment obligations to exacerbate inequality in return on degree, even while reinforcing the case for higher education as a catalyst for higher earnings, generally. Without knowing where one will end up, in terms of occupation and earnings potential, it is difficult for students to make informed choices about their use of student loans and, indeed, difficult for even the wisest of choices to come with any guarantee that a student will be able to meet his/her repayment expectations without undue financial hardship. These figures also illustrate plainly how students

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attaining the same degree may see very different returns on their education, if they have no alternative to borrowing, as compared to having family asset stores or other resources with which to finance their educations (see Elliott & Lewis, 2013). It is difficult to imagine how any scheme of disclosures or requirement for financial literacy could equip students to competently navigate this landscape.

STUDENT LOAN USE BY SOCIOECONOMIC STATUS

Particularly for baccalaureate degrees, family economic status seems to be the strongest protective factor against student loan reliance; 76% of low-income and only 53% of high-income individuals with Bachelor degrees have student loans (see Figure 5). These figures also reveal an important nuance in interpreting population statistics on student loan usage because, while middle-income families are most heavily represented among student borrowers, given their prominence in the population, low-income students are most likely to borrow, as described above, at least among Bachelor degree holders.

The distinction among bachelor degree holders is important because evidence from previous studies indicates that low-income and minority students, in particular Black and Hispanic, are more likely to be loan-averse (Callendar & Jackson, 2005). So, student loans can prevent some low-income and minority students from attending college, while those who do attend are much more susceptible to having to rely on loans to pay for college once in college which leads to more risk of dropping out of college (Kim, 2007), and then diminished financial health after leaving college (Elliott & Lewis, 2014). Since higher education is a particularly critical intervention for these disadvantaged populations, evidence that suggests that student loans may be particularly ill-suited to charting a path to mobility for them should be cause for significant concern.

No one set of data can definitively quantify the extent and depth of the student loan problem in the United States. The descriptive data depicted here are but another representation of the characteristics of student loan usage within the U.S. higher education system today: prevalent, but more essential for low-income than high-income students; rising in average amount and, therefore, more likely to persist throughout Americans' economic lives; and not necessarily controllable by manipulating the conditions one would expect to drive indebtedness, including institutional choice and academic achievement. However, as other analysts have cautioned (Akers, 2014), the mere incidence of student debt assumption does not provide evidence of its problematic nature. Instead, understanding

and accounting for the consequences of student borrowing requires first changing the metrics by which we gauge these effects and, then, turning to data about the ways in which student debt compromises achievement of the end goal of higher education: economic mobility and greater societal equity, in keeping with the American Dream.

Figure 5. STUDENT LOAN USE



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CHAPTER 3

EVEN IF WE SAY IT AIN'T SO, AMERICA HAS A STUDENT DEBT PROBLEM

Reimagining, and, then, rebuilding, the U.S. financial aid system must begin with more completely accounting for the true costs of student loans, to students and the larger economy (see, Hiltonsmith, 2013; Elliott & Lewis, 2013; Dugan & Kafka, 2014). In this light, it is clear that, while current proposals center on reducing monthly payment burdens because these 'tweaks' can reduce the incidence of delinquency and default (Sheets & Crawford, 2014), potentially masking the problems, they do little to address the long-term effects of student loans, before and after college, and may even move in the wrong direction. Indeed, innovations (such as Income-Based Repayments) that seek to reduce the strain on student borrowers by extending the repayment period or making other modifications may only prolong the harmful effects on financial and life outcomes (e.g., Egoian, 2013). This potential for policy to work at cross-purposes highlights the importance of articulating clear indicators by which to assess student loans' individual and societal effects.

Today, we cannot claim ignorance of student loans' failure to catalyze greater educational achievement, increase students' engagement in school, or foster stronger economic foundations (Cofer & Somers, 2000; Perna, 2000; Heller, 2008; Kim, 2007; Dwyer, McCloud, & Hodson, 2011; Fry, 2014, among others). There is a growing body of evidence that reveals the dimensions on which student loans endanger the well-being of individual borrowers, the institutions dependent on them, and our macro-economy (Frizell, 2014; Korkki, 2014). Data reveal that disadvantaged students, particularly low-income and students of color, are disproportionately affected by these forces (Fenske, Porter, & DuBrock, 2000; Kim, 2007). These disparate effects are particularly unacceptable given the role of higher education in fostering greater equity and upward mobility (Greenstone, Looney, Patashnik, & Yu, 2013). When we measure student loans comprehensively, looking beyond repayment burden to consider the fullness of what we should expect from our financial aid system, the imperative for reform becomes more urgent, and our way more apparent.

NET WORTH HOLDINGS BY COLLEGE ATTAINMENT

In this study, we find evidence that graduate students more frequently report being in debt than either respondents with an associate degree or some college or young adults with a bachelor degree (see Figure 6). This might be explained, in part, by that fact that the average time after graduation for these graduate students is about two years compared to about four and half years for young adults with bachelor degrees (see Table 1, Appendix B). This means they have had less time to accumulate assets and repay debts post-graduation, due to the study design.



Figure 6. REPONDENT'S NET WORTH By College Attainment While any amount of higher education may bring some labor market advantage, compared to leaving education with just a high school diploma or less (Greenstone & Looney, 2013), there is a significant payoff for additional schooling, with bachelor degree holders earning about \$32,000 more per year than individuals with only some college (Greenstone & Looney, 2013). Therefore, it is significant that even these presumably higher earnings do not necessarily counteract the apparently corrosive effects of higher levels of student loan borrowing on asset accumulation.

NET WORTH BY STUDENT LOAN USE

Since recent college graduates' annual earnings are usually much lower than they will be during later, prime earning years, most young adults with student loan debt are forced to

rely on credit as a key mechanism for purchasing wealthbuilding items like a home (Keister, 2000; Oliver & Shapiro, 2006). However, delinquent and defaulted student loan accounts may be reflected in students' credit scores. For many students, this reveals another way in which student loans may haunt them as they embark on financial independence. Research by Brown and Caldwell (2013) indicates that students with student loans have credit scores that are 24 points lower than students without student loans.

Contrary to the idea that student loan borrowers face credit constraints, however, research using data from 2010 or earlier finds that there was a positive correlation between having outstanding student debt and other debt (such as mortgage,

With Student Loan Payments:

50% with some college, 51% with a bachelor degree, and 64% with a graduate degree report having negative net worth.

Without Student Loan Payments:

18% with some college, 8% with a bachelor degree, and 13% with a graduate degree report having negative net worth.

vehicle, or credit card), when comparing graduates with and without debt. For instance, Fry (2014) uses 2010 Survey of Consumer Finance data and finds that 43% of households headed by a college graduate with student debt

Figure 7. RESPONDENT'S NET WORTH By Student Loan Use and College Attainment



have vehicle debt and 60% have credit card debt. However, using 2012 data, Brown et al. (2013) find that households with student debt have lower overall debt than households without student debt. They speculate that borrowers post-Great Recession have become less sure about the labor market, causing a drop in the demand for credit. Additionally, lenders may have become more reserved about supplying loans to high-balance student borrowers in the tighter credit markets that followed the financial collapse.

In this study we find that young adults who have a graduate degree and outstanding student loans are more likely to report being in debt than either bachelor degree holders or young adults with an associate degree or some college. Maybe more interestingly, young adults with student loans are more likely to report being in debt, regardless of college attainment, than to report having positive net worth. The opposite pattern occurs among young adults without student debt, who report having positive net worth at a higher rate than they report being in debt (see Figure 7). This seems to support recent findings specific to Generation X, who the Pew Charitable Trusts finds experience an 'education paradox' where those with college degrees are least likely to surpass their parents' wealth holdings at the same age, potentially due to large student debts (Pew Charitable Trusts, 2014).

THE EFFECTS OF DISPOSABLE INCOME ON YOUNG ADULTS' NET WORTH

Schemes such as Income-Based Repayment and the Pay-as-You-Earn plans have been designed to prevent debt burden (how much of the borrower's monthly income has to be devoted to paying back student loans) from becoming excessive (i.e., to prevent default). The recommended cutoff for unmanageable student debt is 8% or 10% (Baum & Schwartz, 2005), which would represent a reduction in loan burden for many student debtors. However, in order to reduce payments to this 'affordable' level, income-driven repayment plans extend the time students typically have to pay off their loans from 10 years to up to 25 years, depending on the precise agreement.

While recognizing the good intentions that spur such proposals, we suggest that these programs only *add* to the student loan problem rather than solving it. Even before the growth in use of these types of modifications, the length of time borrowers took to pay off loans was increasing. As examples of how making minor changes to the terms of student loans will ultimately fail to address the problems caused by their underlying structure and mere presence in the financial aid landscape, utilization of these modifications is growing rapidly, alongside continued increases in concerns about the consequences of student borrowing. In 2013 these programs accounted for 6% of borrowers in repayment and, by 2014, nearly 11% of borrowers were in such a repayment modification (Delisle, 2014a). Further, these programs account for almost 22% of the Direct Loan portfolio in repayment (Delisle, 2014a). While these programs should be a warning sign that the current student loan program is flawed. That is, if so many borrowers find their regular payment plan to be unbearable, and in fact, such payments are officially deemed to be unbearable, one could reasonably conclude that the U.S. has a student debt problem. This realization is even more disturbing in light of evidence that the 'solution' adopted to address this problem may only intensify the long-term harmful effects of student loans, including constrained asset accumulation, while reducing the policy momentum for more substantive reforms by easing some of the pressure exerted by overburdened borrowers.

The Problem is Not Simply How Much Debt Students Have

The definition of 'problematic debt' as \$100,000 stems from media depictions, not empirical evidence of what level of debt causes hardship. This inaccurate definition moves the goalposts, allowing some analysts, policymakers, and pundits to divert attention from the negative effects associated with student debt by merely demonstrating that average student debt is far less. Significantly, this accounting ignores compelling research that shows that amounts much smaller than \$100,000 can create financial hardship. For example, Akers (2014) finds that "high-debt borrowers face

The definition of 'problematic debt' as \$100,000 stems from media depictions, not empirical evidence of what level of debt causes hardship.

financial hardship at only slightly higher rates than comparable households with less debt" (p. 4). Other analysis has found that low-balance borrowers may actually face the greatest repayment difficulty, since they may not have completed the degrees they were pursuing (Kelly, 2014). What this suggests is that high debt does not necessarily

lead to hardship, because people with high debt often have higher earnings secured through the attainment of advanced degrees; equally importantly, it also means that low debt does not necessarily mean absence of hardship.

The same may be true in the case of monthly payments. That is, it might not be as simple as saying if we reduce student debt payments to 10 - 20% of students' monthly income, they will no longer cause substantial harm to the borrower. For example, Egoian (2013) finds that a bachelor degree recipient with median debt of \$23,300 has \$115,096 less in retirement savings than a bachelor degree recipient with no student loans by the time they reach age 73. Egoian's (2013) estimates assume that 7% of an indebted college graduate's earnings go toward yearly loan repayments. This is more conservative than the recommended cutoff for manageable student debt that Income-Based Repayment type plans establish. That is, he finds negative effects that kick in even at levels of indebtedness lower than *recommended* levels. He also bases his estimates off of relatively small amounts of debt—\$23,000, at least far less than \$100,000, yet he finds these relatively large effects. Moreover, his estimates assume that households will pay off their student debt in 10 years, even though we know the average debtor now takes about 13 years.

In this section of the report we examine the effect that available disposable income has on young adults' ability to accumulate wealth. Disposable income is the amount of monthly income a respondent has minus his/her monthly student loan payment. We use separate samples of respondents with an associate degree or some college, bachelor degree, and graduate degree holders because some research suggests that the real debt problem is with graduate students (e.g., Delisle, 2014). Part of what this line of thought assumes is that the problem is the amount of debt students borrow and, since graduate students borrow more, if there is a problem, it is with them. As Delisle (2014) says, "Despite the trends, most accounts of student debt treat loans from graduate and undergraduate studies as one and the same, distorting how we view issues of college costs, student debt, and what policymakers should do in response" (p. 1). As Delisle (2014) points out, there very well might be different policy considerations as well moral commitments to consider when it comes to financing graduate degrees as opposed to an associate or bachelor degree. Certainly, these different levels of degree attainment play different rhetorical functions in the U.S. economy, including related to the pursuit of the American Dream. However, here our focus is on whether or not having outstanding student debt is associated with being more likely to report having more overall debt than assets (i.e., student debt effects on net worth) and whether this is true at one education level and not another. So, here we separate out respondents into different groups based on the level of educational attainment they achieved.

Results for 'Some College' or Associate Degree Respondents

With a set of predictors, the generalized ordinal logistic model estimates the probability that a respondent reports having negative net worth (i.e., assets < debts), even (i.e., assets = debts), or positive net worth (i.e., assets > debts).² These models include estimates of threshold values that act as "cut points" between outcomes, a fact that we illustrate in two figures (see "BA with loan" and "BA without loan"). One threshold separates those young adults who are predicted to have negative net worth from those who are even, while another separates young adults who have positive net worth from those who are even.

In Figures 8 & 9, we see the estimated probabilities as they depend on disposable income. The red "negative" area represents the probability that a respondent is below both threshold values. The grey area, representing the chances of being in the "even" category, exists between the two thresholds. When a respondent's estimates exceed both thresholds, then we predict that the respondent will report having positive net worth. The boundaries between the areas are not straight lines. Instead, they are actually portions of elongated S-shaped curves. The portions of these curves that are revealed in the figure is an important part of the story. In Figure 8, one is struck by the fact that the probability of remaining in the even category is more-or-less fixed for young adults with some college or an associate degree and monthly student loan payments. From left to right, it appears as though young adults are moving from negative net worth into even at about the same rate that they are moving from even into positive net worth. In Figure 9, we see a slightly different process taking place among young adults with some college or an associate degree but who have monthly student loan payments. Notice that the red and gray areas are both shrinking as disposable income increases, meaning that the transition from negative net worth to having positive net worth is

²² See Appendix A for more detailed discussion of methods.

accelerated. The end result is that there is a larger area representing respondents who report having positive net worth.

Interestingly, Table 5 (see Appendix B) makes it clear that, unlike the other groups we examine (bachelor degree

and graduate degree), when young adults with an associate degree or some college have monthly student loan payments it does not appear to matter whether they have more or less disposable income. For example, these young adults have a 51% chance of reporting having negative net worth whether they have \$1,000 of disposable income or \$10,000. In contrast, if they have no monthly student loan payments, more disposable income appears to be associated with having less of a chance of reporting having negative net worth. So, for example, if they have \$1,000 of disposable income they have about a 17% chance of reporting having negative net worth but this drops to only a 7% chance if they have \$10,000 of disposable income.

Young adults who have an associate degree or some college have a 51% chance of reporting having negative net worth whether they have \$1,000 of disposable income or \$10,000.

In contrast, with no monthly student loan repayment, if they have \$1,000 of disposable income they have about a 17% chance of reporting having negative net worth.

This reveals graphically what other analyses suggest: for student borrowers with comparatively low levels of postsecondary education and outstanding student loan debt, college may not have been such a good bet. Therefore, finding ways to protect these students from the extra burden of student debt may be particularly important.





Results for Bachelor Degree Respondents

Table 5 (see Appendix B) indicates that the predicted probability of having negative net worth for young adults who hold a bachelor degree and have no monthly student loan

payments is .12 if he/she has \$1,000 of disposable income and .01 if he/she has \$10,000 of disposable income. Conversely, the predicted probability of young adults with a bachelor degree and monthly student loan payments is higher even when the young adult with student loan payments has \$10,000 of disposable income in comparison to a young adult with no student loans (.16 vs. .12, respectively). Moreover, if a young adult with a bachelor degree and monthly student loan payments has \$3,000 or

If a young adult with a bachelor degree and monthly student loan payments has \$3,000 or less of disposable income, he/she has better than a 50% chance of reporting having negative net worth.

less of disposable income, he/she has better than a 50% chance of reporting having negative net worth. Depending on whether bachelor degree holders have \$1,000 of disposable income or \$10,000, the predicted probability of reporting having positive net worth ranges from .68 to .95, respectively, among those with no monthly student loan payments; in contrast, it ranges from .20 to .69 among those with monthly student loan payments. The differences between young adults with a bachelor degree and monthly student loan payments and those with no monthly student loan payments are graphically depicted in Figures 10 and 11. These figures speak to the return on a college degree for those with and without student loans and raise questions about the ability of education to reach its full capacity as a catalyst for real economic well-being as long as student loans remain the primary instrument for financing college.





Results for Graduate Degree Respondents

It appears from Figures 12 & 13 that young adults who go on to receive a graduate degree and have monthly student

loan payments also have a greater chance of reporting having negative net worth than positive net worth in comparison to similarly-situated young adults who have no monthly student loan payments. Further, Table 5 (see Appendix B) indicates that while having more disposable income appears to buffer young adults with a graduate degree from some of the negative effects that student debt may have on wealth accumulation, young adults strapped with student loan payments have a greater chance of reporting having negative net worth than positive net worth in comparison to their counterparts with no student loan payments. For example, young adults with a graduate degree and no monthly student loan payments have a better than 70% chance of having positive net worth regardless of whether their disposable income is \$1,000 or \$10,000; it climbs to 95% if it is \$10,000. Conversely, even if a young

Young adults with a graduate degree and no monthly student loan payments have a better than 70% chance of having positive net worth regardless of whether their disposable income is \$1,000 or \$10,000.

Conversely, even if a young adult with a graduate degree and monthly student loan payments has disposable income of \$10,000, he/she has less than a 70% change of reporting that they have positive net worth.

adult with a graduate degree and monthly student loan payments has disposable income of \$10,000, he/she has less than a 70% change of reporting that they have positive net worth. Below \$8,000, such a graduate has less than a 50% chance of reporting having positive net worth. In addition to influencing the solidity of these young adults' financial foundations following higher education, with implications, then, for later economic mobility from leveraging these initial asset levels (Elliott & Lewis, 2014), over time, these potential scenarios also illustrate how education financing might shape students' major and career choices, since students who have to borrow heavily have much less 'margin' for choosing a path with relatively less immediate financial payoff.





CONCLUSION

It is also important to point out, separate from disposable income, just having outstanding student debt has a negative association with net worth for all three educational attainment levels (see Table 4, Appendix B). The fact that debt of any size may bring about financial hardship, including putting graduates in a position of negative net worth, with its associated and lasting effects, raises the question of whether making student loans the centerpiece of the U.S. financial aid system is an inherently flawed idea. It also points to the potential futility of policy reforms that merely seek to 'tweak' the student loan system in order to mitigate its worst effects, particularly without fully and adequately articulating the potential dimensions in which student loans' effects are felt. As we understand student borrowing today, the factors that influence whether student debt will be harmful for a given student include not only the amount of debt but other, more complex considerations, including the kind of post-secondary institution attended, the major pursued, the kind of job students secure after graduation, what the economy will be like, and the options they have before, during and after higher education. Most of these factors are at least partially outside of the student's direct control, pointing to the need for larger, systemic reforms, in order to create the conditions in which students' economic well-being can be secured, if not *because* of the pursuit of higher education, at least *in spite* of it.

CHAPTER 4

FROM INDEBTEDNESS TO ASSET BUILDING: CHILDREN'S SAVINGS ACCOUNTS AS AN

ALTERNATIVE TO STUDENT LOANS

Students from higher-income families often enjoy uninterrupted financial support throughout their college careers. While in college, higher-income students may not need to work, allowing more time for study and extracurricular involvement, which strengthens ties to the school and peers and discourages students from dropping out (Walpole, 2003). Furthermore, if students from higher-income backgrounds have more options in deciding where to attend, they are likely to choose a more selective, better-quality school with higher retention rates (Carnevale & Strohl, 2010; Davies & Guppy, 1997). Students with higher-income parents also tend to have access to better-funded secondary schools, which encourage higher academic achievement and better-quality teachers (Card & Krueger, 1996; Condron & Roscigno 2003; Johnson, 2006), thus enabling better college preparation and facilitating greater access to merit scholarships, which in turn reduce reliance on debt financing.

EDUCATING THE POOR FOR POVERTY: TWO-TIER HIGHER EDUCATION SYSTEM

As described earlier when discussing Figures 1 and 2, highly-qualified students too often do not achieve equitably in college, as the economics of higher education strongly influence institutional selection to steer even high-achieving low-income students or students of color to less selective schools that spend less per student on instruction, have lower graduation rates, and yield poorer labor market returns than more competitive institutions (Carnevale & Strohl, 2013). Indeed, analysis of this 'undermatching' (Hoxby & Avery, 2012) suggests the existence of two tiers of higher education and powerful forces that track students into one or the other, based more on socioeconomic status than innate ability. These empirical data run directly contrary to the prevailing notion of the U.S. education system as an equalizer, of course, and seem to demand a rethinking of a postsecondary finance system that exacerbates rather than mitigates these unequal disadvantages.

PARENTS' COLLEGE SAVINGS RELATED TO STUDENT EDUCATIONAL ATTAINMENT

This study provides additional evidence of a two-tiered higher education system where students who do not have parents who save for their college education or cannot draw on other asset stores are disproportionately represented among students with less than a bachelor degree. More specifically, Figure 14 indicates that while 27% of children who have an associate degree or some college have parents who put aside savings for their college education. 61% of children who complete a graduate degree have parents who put aside savings for their college education. Generally, the results suggest that the more education a young adult attains, the more likely he/she is to report having parents who had college savings for them. This aligns with Charels, Roscigno, & Torres (2007) findings that link parents' college savings to college attendance.

Moreover, having college savings may help to reduce the debt burden on students and their families, and thus increase the return on a college degree, even while opening additional postsecondary education options, including some with greater potential to catalyze economic mobility. Consistent with this evidence, previous research controlling for demographic, student, school, and university variables, finds that having parents with college savings increases a student's odds of owing less than \$2,000 in student debt, as compared to owing higher balances (Elliott, Lewis, Nam, & Grinstein-Weiss, 2014).

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Figure 14. PARENTS' COLLEGE SAVINGS By Student Loan Use and College Attainment



PARENTS' COLLEGE SAVINGS MAY BOOST NET WORTH

If it is true that parents' college savings is associated with attending college, likelihood of graduation, level of educational attainment, and amount of debt incurred, then it would not be surprising if the presence of parental savings is also associated with having higher net worth upon leaving college. This study provides some evidence of a possible link between young adults' net worth and parents' college savings. Figure 15 indicates that young adults with an associate degree or some college and young adults with a bachelor degree who had parents with college savings are more likely to report having positive net worth than they are to report having negative net worth. In the case of young adults with a graduate degree and parents with college savings, they still report being in debt more than they report having positive net worth. However, they report being in debt less than graduates without parents with college savings. Regardless of college attainment, young adults who did not have parents with college savings to help them pay for college more often report being in debt than having positive net worth, though the difference is small at the some college level (36% negative vs. 40% positive net worth). Generally, in the case of young adults with an associate degree or some college, they report similar levels of negative net worth or positive net worth regardless of whether or not they had parents with college savings. However, multivariate analysis captured in Table 4 indicates that parents' college savings is a positive significant predictor of young adults' reported net worth.

CURRENT FINANCIAL SYSTEMS ARE UNABLE TO PROVIDE ALL CHILDREN WITH SAVINGS FOR COLLEGE

Given the positive returns on a college education in the U.S. economic context, it is common for families to invest generously in their children's education. According to Lino (2012), on average, families allocate about 17% of their total budget to education-related expenses from birth through age 17. This adds up to about \$38,576 in education-related expenditures *before* figuring in college costs. In light of the correlation between educational attainment and economic standing, inequality in parental investments may lead to some children gaining an advantage over others in school, irrespective of innate ability. In this way, unequal parental investments might actually exacerbate the inequities in school quality and other educational inputs, some facilitated through the tax code. Through the effects of these interrelated and compounding forces, education might actually be helping to maintain the intergenerational transmission of class we see in the United States.

Figure 15. REPONDENT'S NET WORTH By Parents' College Savings and College Attainment



While it is beyond the scope of this report to give a full account of the different financial instruments available for financing college today, one of the most well-known and widely used financial instruments designed to facilitate saving for college are state 529 plans. Authorized in the Internal Revenue Code since 2001 and named after the section of the tax code that created them, 529 plans are tax-preferred vehicles for post-secondary education saving, administered by states, usually through contractual agreements with private financial institutions (Newville, Boshara, Clancy, & Sherraden, 2009; Clancy, Lasser, & Taake, 2010). 529s are offered by every state and already afforded considerable tax and public benefit preferences, most of which accrue to higher earners with greater tax liabilities and, then, more to gain from the often generous consideration afforded by states. As of the end of 2013, \$227.07 billion was invested in 11.6 million 529 accounts (College Savings Plan Network, 2014). State tax incentives have been a primary driver of growing 529 utilization, especially by higher-income households.

While participation may have broadened somewhat in recent years, particularly as some states have introduced incentives to encourage lower-income households' participation, in 2007, the median annual income for households with a 529 account was \$100,000 (Newville, 2010) and only 9% of 529 account holders reported incomes below \$50,000 annually (Bearden, 2009). Families with 529s have three times the median income and 25 times the median assets of those without accounts (Government Accounting Office, 2012). The average 529 account has \$19,584 (College Savings Plan Network, 2014), clearly reflecting primarily holdings of higher-income Americans. These figures underscore the potentially limited utility of 529s, at least as currently constructed, as a savings vehicle for low-income Americans. At the same time, given the potential of college savings to reduce reliance on debt and build assets post-graduation, finding ways to extend similar opportunities to low- and moderate-income children will be essential to charting a new vision of U.S. financial aid.

CHILDREN'S SAVINGS ACCOUNTS (CSAS), BUILDING WEALTH AMONG LOWER-INCOME YOUNG ADULTS

Children's Savings Accounts (CSAs) have been developed to facilitate asset building, particularly among low- and moderate-income children (Sherraden, 1991). CSAs are savings vehicles, most commonly designed for higher education savings, that often incorporate specific incentives and explicit structures to encourage savings by disadvantaged youth and families who otherwise may not have equitable access to financial institutions. Unlike basic savings accounts, CSAs leverage investments by individuals, families, and, sometimes, third parties, including public transfers for initial deposits and/or matching funds. These progressive investments extend meaningful incentives for saving and support for building balances to low-income savers, as are already available to higher-income households through tax benefits.

Savings Gateway to Other Assets

While findings from this study and a number of others indicate that outstanding student debt can reduce the ability of young adults to accumulate wealth, emerging research indicates when young adults have had savings accounts as children, they are more likely to own savings accounts (e.g., Ashby, Schoon, & Webley, 2011; Friedline & Elliott, 2013). Further, Friedline, Johnson, and Hughes (2014) find that the overwhelming majority of young adults owned a savings account at or before the acquisition of all financial products including checking, CD, money market, savings bond, stock, and retirement accounts. What the evidence suggests, then, is that CSAs may be a gateway not only to greater educational attainment, itself a conduit of economic mobility, but also to a more diversified asset portfolio, which can then be leveraged for later mobility, from a platform of initial asset holdings (Elliott & Lewis, 2014).

Finding Ways to Increase Asset Accumulation - Repurposing Pell Grants

If CSAs are going to truly be effective tools for helping, in particular, low-income and minority students reduce the need for student loans, creative ways for resourcing these accounts are needed to build adequate savings balances. If transfers can be potent tools for facilitating economic mobility, if properly conceived and delivered, then CSAs may have additional utility as receptacles for the asset-building transfers largely confined, today, to higher earners through the tax code (Steuerle, Harris, McKernan, Quakenbush, & Ratcliffe, 2014). One way to enable low-income children and their families to build significant amounts of assets for college may be to redeploy Pell Grants as an early commitment program. Such an approach also presents the political advantage of using monies already dedicated to higher education financing and the rhetorical victory of repurposing-at least partially-a dedicated transfer program as an asset-building investment. Conversations about using Pell Grants as an early commitment program started without considering linking them to CSAs (e.g., Advisory Committee on Student Financial Assistance, 2005; 2008; Heller, 2006; Schwartz, 2008). Recently, however, the College Board (2013) recommended supplementing the Pell Grant program by opening savings accounts for students as early as age 11 or 12 who would likely be eligible for Pell once they reached college age and making annual deposits of 5% to 10% of the amount of their likely Pell Grant award. There are other potential funding sources for CSAs, of course, including the reallocation of resources currently expended in poorly-targeted and only marginally effective tax credits for higher education (RADD, 2013), but the Pell Grant's emphasis on cultivating superior academic outcomes for low-income children may make it particularly well-suited to these objectives.

Finding Ways to Build Initial Assets is Important for Building Future Assets

The idea behind providing people with early assets as a way to help level the playing field is a concept with which most people are familiar. For simplicity, if you put \$1 in a bank account or other investment vehicle (such as an a state 529 plan or 401k) that has no money in it, you will earn far less from that same \$1 than if you put it into a bank account that has \$10,000 in it already. More concretely, research reveals important relationships between initial asset levels and future asset accumulation (Elliott & Lewis, 2014; Shapiro, Meschede, & Osoro, 2013). For example, Shapiro, Meschede, and Osoro (2013) find that a \$1.00 increase in income later translates to a \$5.00 increase in wealth for Whites, but only a \$0.70 increase for Blacks. However, when initial assets are considered, they find that Blacks have a return of \$4.03 for each dollar increase in income. These findings point to the fact that initial asset levels may play an instrumental role in the power of income to generate assets. Moreover, they suggest, if we can help people build initial assets levels through repurposing the Pell Grant or other innovations, we can help people better leverage the money they have. Particularly when seen in contrast with the current debt-dependent financial aid system that results from our reliance on student loans, the superior economic position students could secure through accumulation of positive financial assets in a CSA—capitalized with their own savings effort and the adequate transfer of public resources from repurposed Pell Grants and other sources-becomes evident. With the potential for improved outcomes on a variety of indicators across a child's lifespan, pivoting to asset-empowered financial aid is a policy move worthy of the significant political lift it would require.

IN CONCLUSION

As American college graduates encounter an increasingly globalized economy with greater risks and considerably less margin for error, U.S. higher education policies need to go beyond focusing on how to increase college enrollment and even graduation. They must turn to enhancing opportunities for students to increase their expectations related to educational achievement and for their families to prepare financially in advance of college. We also must consider whether our policies place college graduates in a strong position to succeed financially as young adults, the ultimate aim of higher education investments and the primary rationale for expanding public support for such investments. As recognition of the at least potentially harmful effects of student debt mounts, the greatest obstacle to pivoting to asset-empowered instead of debt-dependent financial aid may be rhetorical; unless we can imagine the alternatives and the benefits they could bring, we will struggle to make this leap, even if the viability of the American Dream depends on it.

CSAs may be a way to make progress on all of these goals and maximize the benefit of going to college. For example, student debt reduces the return borrowers receive on their educational investment. Having assets may help to eliminate the student debt burden on students and their families, and thus increase the value of a college education. In addition, if CSAs correlate with better student engagement at an early age, saving may allow them to take full advantage of the primary and secondary education they receive and position them for greater college achievement, alongside their more advantaged peers. Given the relationship between engagement and academic attainment, the prospect of affecting children's orientation toward their education for relatively small initial investments deserves greater attention. Also, if CSAs are gateway financial instruments that lead to greater asset accumulation in other vehicles, children may be more likely as adults to maximize the financial benefit of having a college degree. While more research is needed to determine the precise mechanisms through which to realize the potential outcomes evidence suggests are associated with Children's Savings Accounts, in order to inform policy development, on balance, it seems clear that there are real advantages to reshaping our financial aid system from one that hinges on students' willingness to borrow—sometimes fairly recklessly—to one that invites families to partner with government to prepare in advance for their futures. Certainly a model that builds on CSAs conveys greater hope that, through expenditure of considerable effort, children can achieve the dreams they and their families forge. Such a promise is the core of the American Dream and a force demonstrably potent enough to carry this generation forward.

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APPENDIX A.

METHODS

DATA

This study uses longitudinal data from the Educational Longitudinal Survey (ELS) made available to the public by the National Center for Education Statistics (NCES). The survey began in 2002 when students were in 10th grade, and follow-up waves took place in 2004, 2006, and 2012. Its purpose was to follow students as they progressed through high school and transitioned to postsecondary education or the labor market and is an ideal dataset to test whether early experiences or resources predicted later outcomes.

The ELS aimed to present a holistic picture of student achievement by gathering information from multiple sources. Students, their parents, teachers, librarians, and principals provided information regarding students' average grades, math achievement, and educational expectations and school resources and curriculum, teacher experience, student and parent work/employment, and students' post-high school enrollment in college.

SAMPLE

We then created three separate samples of young adults (a) who had some college or an associate degree, (b) bachelor degree, and (c) graduate degree. These samples were restricted to include students who were in the 2002 10th grade cohort and the 2012 ELS samples (i.e., those who answered the follow-up questionnaires). Further, all three samples only include students who graduated from high school.

Family Economic Status Variables

All covariates are downloaded from 2002 unless specified otherwise.

Household income. In the ELS, household income included 13 distinct levels. For this study, the levels of household income were combined into three levels: (a) low-income (below \$35,000), (b) middle-income (>=\$35,000 to \$75,000), and (c) high-income (\$75,000 or higher). The levels were chosen, in part, to keep relatively equal cases in each category while maintaining important distinctions between income groups.

Parent education level. Parent education level is equivalent to whichever parent's is higher and includes eight distinct levels. The eight levels were collapsed into three for the final analysis: (a) high school diploma or less, (b) some college or associate degree, (c) bachelor degree, and (d) graduate degree or higher.

Young Adult's Characteristics Variables

Student race/ethnicity. The variable representing race included seven categories in the ELS. American Indian or Alaska Native and more than one race were not included in this analysis due to small sample sizes, and Hispanic and Latino were combined. Five categories were included in the final analysis: (a) White, (b) Black, (c) Latino/Hispanic, (d) Asian, and (e) Other.

Gender. Student's gender is a dichotomous variable: (a) male and (b) female.

Marital status. Marital status was recoded into a dichotomous variable: (a) married and (b) not married.

Region of the country. In the ELS data set, region is coded as Northeast, Midwest, South, and West. It is the region of the country the respondent attended high school.

Employment status. The employment status variable was recoded into a three level variable: (a) unemployed, (b) part-time employment, and (c) full-time employment.

High school GPA. Students' grade point average (GPA) is a categorical variable that averages grades for all coursework in 9th through 12th grades. There are seven categories: 0 = 0.00-1.00, 1 = 1.01-1.50, 2 = 1.51-2.00, 3 = 2.01-2.50, 4 = 2.51-3.00, 5 = 3.01-3.50, and 6 = 3.51-4.00. We collapsed categories 0-2 into one due to small frequencies (36, 156, and 782, respectively). To convert this into letter grades, a commonly used grade scale is 0 = F, 1 = D, 2-3 = C, 4-5 = B, and 6 = A. A dichotomous variable was created 0 = below 3.0 and 1 = 3.0 or above.

College selectivity. The following categories made up the college selectivity variable: 1 = public, four-year or above; 2 = private, not-for-profit, four-year; 3 = private, for-profit, four-year; 4 = public, two-year; 5 = private, not-for-profit, two-year; 6 = private, for-profit, two-year; 7 = public, less than two-year; 8 = private, not-for-profit, less than two-year; 9 = private, for-profit, less than two-year. They were recoded as a three level variable with the following categories: 0 = public, four-year; 1 = private, four-year; 2 = private, for-profit, four year; college. Downloaded from 2006 data.

Years after college. This was a continuous variable created by subtracting the year 2013 from the last year responded reported attending postsecondary school.

Occupation classification. The ELS occupation variable was recoded into three groups: (a) highest paying occupations (\$60,000 or above), moderate paying occupations (\$35,000 to \$59,999), and lowest paying occupations (below \$35,000). The Bureau of Labor Statistics employment by major occupational group was used to classify the jobs by median annual wage.³ How jobs were classified:

•	Highest paying occupations (\$60,000 or above)	Management Occupations, Business and Financial Operations Occupations, Compute and Mathematical Occupations, Architecture and Engineering Occupations, Life, Physical, and Social Service Occupations, Healthcare Practitioners and Technical Occupations, and Legal Occupations
•	Moderate paying occupations (\$35,000 to \$59,999)	Protective Services, Arts, Design, entertainment, sports, and media occupations, Education, training, and library occupations, Community and Social Service Occupations, Installation, maintenance, and repair occupations, Construction and extraction occupations
•	Lowest paying occupations (below \$35,000)	Transportation and Material Moving Occupations, Production Occupations, Farming, fishing, and forestry occupations, Office and administrative support occupations, Sales and related occupations, Personal care and service occupations, Building and grounds cleaning and maintenance occupations, Food preparation and serving related occupations, Healthcare support occupations

Variables of Interest

Parents' savings for student's college. The variable of interest came from a survey question that asked parents whether they were financially preparing to pay for their children to attend college by starting a savings account: 1 = yes, 0 = no. Downloaded from 2002 data.

Student debt. The student debt outcome variable is a dichotomous variable (i.e., has student loan debt/does not have student loan debt). Downloaded from 2012 data.

³³ See <u>http://www.bls.gov/emp/ep_table_101.htm</u>.

Amount of student loan debt. The variable of interest, amount of student loan debt, was drawn from the 2012 wave and was a continuous variable.

Disposable income. We also created a disposable income variable. To create the disposable income variable we first divide total annual income by 12 to determine what each respondent's monthly income was. Then we subtracted the respondent's monthly student loan payment from his/her total monthly income. For young adults with no student loans, the disposable income and the total monthly income would be the same amount.

Dependent Variable

Net worth. Respondents were asked to imagine if they and their spouse were to sell all of their major possessions to include their home, turn them into cash, and pay off all of their debts to include their mortgage, would they have something left over, break even, or be in debt?

ANALYSIS PLAN

Prior to running the regression model, we first tested for the usual symptoms of multi-collinearity by computing the Variance Inflation Factors (VIF) for every covariate in all three samples. In each of the three samples, we found all of them to be less than two (i.e. $\max(VIF) < 2$), which suggests that multi-collinearity is not an issue.

The standard ordinal model implicitly assumes proportional-odds. To valid this assumption, we conducted a test proposed by Brant (1990). From the results of the Brant test we found: (a) some college/associate degree - covariates race, gender, and loan use; (b) bachelor degree - covariates family income, occupation, and loan use; and (c) graduate degree – covariates region, college selectivity, and occupation violate the ordinal logit models parallel lines assumption. Hence, we consider a modification to the standard ordinal logit, a generalized threshold model that accounts for the possibility of young adults using different thresholds in reporting their responses, by relaxing the assumption that the thresholds, are identical for all respondents.

The generalized threshold ordinal logit model retains the idea that young adults realize their net worth from a common distribution, but assumes that they use systematically different thresholds while reporting their net worth. A common approach to model generalized thresholds is to make the threshold parameters linear (Maddala, 1983; Peterson & Harrell, 1990). We estimate the parameters of this generalized threshold model using the GOLOGIT2 routine (Williams, 2006a) in STATA 13. The results are summarized in Table 4, Appendix B.

MARGINAL EFFECTS

The main purpose of our model is to predict the probability that a young adult who borrows student loans reports a particular level of net worth. It is important to understand how these probabilities of a young adult reporting a certain level of net worth change with student loans and other covariates. Hence we calculated the predicted probabilities of the effect of different covariates on net worth. While measuring the marginal probability effects of any covariate, we define a typical young adult for every covariate by fixing the rest of the covariates at their mean (or the mode for categorical covariates).

APPENDIX B

Tables

Table 1. Weighted (row) descriptive statistics

Categorical Variables Associate Degre		e/Some College ($n = 4,005$)	Bachelor	Degree $(n = 3, 118)$	Graduate Degree $(n = 914)$		
	Freq.	%	Freq.	%	Freq.	%	
Family income							
Low-income (below \$35,000)	1,743	73	554	23	104	04	
Middle-income (>=\$35,000 to < \$75,000)	1,964	58	1,136	34	278	08	
High-income (\$75,00 or higher)	917	38	1,114	46	384	16	
Parent's education (head)							
High school or less	1,402	74	423	22	156	04	
Some college or associate degree	1,773	65	797	29	156	06	
Bachelor degree	812	44	827	44	227	12	
Graduate degree	446	32	658	48	269	20	
Race/Ethnicity							
White	2,578	50	2,004	39	555	11	
Asian	121	39	143	46	46	15	
Black	690	72	210	22	57	06	
Hispanic	808	74	238	22	47	04	
Other	228	64	104	29	27	07	
Male	2,218	60	1,242	33	261	07	
Female	2.226	53	1.466	35	472	11	
Married	1.377	57	809	34	218	09	
Not married	3.187	56	1,958	34	545	10	
Region of Country	-,		-,,			- •	
Northeast	789	49	623	38	214	13	
Midwest	1,119	54	736	36	200	10	
South	1,572	58	897	33	227	08	
West	1.144	63	549	30	124	07	
Employment Status	,						
Unemployed	896	77	212	18	60	05	
Part-time employment	615	62	297	30	73	07	
Full-time employment	3,114	52	2,295	38	633	10	
High school GPA 3.0 or above	2,573	44	2,534	43	739	13	
High school GPA below 3.0	2,051	87	270	12	26	01	
University Selectivity							
Public university	3,206	57	1,950	35	434	08	
Private not-for-profit	332	24	749	54	293	21	
Private for-profit	1,003	88	98	09	35	03	
Occupation Classification							
Lowest paying occupations (below \$35,000)	2,696	74	895	24	77	02	
Moderate paying occupations (\$35,000 - \$59,999)	871	49	654	37	237	13	
Highest paying occupations (\$60,000 or more)	906	35	1,215	48	439	17	
Continuous Variables	Freq.	(Mean)[Median]	Freq.	(Mean)[Median]	Freq.	(Mean)[Median]	
Years since college	3,963	(4.59)[5]	3,096	(3.95)[4]	910	(2.34)[2]	

Source. Data from the Educational Longitudinal Study (ELS). All numbers are rounded to the nearest whole number. *Note*. Freq. = frequency. All numbers are rounded to the nearest whole number.

Table 2.	Weighted	descriptive	statistics	for young	adults with loans	
I ubic 4.	,, eignieu	acocriptive	statistics	ior joung	addito with found	

Categorical Variables	Categorical Variables Associate Degree/Some College (n = 4,005)		Bachelor I	Degree $(n = 3, 118)$	Graduate Degree ($n = 91$)		
	Freq.	Percent	Freq.	Percent	Freq.	Percent	
Family's Income							
Low-income (below \$35,000)	757	48	466	76	103	83	
Middle-income (>=\$35,000 to < \$75,000)	936	53	936	74	269	81	
High-income (\$75,00 or higher)	376	45	658	53	338	74	
Parents' education (head)							
High school or less	635	50	356	76	83	86	
Some college or associate degree	796	50	667	75	157	84	
Bachelor degree	372	51	587	64	213	79	
Graduate degree	180	45	391	54	221	69	
Race/Ethnicity							
White	1.144	49	1.428	64	499	75	
Asian	45	41	94	59	44	79	
Black	357	57	190	82	61	88	
Hispanic	328	45	203	77	44	79	
Other	160	52	82	71	27	86	
Mala	915	46	898	65	239	77	
	1.071	52	1 106	69	126	77	
Female	1,071	55	1,100	08	430		
Married	572	46	595	66	193	74	
Not married	1,468	51	1,439	66	513	79	
Region of Country							
Northeast	444	63	516	75	212	83	
Midwest	586	58	571	70	188	79	
South	636	45	600	60	192	71	
West	636	45	372	61	117	80	
Employment Status							
Unemployed	382	47	164	70	55	77	
Part-time employment	297	54	219	66	71	81	
Full-time employment	1,390	50	1,676	66	584	77	
High school GPA 3.0 or above	1,173	51	1,844	65	687	78	
High school GPA below 3.0	895	49	216	72	22	70	
University Selectivity							
Public university	1,159	40	1,383	64	391	75	
Private not-for-profit	191	64	578	69	285	81	
Private for-profit	689	76	92	84	31	74	
Occupation Classification							
Lowest paying occupations (below \$35,000)	1,219	50	674	68	67	73	
Moderate paying occupations (\$35,000 to \$59,999)	367	47	497	68	215	76	
Highest paying occupations (\$60,000 or more)	423	52	859	64	412	79	
Has student loans	2,068	50	2,060	66	709	78	
Continuous Variables	Freq.	(Mean)[Median]	Freq.	(Mean)[Median]	Freq.	(Mean)[Median]	
Amount borrowed*	4,162	(\$8,148)[\$0]	3,118	(\$21,433)[\$15,000]	914	(\$55,716)[\$40,000]	
Monthly student loan payment*	3,132	(\$62.77)[\$0]	2,623	(\$188)[\$110]	681	(\$367)[\$250]	
Disposable income*	3,132	(\$1,997)[\$1,750]	2,623	(\$2,805)[\$2,573]	681	(\$2,371)[\$2,317]	

Source. Data from the Educational Longitudinal Study (ELS). All numbers are rounded to the nearest whole number. Note. Freq. = frequency. All numbers are rounded to the nearest whole number. * These figures include young adults with no loans. This is why, for example, the median amount borrowed is \$0 among students with an associate degree or some college.

Table 3. Net worth weighted descriptive statistics

Categorical Variables	Assoc	viate Degree/Some College	Bache	lor Degree	Graduate Degree	
		(n :	= 3,118)	(n = 914)		
No Student Debt	Freq.	%	Freq.	%	Freq.	%
Debt (assets < debt)	1,202	34	1,045	36	454	52
Even (assets = debt)	860	25	460	16	117	14
Ahead (assets > debt)	1,450	41	1,363	48	290	34
Has Student Debt						
Debt (assets < debt)	863	50	972	51	430	64
Even (assets = debt)	383	22	134	17	99	15
Ahead (assets $>$ debt)	478	28	758	32	142	21

Source. Data from the Educational Longitudinal Study (ELS). *Note*. Freq. = frequency. All numbers are rounded to the nearest whole number.

Tuble 1. Futurieter Estimates for the ordinar Eogit models to	Associate Degree/Some College		Bachelor Degree			Graduate Degree			
	(n = 1.851)		(n = 1.897)			(n = 507)			
Variable	Standard	Gener	alized	Standard Generalized		Standard Generalized			
	Debt/Even	Debt	Even	Debt/Even	Debt	Even	Debt/Even	Even	Debt
Family's Income (Ref. Low-Income)									
Middle income	-0.090	-0.085	-0.085	0.103	-0.053	<i>0.316</i> †	-0.584†	-0.603†	-0.603†
High income	0.039	0.048	0.048	0.226	0.022	0.471*	-0.689†	-0.672†	-0.672†
Parents' Education (Head's) (Ref. High school or less)									
Some college or associate degree	0.015	0.020	0.020	-0.238	-0.236	-0.236	0.293	0.277	0.277
Bachelor degree	0.028	0.034	0.034	-0.194	-0.189	-0.189	0.354	0.323	0.323
Graduate degree	0.198	0.206	0.206	-0.009	-0.013	-0.013	0.467	0.432	0.432
Race/Ethnicity (Ref. White)									
Asian	-0.280	-0.285	-0.285	-0.038	-0.039	-0.039	0.018	-0.034	-0.034
Black	-0.319*	-0.311†	-0.311†	-0.621*	-0.620*	-0.620	-0.647	-0.678	-0.678
Hispanic	0.048	0.337†	0.121	0.013	0.005	0.005	0.354	0.283	0.283
Other	-0.322	-0.316	-0.316	0.048	0.045	0.045	-1.635*	-1.762**	-1.762**
Male	-0.400***	-0.175	-0.543***	-0.016	-0.014	-0.014	0.201	0.181	0.181
Married	0.273**	0.277**	0.277**	0.468***	0.461***	0.461***	0.784***	0.783***	0.783***
Region of Country (Ref. Northeast)									
Midwest	0.133	0.128	0.128	0.214	0.213	0.213	-0.179	-0.345	-0.106
South	0.062	0.062	0.062	0.259†	0.254†	0.254†	0.025	0.047	0.047
West	-0.076	-0.073	-0.073	0.218	0.220	0.220	-0.355	-0.343	-0.343
Employment Status (Ref. Unemployed)									
Part-time employment	0.137	0.142	0.142	-0.222	-0.228	-0.228	0.674	0.660	0.660
Full-time employment	0.131	0.135	0.135	-0.267	-0.276	-0.276	0.783†	0.733	0.733
GPA 3.0 or above	0.031	0.031	0.031	-0.404*	-0.404*	-0.404*	0.510	0.564	0.564
University Selectivity (Ref. Public)									
Private not-for-profit	-0.196	-0.196	-0.196	-0.239*	-0.247*	-0.247*	-0.333	-0.130	-0.597*
Private for-profit	-0.230†	-0.239†	-0.239†	-0.664*	-0.673*	-0.673*	-1.194*	-1.147†	-1.147†
Years since college	-0.011	-0.012	-0.012	-0.009	-0.009	-0.009	-0.056	-0.059	-0.059
Occupation Classification									
(<i>Ref.</i> Lowest paying occupations – below \$35,000)									
Moderate paying occupations (\$35,000 - \$59,999)	0.216†	0.219†	0.219†	0.209	0.216	0.216	-0.365	-0.357	-0.357
Highest paying occupations (\$60,000 or more)	0.375**	0.370**	0.370**	0.171	0.173	0.173	-0.521	-0.757*	-0.164
Variables of Interest									
Parents college savings	0.082**	0.079**	0.079**	0.069**	0.068**	0.068**	0.103*	0.101*	0.101*
Disposable income	0.000 **	0.000 **	0.000 **	0.000***	0.000 * * *	0.000 * * *	0.000***	0.000 * * *	0.000 ***
Has student loans	-1.436***	-1.622***	-1.255***	-2.247***	-2.502***	-2.155***	-2.590***	-2.628***	-2.628***
Threshold: Debt-Even	-1.130***			-1.616***			-0.631		
Threshold: Even-Assets	0.111			-0.623			0.217		
Log Likelihood LL	-1,766	-1,749		-1,523	-1,515		-392	-385	
Likelihood Ratio χ^2 LR	364	398		803	819		228	242	
No. of Parameters	25	28		25	28		25	28	
McFadden Pseudo R ²	.09	.10		.21	.21		.23	.24	

Table 4. Parameter Estimates for the Ordinal Logit Models by Educational Attainment

Source. Data from the Educational Longitudinal Study (ELS). †p<.10; *p<.05; **p<.01; ***p<.001.

	Disposable Income		No Loans		Has Loans			
	Disposable income	Debt	Even	Ahead	Debt	Even	Ahead	
	\$1,000	0.17	0.28	0.55	0.51	0.23	0.26	
	\$2,000	0.16	0.27	0.58	0.48	0.24	0.28	
	\$3,000	0.14	0.25	0.60	0.46	0.24	0.30	
	\$4,000	0.13	0.24	0.63	0.43	0.24	0.33	
Sama Callaga ar Associate Dagras	\$5,000	0.12	0.23	0.65	0.41	0.25	0.35	
Some Conege of Associate Degree	\$6,000	0.11	0.21	0.68	0.38	0.25	0.37	
	\$7,000	0.10	0.20	0.70	0.35	0.25	0.40	
	\$8,000	0.09	0.19	0.72	0.33	0.24	0.43	
	\$9,000	0.08	0.18	0.74	0.31	0.24	0.45	
	\$10,000	0.07	0.16	0.76	0.51	0.23	0.26	
	\$1,000	0.12	0.20	0.68	0.63	0.18	0.20	
	\$2,000	0.10	0.17	0.73	0.57	0.20	0.24	
	\$3,000	0.08	0.15	0.77	0.51	0.21	0.28	
	\$4,000	0.06	0.12	0.81	0.45	0.22	0.34	
Pachalor Degree	\$5,000	0.05	0.10	0.85	0.39	0.22	0.39	
Bachelor Degree	\$6,000	0.04	0.08	0.88	0.33	0.22	0.45	
	\$7,000	0.03	0.07	0.90	0.28	0.21	0.51	
	\$8,000	0.02	0.06	0.92	0.23	0.19	0.57	
	\$9,000	0.02	0.04	0.94	0.19	0.18	0.63	
	\$10,000	0.01	0.04	0.95	0.16	0.16	0.69	
	\$1,000	0.14	0.14	0.72	0.70	0.14	0.15	
	\$2,000	0.12	0.12	0.76	0.65	0.16	0.19	
	\$3,000	0.10	0.10	0.80	0.60	0.18	0.23	
	\$4,000	0.08	0.09	0.84	0.54	0.19	0.27	
Graduata Dagraa	\$5,000	0.06	0.07	0.87	0.48	0.20	0.32	
Ofaduate Degree	\$6,000	0.05	0.06	0.89	0.42	0.21	0.37	
	\$7,000	0.04	0.05	0.91	0.37	0.21	0.43	
	\$8,000	0.03	0.04	0.93	0.31	0.20	0.48	
	\$9,000	0.03	0.03	0.94	0.27	0.19	0.54	
	\$10,000	0.02	0.03	0.95	0.22	0.18	0.60	

Table 5. Predicted Probabilities for the Ordinal Logit Models by Educational Attainment

Source. Data from the Educational Longitudinal Study (ELS). *Notes*. See Figures 1-6 for a picture of the predicted probabilities.





Project supported by:

Ewing Marion KAUFFMAN Foundation

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