SAVINGS ACCOUNT: PROTECTION FROM UNSECURED DEBT

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Terri Friedline, PhD, University of Kansas, School of Social Welfare
1545 Lilac Lane, 307 Twente Hall, Lawrence, KS 66045
Email: tfriedline@ku.edu; Phone: (785) 864-2267

Allison T. Freeman, PhD, University of North Carolina at Chapel Hill, Center for Community Capital
1700 Martin Luther King Boulevard, Suite 129 CB#3452, Chapel Hill, NC 27599
Email: allison_freeman@unc.edu; Phone: (919) 843-7291

Abstract

Debt is an important component of young Americans' balance sheets, in part because the effects of different types of debt can vary widely: while some types of debt can contribute to lifetime economic mobility, other types can drain resources. This paper used data from the 1996 Survey of Income and Program Participation to consider the role that a savings account might play in the use of secured and unsecured debt by young adult households. While a savings account was related to more accumulated debt overall, the type of debt accumulated was less risky and potentially more productive. Owning a savings account was associated with a 15% increase, or $7,500, in the value of secured debt and a 14% decrease, or $581, in the value of unsecured debt. Thus, a savings account may help young adults "invest in their debt" by entering better, healthier credit markets and protecting them from riskier ones.

Center on Assets, Education, and Inclusion
The University of Kansas
www.aedi.ku.edu

Introduction

Following the Great Recession, public discussion has been increasingly focused on the financial well-being of young adult households and, in particular, on the effect that indebtedness might have on their financial health and their life transitions (Mazumder, 2012; Pew Charitable Trusts, 2013). The average overall debt — including mortgage, vehicle, credit card, and student loan debt — of households headed by those in their mid-20s is approximately $60,000 (Hodson & Dwyer, 2014), and young adults are delaying marriage, parenthood, and homeownership, in part due to their accumulated debt (Hodson & Dwyer, 2014). Beyond the impact debt has on young adults' immediate life choices, mounting debt can limit young people's chances for economic mobility over the life course.

From this perspective, debt can be considered a "double-edged sword" (Hodson & Dwyer, 2014, p. 1). In some cases, debt can be used in productive ways that might promote economic mobility: mortgage debt undertaken on a home that might generate equity is one example of this (Houle & Berger, 2014). In other cases, however, debt can act as a drain on resources rather than an investment in future gain, and it is therefore unproductive: paying down high interest on credit through long repayment plans is an example of this type of debt (Caskey, 2001, 2005; Houle, 2014). The different types of debt and their widely varying effects are what make debt an important component of young Americans' balance sheets and worthy of exploration.

Of course, reliance on and use of debt is intricately tied to the asset side of the balance sheet. Young adults who hold liquid assets and have positive net worth may have the financial resources to better weather unexpected changes in employment or living situations or to further invest in their futures (Bell & Blanchflower, 2011; Rank & Hirschl, 2010); they are also going to be less likely to rely on unproductive debt during times of financial strain. Thus, finding strategies that facilitate asset acquisition and accumulation may help steer young adults toward more financially stable balance sheets and improve their chances for economic mobility.

One strategy toward helping young adults decrease their reliance on unproductive debt may be ownership or acquisition of a savings account. Friedline, Johnson, and Hughes (2014) found that young

adults who owned or acquired a savings account had more diverse asset portfolios, exemplified by their ownership of checking, stock, and retirement accounts. While these researchers found that the acquisition of a savings account contributed $50 to young adults' accumulated liquid assets, they also discovered that the contribution exceeded $5,000 when a savings account was combined with a diverse asset portfolio (Friedline, Johnson, & Hughes, 2014). These researchers hypothesized that a savings account served as a gateway to asset diversification and accumulation.

Just as a savings account may serve as a gateway to building the asset side of young Americans' balance sheets, a savings account may also be related to the debt side of their balance sheets. Specifically, a savings account may facilitate young adults' access to and accumulation of secured, productive debt that may be used to achieve upward economic mobility, while also protecting them from access to and accumulation of unsecured, unproductive debt that may relate to potential downward economic mobility.

In this paper, we measure young adult households' use of secured and unsecured debt and test the role that a savings account might play in mitigating reliance on unsecured debt. The paper begins by defining secured, productive debt and unsecured, unproductive debt. This is followed by a review of the literature on young adults' reliance on debt, young adults' use of unsecured debt, and the relationship between savings accounts and debt use more generally. Next we present our research questions and methods. Of note is that we explore young adults' debt using data from 1996. Even though the Great Recession served as a flashpoint of sorts for public discussion about debt, the Great Recession was a unique moment in history, and so we instead use data from a period of macroeconomic prosperity to serve as a benchmark of young adult households' debt. After presenting and discussing the results, the paper concludes by drawing practical implications for research and policy that might support young adults' economic mobility.

Productive and Unproductive Debt

Secured and unsecured debt are referred to, respectively, as "productive" and "unproductive" throughout this paper. Secured debt is considered productive since it is lower-risk than unsecured debt and may be used for activities that might promote economic well-being, such as obtaining a home or investing in education (Boot, Thakor, & Udell, 1991). Secured debt can help borrowers build credit and improve their financial standing (Dwyer, McCloud, & Hodson, 2011), potentially serving both as an indicator of and catalyst for upward economic mobility. While secured debt may not always assist in promoting economic

mobility — as was the case during the Great Recession when unemployment rose, equity on some home mortgages was negative, and many households found themselves overleveraged (Ferreira, Gyourko, & Tracy, 2010) — its collateralized nature allows borrowers to leverage existing assets and often bend credit markets to their advantage (Campbell & Hercowitz, 2005).

In contrast, borrowers of unsecured, uncollateralized debt have not leveraged existing assets, and their use of credit markets is riskier (Chatterjee, Corbae, Nakajima, & Ríos-Rull, 2007); for these reasons, we refer to unsecured debt as unproductive. While there may be times when unsecured debt from credit cards or payday lenders helps young adult households meet short-term financial goals on their path to economic mobility (Morse, 2011), generally speaking unsecured debt costs its borrowers more and places them at greater financial risk than secured debt does. Unfortunately, unsecured debt is the type more widely available to lower-income households (Bolton & Rosenthal, 2005), demonstrating a bifurcation within the borrowing system that may steer higher-income, more advantaged households toward secured, productive debt and lower-income, less advantaged households toward unsecured, unproductive debt (Brown & Taylor, 2008; Houle, 2014; Sullivan, 2008). Ultimately, a balance sheet tilted toward unsecured debt may chip away at young adults' already fragile financial well-being rather than serve as a catalyst for their upward economic mobility.

Literature Review

As we consider the effect that holding a savings account might have on young adults' use of unproductive debt, we are really looking at three interrelated things: young adults' reliance on debt in general, young adults' use of unsecured debt in particular, and the relationship between savings accounts and debt use more generally, whether in the lives of young adults or not. This literature review examines these topics.

Most recent cohorts of young adults have relied on debt (Chiteji, 2007; Hodson & Dwyer, 2014; Houle, 2014). From early Baby Boomers, who entered adulthood in the mid-1970s, to Generation Y, who entered adulthood in the mid-2000s, the vast majority (respectively ranging from 78% to 75%) held some type of debt during their young adult years (Houle, 2014). Yet despite its historically-acceptable position on the balance sheet, debt has captured an increasing share of young adult households' balance sheets over time. For example, young adult households' reported debt burden — the ratio of debt relative to assets — increased from about 2% to 23% between early Baby Boomers and Generation Y, and the percentage

reporting negative net worth almost doubled (Houle, 2014). Young adults' debt use appears to be increasing while their assets and net worth appear to be diminishing, and, unfortunately, the rise in debt usage has come at the expense of productive debt, i.e. the share of collateralized, productive debt is decreasing relative to uncollateralized, unproductive debt (Houle, 2014).

Several researchers have looked into the use of unsecured debt by young adults. Autio et al. (2009) examined the use of consumer credit by young adults, and discovered that young adults in all income brackets and employment positions used consumer credit; however, there was a direct link between certain "life-course stages" (young, single parent), financial positions (low income), employment situations (marginal) and the likelihood of taking out instant loans and consumer credit. Narrowing in on just credit card use by the young, lack of financial knowledge, age, number of credit cards, the ability to delay gratification, and attitudes toward credit card use were all related to credit card indebtedness (Norvilitis et al., 2006).

Ultimately, our research concerns the relationship between the presence of savings and reliance on unproductive, unsecured debt. The link between holding a savings account and the use of unsecured debt is not direct: possession of a savings account in and of itself will not stop young adults from carrying a balance on a credit card or taking out a payday loan. However, it is reasonable to assume that if one has a savings account, one is more likely to have the funds to meet unexpected expenses or smooth income fluctuations: in fact, research has shown that holding a savings account is related to access to other financial tools that can potentially reduce the amount of unsecured debt one accumulates (Friedline, Johnson, & Hughes, 2014). In this paper, we assume that young adults with a savings account have some funds that they might draw on in times of financial need, and that their doing so will reduce their use of payday loans, credit cards, and other forms of unsecured debt.

Unfortunately, the literature on the relationship between savings and unsecured debt is thin, which is part of why we are undertaking the current analysis. Sullivan (2008) used SIPP data to look at lower-income households' reliance on unsecured debt (which he defined as uncollateralized debt, including credit card loans, overdraft fees, etc.) during temporary shortfalls in employment income. He found that households in the second and third deciles of the asset distribution relied on unsecured debt, increasing their unsecured debt by between 11.5 and 13.4 cents for every dollar lost in income, whereas households in higher asset deciles did not rely on unsecured debt. Sullivan's (2008) investigation was not focused on

whether savings accounts or other assets mitigated the acquisition or accumulation of unsecured debt; however, his findings suggest that households from higher asset deciles — potentially those with a savings account and access to a diversity of financial tools — do not rely on unsecured debt during shortfalls in unemployment income. In other words, their assets may protect them from acquiring and accumulating unproductive, unsecured debt in times of financial need.

Research Questions

We now move on to explore what predicts young adults' debt-holding and test whether ownership and acquisition of a savings account might provide access to productive debt and mitigate reliance on unproductive debt. Specifically, we ask whether ownership and acquisition of a savings account facilitates the acquisition and accumulation of young adult households' secured debt and protects against the acquisition and accumulation of their unsecured debt. We look at how young adults' age, education level, and earned income interact with a savings account to produce these effects; we examine these things in particular because research has shown that those who are older, achieve higher levels of education, and earn more money are more likely to have savings accounts and related financial products that connect them to credit markets (Federal Deposit Insurance Corporation [FDIC], 2012).

Methods

Data

In order to analyze household debt among young adults over time, we needed a large sample that provided information at multiple and frequent time points. The Panel Study of Income Dynamics (PSID) and Survey of Consumer Finances (SCF) are often used to explore questions about wealth, including assets and debts (Curtin, Juster, & Morgan, 1989; Czajka, Jacobson, & Cody, 2003; Wolff, 1999); however, these surveys have small sample sizes, only measure data every other year at most (potentially missing sensitive changes that occur monthly or quarterly), and only one of them is a panel study. We therefore used data from the 1996 panel of the Survey of Income and Program Participation (SIPP), which was collected on a monthly basis over a period of four years and was made publicly available by the Census Bureau. We relied on data from 1996 because it was gathered during a period of economic prosperity (i.e. a time of wealth gains for many households and for the economy as a whole).[1] Because of this, the 1996 data provide insight

[1] While the US as a whole experienced macroeconomic growth evidenced in part by expanded productivity, (Jorgenson, Ho, & Stiroh, 2008), this growth did not necessarily translate into healthy balance sheets for all

into young adults' balance sheets during a period of macroeconomic stability when young adults' balance sheets might have appeared the most optimistic (Jorgenson, Ho, & Stiroh, 2008), as opposed to during a period of economic volatility.

Between December 1995 and February 2000, the 1996 SIPP drew a random sample of households grouped within geographic regions based on population counts from the most recent census (US Census Bureau, 2012) and over-sampling those with lower incomes (N = 380,609 individual respondents from 40,188 eligible households; n = 1,634,357 number of rows). Each household member over age 15 participated in data collection, which occurred once during every four-month period. During each interview, respondents recalled their previous four months' experiences, thus resulting in 12 observations per year for a 48-month time span on many variables. This allowed for the construction of monthly and quarterly histories of young adults' savings account acquisition for up to 48 months, which was ideal for addressing the research questions. Information was taken from the fourth month in the reference period when respondents were interviewed in person and their recall was likely the most accurate. The 1996 SIPP also collected annual information in topical modules, including topics such as health, education, child care, and assets and debts. Annual information on household debt was collected in topical modules during waves 3, 6, 9, and 12 during the four-year panel.

For the current research, sample selection criteria included young adults between ages 18 to 40 who provided reference month and topical module information. Young adult respondents were included when they were within the age range of 18 to 40 and participated in at least two years' worth of data collection. This meant that a young adult who entered the sample at age 16 was included when they provided at least two years' worth of information, making them age 18 at some time during the sampling frame. Likewise, two years' worth of information was retained for a young adult who entered the sample at age 40, making them age 42 at some time during the sampling frame. Restricting the sample in this way minimized the inclusion of young adults who cycled in or out of the 1996 SIPP within a shorter time, ensured more equal sample sizes across age groups, and reduced the number of available rows in the data to 100,998. Our final sample was 43,455 young adults.

Americans. For instance, in the late 1990s, younger households headed by someone age 42 or less had about 29% of the median net worth held by older households, female-headed households had about 9% of the median net worth of male-headed households, black households had about 14% of the median net worth held by white households, and high school-educated households had about 19% of the median net worth held by college-educated households (Friedline, Nam, & Loke, 2014).

Within the final sample, young adults had an average age of approximately 32. Forty-six percent of young adults owned a savings account and 4% acquired one during the course of the panel. Among young adult households that used debt (i.e. the value of their debt was greater than $0), their median total debt value was $33,000 (*SD* = $66,957).[2] Households that used debt held a median of $50,000 (*SD* = $66,245) in secured debt and $4,150 (*SD* = $12,240) in unsecured debt. See Tables 1 and 2 for additional sample characteristics.

[Insert Table 1 here]

[Insert Table 2 here]

Measures

Our analysis examined young adult households' total debt and secured and unsecured debt as outcome variables, with savings account acquisition as the variable of interest.

Savings account acquisition. In order to model the acquisition of a savings account during the course of the panel, young adults' account ownership was tracked to determine whether or not, and when, they acquired a savings account (EAST2B). This tracking used quarterly histories and occurred retrospectively over one previous calendar year. For instance, a young adult who originally said they did not own a savings account during one quarter and then said yes during the next quarter was considered to have acquired a savings account. Thus, this dependent variable measured young adults' "no-to-yes" change in account, compared to those who consistently reported owning a savings account, closed their account, or did not acquire a savings account (savings account ownership "yes-yes" = 3; savings account acquisition "no-to-yes" = 2; savings account closure "yes-to-no" = 1; no savings account ownership "no-no" = 0).

Total household debt. Young adults were asked a series of questions about their debts, including debt from mortgages, businesses, real estate, vehicles, credit cards, unsecured loans, and outstanding bills. These amounts were available from topical modules in waves 3, 6, 9, and 12 of the 1996 SIPP and were summed together by the 1996 SIPP in order to create a measure of total household debt (THHDEBT).

Household secured debt. Young adults were asked whether or not they held different types of secured debt (mortgages, businesses, real estate, vehicles) and the amounts of those debts. The 1996 SIPP summed or recoded these amounts into a continuous measure of accumulated secured debt (THHSCDBT).

[2] The median value presented here for total household debt was provided after the value was winsorized and excluded any households that reported $0 debt (Cox, 2006).

Household unsecured debt. Young adults were asked whether or not they held different types of unsecured debt (credit cards, unsecured loans, outstanding bills) and the amounts of those debts. The 1996 SIPP summed or recoded these amounts into a continuous measure of accumulated unsecured debt (RHHUSCBT).

All household debt variables were winsorized at the 99th percentile to censor extreme values (Cox, 2006) and transformed using the natural log transformation. The inverse hyperbolic sine (IHS) transformation was also considered for dealing with skewness in the debt variables' distributions (Friedline, Masa, & Chowa, 2015; Pence, 2006); however, the natural log transformation was ultimately chosen because it has been found to perform just as well as the IHS transformation when distributions do not cross zero and its interpretation is less complicated (Pence, 2006). Debt variables' $0 values — for the purposes of this paper indicated that households did not use debt — were adjusted to $1 before being log transformed.[3]

Eleven variables were included as controls in the analyses, including age, gender (female; male), race (white; non-white), marital status (married; not married), college enrollment (enrolled full-time; enrolled part-time; not enrolled), education level (college degree or more; some college; high school degree; partial high school; primary school), employment (employed; not employed), quarterly earned income, family household type (family; non-family), new head of household (new head of household; not a new head of household), and geographic region ([metropolitan; rural or suburban] and [south; north central; west; north east]). These variables were controlled in order to portray young adults' life course stages and their relationships to debt.

Given that home ownership was likely a driver of and endogenous to young adult households' debt accumulation, we wanted to measure home ownership in a way that captured whether or not, and when, young adults acquired a home. This tracking used quarterly histories and occurred retrospectively over one previous calendar year. In other words, a young adult who originally said they did not own a home during one quarter and then said yes during the next quarter was considered to have purchased a home. A young adult who originally said they owned a home and then did not was considered to have sold their home (owned a home "yes-yes" = 3; purchased a home "no-yes" = 2; sold a home "yes-no" = 1; and never owned

[3] This was because the natural log transformation cannot be applied to zeros; therefore, the amount of debt was adjusted to $1 in order to calculate the natural log transformation.

a home “no-no” = 0 [reference]). Thus, this measure was able to capture dynamic changes in home ownership and their relationship to young adult households' debt. Descriptions of all control variables are available in Appendix A.

Analytic Plan

Data was analyzed using Cragg's double-hurdle models[4] with and without interaction effects and average partial effects (APEs) were estimated. Cragg's (1971) double-hurdle models were estimated in Stata (Stata Corp, 2011) to examine acquisition and accumulation of total, secured and unsecured debt. A double-hurdle approach was ideal for analyzing the data because it assumed that a household's debt acquisition was separate from the amount of debt they accumulated (Cragg, 1971; Ricker-Gilbert, Jayne, & Chirwa, 2011; Yen & Jones, 1997). This assumption was similar to a two-step Heckman (1979) selection model; however, Heckman's model was designed to analyze data when zeros were unobserved or missing. In the case of debt, an observed value of $0 could effectively represent households' choices or preferences to avoid debt. An observed value of $0 could also represent households' inability to access debt despite their preferences to do so, such as being blocked from securing a loan due to discrimination or past credit history. Unfortunately, the data did not allow us to draw definitive conclusions about why households' debt equaled $0. However, once households acquired debt, that acquisition may not have affected the amount of debt they accumulated. In other words, the extent to which households were leveraged may have varied even among those that used debt and may have been unrelated to their preference to avoid or their inability to access debt. Therefore, results are reported as the probability of acquiring household debt (hurdle 1; debt > $0 compared to debt = $0) and the value of accumulated household debt (hurdle 2; accumulating debt > $0).

The relationship of savings account acquisition to the acquisition and accumulation of debt might vary by young adults' age, education level, and household income. Young adults who demonstrated some indicators of economic mobility — becoming more educated, earning higher incomes — might have been able to leverage their acquisition of a savings account to their advantage. Education level and household income in particular are often used as indicators of economic mobility (Pew Charitable Trusts, 2013), and mobility is increasingly realized as people progress through the life course. In other words, young adults'

[4] The authors would like to thank Dr. Paul Johnson for recommending double-hurdle models for our analyses.

age, education level, and their household income might have significantly interacted with their acquisition of a savings account and helped explain the relationship to debt. This is unsurprising, as these variables are likely endogenous to ownership and acquisition of a savings account (Friedline & Rauktis, 2014). As such, the double-hurdle models tested the interactions between savings account acquisition and young adults' age, education level, and household quarterly earned income. Average partial effects (APEs) were estimated to provide assessments of the additional debt accumulated for each year of age, level of education, and $1,000 in quarterly earned income. Standard errors for APEs were produced by bootstrapping at 250 replications (Burke, 2009; Wooldridge, 2002).

Results

The presentation of the results is ordered by total household debt, household secured debt, and household unsecured debt. Within each type of debt, the descriptive findings, the probability of acquiring debt (hurdle 1; debt > $0 compared to debt = $0), the value of accumulated household debt (hurdle 2; accumulating debt > $0), and the APEs are reported. The results with regard to the role of a savings account are reported as their own subsection within each type of debt.

Total Household Debt

Eighty-two percent of young adults accumulated total household debt greater than $0 (see Table 3). Among those with total household debt greater than $0, the values were greater for those who were older, achieved higher levels of education, and earned more income. For instance, the median total household debt held by young adults with college degrees was valued at $74,600 compared to the median debt held by young adults who had completed some college that was valued at $31,000 — a difference of $43,600. Other differences in the values of total household debt for young adults with lower levels of education were also sizeable. Young adults with a high school degree had median total household debt that was valued at $22,501— about double the median value of the debt that was held by young adults who achieved some high school education or less ($10,675). Young adults who earned incomes at or above the 75th percentile held $96,400 in median total household debt, compared to those in the third, second, and lowest percentiles who respectively held $45,000, $16,260, and $8,000 in median total household debt.

[Insert Table 3 here]

Some young adults were more likely to acquire household debt than others (see Table 4, hurdle 1). The probability of acquiring household debt increased when young adults were white, had attended some

college or earned a college degree, were currently enrolled in college, were employed, earned increasingly higher incomes, owned, purchased, or sold a home, and lived in geographic regions outside the northeastern US. The probability of acquiring household debt significantly decreased as young adults were older, were married, and lived in a metropolitan region.

Many of the variables that related to the acquisition of total household debt also related to the value of that debt (see Table 4, hurdle 2).[5] Young adults who were white, attended some college or earned a college degree, were currently enrolled in college, earned increasingly higher incomes, owned, purchased, or sold a home, and lived in the western US accumulated significantly more debt than their counterparts. For instance, compared to having some high school education or less, having a college degree or more was associated with an 86% increase in the value of accumulated total household debt or an increase in the median value of $29,068. Compared to no home ownership, purchasing a home was associated with a 196% increase in the value of accumulated total household debt, or an increase of $66,248, while owning a home was associated with a 186% increase or $62,868 compared to no ownership. Those who were female, were married, and lived in a metropolitan region accumulated significantly less debt. Being married compared to not married was associated with a 32% decrease in household debt, or $10,816. While there were no differences in the probability of acquiring debt based on gender, family household type, or metropolitan region, significant differences emerged when predicting the value of young adult households' accumulated debt. Females and those living in a metropolitan region accumulated significantly less debt, while those living in a family-related household accumulated significantly more debt.

[Insert Table 4 here]

[5] The changes in total household debt were also interpreted as percent changes for every unit increase in the control variables and compared using median debt values. For example, the median value of accumulated total household debt was $33,800 (Table 2). A college degree or more was associated with an 86% increase in the value of accumulated total household debt, and $29,068 is roughly an 86% increase in the medial value of $33,800. Therefore, the accumulated total household debt rose to $62,868 for young adults who held a college degree or more compared to those who had some high school education or less. Throughout the paper, the dollar interpretations for total, secured, and unsecured debt are based on the median values reported in Table 2.

Mean APEs for total household debt by age, education level, and household quarterly earned income are reported in Table 5. The mean APE for age across the sample was −.014, suggesting that young adults accumulated almost 1.5% less household debt with each additional year of age. While age was unrelated to accumulated total household debt (see Table 4, hurdle 2), the relationship emerged significant and negative when the APEs explored yearly changes in age. The mean APE for education level across the sample was .559, suggesting that young adults accumulated about 56% more household debt with each additional level of education. The mean APE for income across the sample was .251, suggesting that young adults accumulated about 25% more household debt with each additional $1,000 in earned income.

[Insert Table 5 here]

The Role of a Savings Account. Young adults who owned a savings account during the course of the panel had median total household debt that was valued at $59,000, compared to median debt valued at $24,400 for young adults who acquired a savings account (see Table 3). Those who closed a savings account had median debt valued at $25,600 and those who did not own an account had median debt valued at $17,000. Any type of savings account ownership, acquisition, or closure during the course of the panel was related to the increased probability of acquiring household debt (see Table 4, hurdle 1), suggesting that any interface with a savings account provided access to credit. All interactions between young adults' savings account acquisition and their age, education level, and earned income were positively and significantly related to the probability of acquiring household debt (see Table 6, hurdle 1). However, even though the interactions were significant, the coefficients were small and the variables had stronger relationships to debt based on their individually controlled coefficients. This remained the same with all interactions across all models.

These relationships remained mostly the same with regard to the value of accumulated total household debt (see Tables 4 and 6); however, there was an exception with regard to account acquisition. Compared to no account ownership, owning a savings account was associated with a 10% increase in the value of accumulated total household debt, or about $3,380. The acquisition of a savings account during the course of the panel was unrelated to the value of accumulated household debt (see Table 4, hurdle 2). This was not necessarily surprising given that the time frame of the panel was likely not long enough to observe the positive relationship to accumulation that was found with account ownership. In other words, once acquired, young adults might not have owned the account long enough during the panel to experience the

related effects on debt accumulation. Interactions between account ownership and age, education level, and earned income were significantly and positively related to the value of accumulated household debt (see Table 6, hurdle 2).

[Insert Table 6 here]

Household Secured Debt

Sixty-five percent of young adults accumulated household secured debt greater than $0 (see Table 3). Among those with secured debt greater than $0, the amounts accumulated were greater for those who were older, achieved higher levels of education, and earned more income. For instance, while the median values of household secured debt for young adults ages 28 to 40 ranged from $50,000 to $66,050, the median value of this debt for young adults below age 28 was $13,000. Median household secured debt held by young adults with college degrees was valued at $85,000 compared to the median secured debt held by young adults who had completed some college, which was valued at $47,001 — a difference of $37,999. Other differences in median values of household secured debt for young adults with lower levels of education were also sizeable. Young adults with a high school degree accumulated secured debt whose median value was $32,000 — almost twice the median value of secured debt accumulated by young adults who achieved some high school education or less ($18,412). Young adults who earned incomes at or above the 75th percentile held $97,850 in household secured debt, compared to those at the third, second, and lowest percentiles who respectively held $53,000, $19,000, and $11,000 in household secured debt.

The probability of acquiring household secured debt increased when young adults were white, attended some college or earned a high school or college degree, were employed, earned increasingly higher incomes, owned, purchased, or sold a home, and lived in geographic regions outside the northeastern US (see Table 7, hurdle 1). The probability of acquiring household secured debt decreased when young adults were older, married, lived in non-family related households, were enrolled in college, and lived in metropolitan regions.

Many of the same variables related to the value of accumulated household secured debt (see Table 7, hurdle 2). Young adults who were older, white, lived in non-family related households, attended some college or earned a high school or college degree, earned increasingly higher incomes, owned, purchased, or sold a home, and lived in the western US accumulated significantly more secured debt than their counterparts. Compared to no home ownership, purchasing a home was associated with a 210% increase in

the value of accumulated household secured debt. This translated into an increase of roughly $105,000.[6] Owning a home was associated with a 199% increase, or $99,500. Those who were married, were enrolled in college, lived in metropolitan regions, and lived in the south accumulated significantly less secured debt. Being married compared to not married was associated with a 25% decrease, or $12,500. While being employed was related to the probability of acquiring secured debt, this relationship disappeared when predicting the value of young adults' accumulated secured household debt: being employed was related to the increased probability of acquiring secured debt, but these young adults accumulated no more secured debt than their unemployed counterparts.

[Insert Table 7 here]

Mean APEs for household secured debt by age, education level, and household quarterly earned income are reported in Table 8. The mean APE for age across the sample was −.016, suggesting that young adults accumulated about 2% less secured household debt with each additional year of age. While age was unrelated to accumulated total household debt (see Table 6, hurdle 2), the relationship emerged significant and negative when the APEs explored yearly changes in age. The mean APE for education level across the sample was .343, suggesting that young adults accumulated about 34% more secured household debt with each additional level of education. The mean APE for income across the sample was .302, suggesting that young adults accumulated about 30% more secured household debt with each additional $1,000 in earned income.

[Insert Table 8 here]

The Role of a Savings Account. Young adults who owned a savings account during the course of the panel accumulated median household secured debt that was valued at $68,200, compared to median secured debt valued at $33,000 for young adults who acquired a savings account (see Table 3). Those who closed a savings account had median secured debt valued at $40,000 and those who did not own an account had median secured debt valued at $22,000. Savings account ownership, acquisition, or closure were all positively related to the probability of acquiring secured household debt (see Table 7, hurdle 1), suggesting that a savings account served as a gateway of sorts to productive debt. Compared to no savings account

[6] During the remainder of this section, all dollar changes in the value of household secured debt are based on the median value of $50,000 that is reported in Table 2.

ownership, owning a savings account was associated with a 15% increase, or $7,500.[7] All interactions between young adults' savings account acquisition and their age, education level, and earned income were positively and significantly related to the probability of acquiring secured debt (see Table 9, hurdle 1). These relationships remained mostly the same with regard to the value of accumulated household secured debt (see Table 7, hurdle 2); however, there was again an exception in the relationship between account acquisition and the value of young adults' household secured debt. The acquisition of a savings account during the course of the panel was unrelated to the value of accumulated household secured debt. Interactions between account ownership and age, education level, and earned income were significantly and positively related to the value of accumulated household secured debt (see Table 9, hurdle 2).

[Insert Table 9 here]

Household Unsecured Debt

Sixty-five percent of young adults accumulated household unsecured debt greater than $0 (see Table 3). Among those with unsecured debt greater than $0, the amounts accumulated were greater for those who achieved higher levels of education and earned more income. Median household unsecured debt held by young adults with college degrees was valued at $6,000 compared to the median unsecured debt held by young adults who had completed some college that was valued at $4,300. Other differences in median values of household unsecured debt for young adults with lower levels of education were also noticeable. Young adults with a high school degree accumulated unsecured debt with a median value of $3,500 — almost twice the median value of unsecured debt that was accumulated by young adults who achieved some high school education or less ($2,100). Young adults who earned incomes at or above the 75th percentile held $5,500 in median household unsecured debt, compared to those at the third, second, and lowest percentiles who respectively held $4,801, $3,500, and $3,000 in median household unsecured debt.

The probability of acquiring household unsecured debt increased when young adults were female, white, lived in a non-family household, attended some college or earned a high school or college degree, were currently enrolled in college, were employed, earned increasingly higher incomes, and owned or

[7] Based on the median household secured debt value of $50,000, this would raise the value of secured debt for those with a savings account to $57,500.

purchased a home (see Table 10, hurdle 1). The probability of acquiring household unsecured debt was significantly decreased when young adults were older, married, and new heads of households.

Many of the same variables related to the value of accumulated household unsecured debt (see Table 10, hurdle 2). Young adults who were white, attended some college or earned a high school or college degree, were currently enrolled in college, were employed, and earned increasingly higher incomes accumulated significantly more unsecured debt than their counterparts. Compared to having some high school education or less, having a college degree or more was associated with an 83% increase in the value of accumulated household unsecured debt, or $3,445.[8] For young adults with some college education, the associated increase was 53%, or about $2,200. Those who were married, owned their homes, and lived in the northern and southern US accumulated significantly less unsecured debt. Compared to not being married, being married was associated with a 20% decrease in the value of accumulated household unsecured debt, or about $830. Compared to no home ownership, owning a home was associated with an 8% decrease in the value of accumulated household unsecured debt or roughly $332. While being female related to the probability that young adult households acquired unsecured debt, once debt was acquired, gender was no longer significant and females accumulated no more unsecured debt than males. Similarly, owning or purchasing a home related to an increased probability of acquiring unsecured debt; once the unsecured debt was acquired, however, home owners accumulated significantly less unsecured debt than their counterparts. While young adult households that purchased a home were significantly more likely to have unsecured debt, there was no significant difference in the amount of unsecured debt that they accumulated.

[Insert Table 10 here]

Mean APEs for household unsecured debt by age, education level, and household quarterly earned income are reported in Table 11. The mean APE for age across the sample was −.027, suggesting that young adults accumulated about 3% less unsecured household debt with each additional year of age. While the negative relationship between age and accumulated unsecured debt was not significant in the original model (see Table 10, hurdle 2), the effect of age emerged as significant when yearly changes were explored with APEs. The mean APE for education level across the sample was .525, suggesting that young adults

[8] During the remainder of this section, all dollar changes in the value of household unsecured debt are based on the median value of $4,150 that is reported in Table 2.

accumulated about 53% more unsecured household debt with each additional level of education. The mean APE for income across the sample was .108, suggesting that young adults accumulated about 11% more unsecured household debt with each additional $1,000 in earned income.

[Insert Table 11 here]

The Role of a Savings Account. Young adults who owned a savings account during the course of the panel accumulated median household unsecured debt that was valued at $4,400, which was about the same as those who acquired, closed or did not own a savings account at respective values of $4,775, $4,200, and $4,000 (see Table 3). Savings account ownership, acquisition, and closure during the course of the panel were positively related to the probability of acquiring household unsecured debt (see Table 10, hurdle 1). All interactions between young adults' savings account ownership, acquisition, and closure and their age, education level, and earned income were positively and significantly related to the probability of acquiring unsecured debt (see Table 12, hurdle 1). However, some of these relationships changed with regard to the value of accumulated household unsecured debt (see Tables 10 and 12, hurdle 2). Young adults who owned a savings account accumulated significantly less unsecured debt than their counterparts. Compared to no account ownership, owning a savings account was associated with a 14% decrease in the value of accumulated household unsecured debt, or about $581. Based on results of the interactions, this relationship was strengthened with age. Older young adults who owned a savings account also accumulated significantly less unsecured debt. Young adults who achieved higher levels of education and earned more income accumulated significantly more unsecured debt when they had a savings account.

[Insert Table 12 here]

Discussion

This paper explored the role of a savings account for young adult households' acquisition and accumulation of secured debt and also protection against their acquisition and accumulation of unsecured debt, the latter of which may be more costly to — and thus riskier for — the health of their balance sheets. Moreover, this paper explored whether indicators of economic mobility such as age, education level, and earned income facilitated the ownership and acquisition of a savings account and could help explain the relationship between a savings account and debt.

A Savings Account: Access to Productive Debt, Protection from Unproductive Debt

We found some evidence that a savings account facilitated young adults' acquisition and accumulation of secured debt and protected them against unsecured debt. Ownership, acquisition, and closure of a savings account were significantly and positively related to both the acquisition and accumulation of households' total debt and secured debt in almost every model: there were stark differences in both accumulated total debt and secured debt between savings account owners and acquirers, compared to young adults who did not own an account. For example, the differences in median values of total and secured debt between young adults who owned a savings account and did not own a savings account were respectively $42,000 and $46,000. Thus, a savings account may have helped young adults "invest in their debt" by entering and accumulating debt in better, healthier credit markets.[9]

Ownership, acquisition, and closure of a savings account were also significantly and positively related to the acquisition of unsecured debt; however, owning a savings account was significantly and negatively related to the value of that accumulated debt. Owning a savings account was associated with a 14% decrease in the value of accumulated household unsecured debt, or about $581. This amount is consistent with the average payday or cash advance loan of $500 (Consumer Financial Protection Bureau [CFPB], 2014) and while this amount might seem small, it could add up quickly. The average two-week payday loan has an annualized interest rate ranging between 300% and 500% (Center for Responsible Lending, 2013), and that $581 could end up costing the household without a savings account $2,905 in interest payments[10] — an amount that the household *with* a savings account would not have to pay. Even though not all the relationships were significant, every variation of account holding (ownership, acquisition, and closure) was negatively related to unsecured debt accumulation. Taken together, these results suggest that a savings account may have provided young adult households with *access* to secured and unsecured debt, while simultaneously protecting them from *accumulating* debt that posed a greater risk to their balance sheets.

The Roles of Age, Education Level, and Earned Income

Age, education level, and earned income helped to explain the relationship between a savings account and debt. Age had a negative relationship with debt acquisition; that is, whether the outcome was total, secured, or unsecured debt, for the most part older young adults were less likely to acquire and

[9] The authors thank Dr. Benjamin Friedline for his description of "invest in their debt."
[10] This assumes a 500% annualized interest rate and rolling over the original loan for a period of 12 months.

accumulate debt. APEs confirmed this relationship, finding that young adults accumulated almost 2% less total debt and almost 3% less unsecured debt for each additional year of age. There was an exception with regard to secured debt that emerged in the descriptive findings. Young adults accumulated an additional $37,000 in secured debt somewhere between the ages of 28 and 33, after which there was a plateau in accumulation. Since secured debt may be driven by home ownership, the increase in median household secured debt could be explained by home ownership rates that tend to peak in the early 30s (Chiuri & Jappelli, 2003; National Association of Realtors, 2014).

Compared to having less than a high school degree, all levels of education were significantly and positively related to the acquisition and accumulation of all types of debt. Young adults acquired and accumulated more debt, and increasingly so, as they achieved higher levels of education. Young adults accumulated about 56% more total household debt, 34% more secured debt, and 53% more unsecured debt with each additional level of education achieved. College degree holders accumulated $52,099 more in total debt compared to high school degree holders. They also accumulated $53,000 more in secured debt and $2,500 more in unsecured debt compared to high school degree holders. The debt that these college-educated young adults accumulated could be interpreted as burdensome given how much more debt they accumulated compared to those with lower levels of education; however, much of the debt accumulated by college degree holders was collateralized and potentially productive for their balance sheets. College degree holders, who often take on more debt to achieve higher levels of education (College Board, 2014), are also more likely to purchase homes (Mishel, Bivens, Gould, & Shierholz, 2012). Thus, the debt accumulated by these young adults could be considered advantageous, meaning that their educational standing afforded them the opportunity to enter better credit markets and to invest in homes that generated equity. This latter interpretation should be made with caution, though, based on recent evidence that young adults who emerge from college with higher debt burdens also experience greater losses in home equity (Hiltonsmith, 2013).

Young adult households increasingly acquired and accumulated all types of debt as they earned more income. Specifically, young adults accumulated about 25% more total household debt, 30% more secured debt, and 11% more unsecured debt with each additional $1,000 in earned income. Even though earned income was related to all types of accumulation, its relationship to secured debt was strongest, which these households could have leveraged to improve their overall economic mobility. Large gains in

accumulated secured debt were observed as households earned more income, while accumulated unsecured debt remained mostly flat. In other words, a greater share of debt among young adults who earned income in the 25th to 50th percentile — 12% — was unsecured. Unsecured debt was only 6% of total debt among young adults who earned income in the 75th percentile or greater. This contrast indicates that there was a potential bifurcation in the borrowing system that steered higher-income young adults toward secured, productive debt and lower-income young adults toward unsecured, unproductive debt (Houle, 2014).

The Roles of Other Life Milestones

Findings also provide some evidence that young adults acquired and accumulated debt in tandem with other important life milestones, such as employment and home ownership. Young adults who were employed were more likely to acquire every type of debt; however, once their debt was acquired, employed young adults were no more likely to accumulate debt than unemployed young adults. It appeared that being employed may have helped connect young adults to credit markets and acquire debt (Fogel & Schneider, 2011). One exception was with unsecured debt; employed young adults accumulated significantly more unsecured debt than unemployed adults. Despite being employed, young adults might not have had sufficient finances to make ends meet and relied on risky and unproductive debt (Melzer, 2011). For example, if they were employed, young adults were eligible to earn a paycheck for which they could receive a cash advance.

The ownership, purchase, or selling of a home was positively related to the acquisition of almost every type of debt, which, as expected, indicated that owning a home was a driver of debt acquisition. Owning, purchasing, or selling a home were also significantly related to the amount of total and secured debt accumulated by young adult households; however, there was an exception with regard to the relationship to accumulated unsecured debt. Young adult households that owned their homes accumulated significantly less unsecured debt than those that never owned a home. It appeared that home ownership — an important asset on young Americans' balance sheets — protected them from accumulating unsecured, risky debt. Following this logic, it is easy to imagine how a young adult home owner could leverage their equity to avoid carrying a balance on their credit card or receiving an advance on their paycheck if they needed money.

Limitations

Findings from this research should be considered in light of several limitations. The measures included in this research were limited to those available from the 1996 SIPP and many contextual factors with potential relevance to young adults' household debt were not incorporated into the analyses, such as family history of financial socialization, availability of banks within a community, US economic growth during the 1990s, or the banking mergers and closures that took place during the late 1980s and early 1990s preceding the 1996 SIPP data collection (FDIC, 1997; Serido, Shim, Mishra, & Tang, 2010). While this research cannot rule out the relationships between these contextual factors with young adults' household debt, measuring employment, education level, income, or household relationship provided some context. The 1996 SIPP data itself had some complexities, including the over-sampling of lower income young adults resulting in less-frequent ownership of a savings account and potentially less accumulated debt compared to other surveys (Czajka, Jacobson, & Cody, 2003). In addition, imprecise reporting of retrospective monthly or quarterly information may have resulted in excessive transitions between reference periods (also known as "seam bias"; Moore, Bates, Pascale, & Okon, 2009). While this research focused on the household debt of all young adults, those from lower-income backgrounds are arguably at greater risk for indebtedness and, thus, are an important subgroup of interest; this mitigates concerns about the 1996 SIPP's over-sampling. The concern about excessive transitions between reference periods — an artifact of the 1996 SIPP survey design — has been mitigated by using information from the fourth and last reference month of the quarter, a recommendation made by previous research (Ham, Li, & Shore-Sheppard, 2009; Moore, Bates, Pascale, & Okon, 2009). This meant using information from 12 quarters across the four-year panel (the last reference month in the quarter), as opposed to all 48 months. In other words, young adults appeared to more precisely report life events like the month that they were married, but their recollection at the monthly level was "fuzzier" about seemingly minor life events like opening a savings account until they were asked in person by the SIPP interviewers in the fourth reference month.

Conclusion

In this paper, we used data from the 1996 Survey of Income and Program Participation to assess the use of secured and unsecured debt by young adult Americans. We focused in particular on the role that a savings account might have in mitigating young people's reliance on unsecured debt, a form of debt that tends to cost more and place borrowers at greater financial risk than secured debt does. We undertook this

project to assess whether a savings account might help protect young adult households from reliance on unsecured debt.

Our analysis revealed that while a savings account was related to more accumulated debt overall, the type of debt accumulated was less risky and potentially more productive for young adults' balance sheets. Compared to no account ownership, owning a savings account was associated with a 15% increase in the value of accumulated household secured debt and a 14% decrease in the value of accumulated household unsecured debt. We concluded that a savings account may help young adults "invest in their debt" by entering better, healthier credit markets, and that, in this way, it might protect them from riskier, more costly credit markets.

We see four specific implications of our research. First, our findings have implications concerning financial inclusion. Our findings on the link between a savings account and debt implies that a savings account is a financial tool that serves as a gateway to healthy balance sheets: young adults' balance sheets could have favorable debt-to-assets ratios and hold more productive debt if only better financial tools were available. This finding clearly carries implications for the financial industry. Half of young adult households in our sample closed or never owned a savings account, suggesting they were excluded from use of this financial tool and therefore lingered on the financial margins. The onus cannot solely be on young adults to seek out savings accounts from financial institutions; institutions themselves need a wider reach. The most obvious way for financial institutions to broaden their reach is through the provision of safe and affordable savings accounts. According to the Federal Deposit Insurance Corporation's (FDIC) survey of financial institutions' efforts to serve those on the financial margins, only about 40% of institutions report developing products and services for lower-income, financially marginalized populations and only 20% of financial institutions offer "second chance" accounts to consumers whose credit histories might otherwise exclude them from the financial mainstream. While not all young adults find themselves on the financial margins and in need of "second chance" products, these statistics suggest that financial institutions may not be in the business of inclusion. As one way to contribute to healthier household balance sheets and provide services to young adults (whose portfolios are likely to increase as they age and benefit financial institutions), these institutions need encouragement from regulators and legislators to be more inclusive.

Second, policies may be needed that assist young adult households in using debt productively. The mounting debt held by young adults is of particular concern as their financial health is eroded by an unstable economy and as uncollateralized debt takes up an increasing share of their balance sheets relative to other types of debt (Houle, 2014; Ross, 2013). Historically, secured debt dominated young Americans' balance sheets: this had the benefits of providing collateral that could be leveraged to acquire other types of debt, generating equity over time, allowing for considerable tax breaks, and contributing to wealth accumulation. In fact, secured debt in the form of home ownership has long been the primary mechanism for wealth accumulation in the United States. However, many young adults are delaying or foregoing the purchase of a home, and this is partly due to rising debt generally and student loan debt in particular (Elliott, Grinstein-Weiss, & Nam, 2013). Minimizing unsecured, unproductive debt and burdensome student loan debt is an obvious policy intervention which would benefit young adults' balance sheets and allow them to begin building toward a strong financial future. Like the historic wealth transfers made available by the Homestead Act of 1862 (Williams Shanks, 2005), perhaps the equivalent policy intervention for the 21st century is one that invests in young adults' debt to stabilize their financial health and catalyze them toward economic mobility.

Third, in order for young adults to manage both sides of their balance sheets, financial education is invaluable. While financial education has a positive effect on adults' debt use generally (Fernandes, Lynch, & Netemeyer, 2014), these effects are particularly noteworthy for young adults (Brown et al., 2013, 2014). For example, Brown et al. (2014) revealed that young people who attended public school after the implementation of state mandated financial education in schools had slightly better credit scores and lower delinquency rates. A different study assessing the effect of young adults' financial training on their debt outcomes in early adulthood determined that financial education had an impact on the likelihood of young adults' having credit reports (Brown et al. 2013); however, the type of financial training young adults received also had an effect. Conditional on their having credit reports, young adults who received financial and math literacy education were less likely to be delinquent on their loan repayments and to have accounts in collection, while young adults who received economic education were more likely to carry debt, carry larger amounts of debt, have a higher risk of adverse credit outcomes, and ultimately end up with lower credit scores. While financial education cannot compensate for low- or stagnant-wages or un- or under-

employment, insofar as it can help all of us make better financial decisions, it should be promoted in our school systems.

Finally, one reason possession of a savings account relates to young adults' financial well-being — including their use and accumulation of debt, especially unsecured — is that the savings therein might be used to meet unexpected expenses or smooth disruptions in income. Research confirms the importance of savings in staving off financial difficulties. Brobeck (2008) determined that low- and moderate-income respondents with less than $500 in emergency savings are more than twice as likely to report adverse financial experiences such as difficulty paying monthly bills, making mortgage or rent payments, bouncing checks, and, most important for the current topic, taking out high-cost loans. Mills and Amick (2010) found that lower-income households that hold liquid assets of $1,999 or less (as opposed to no liquid assets at all) experienced a significantly lower incidence of most types of material hardship, including missing utility or housing payments, missing a doctor's visit, or experiencing food insecurity. Gjertson (in press) found that emergency savings can help buffer against financial shock, and that this is especially true for low-income households. Interestingly, Gjertson found that "saving for an emergency appears to have an effect on hardship *distinct from other types of saving*. Emergency savers may be better prepared to cope with economic shocks over time as they are able to use reserved liquid funds to meet expenses and reduce hardships" (p. 18, emphasis added). Programs that help lower-income people build emergency savings (New York City's Save USA, for example, which offers an incentive to save at tax time) should be promoted by advocates and supported by policy.

In the midst of public discussions about young adults' indebtedness and the problems it can create for building healthy balance sheets, our findings demonstrate that a savings account — a simple financial tool — can be a potentially powerful solution. Thus, a savings account may help young adults "invest in their debt," serving as a gateway to better, healthier credit markets and protecting them from riskier ones. With this, young Americans may begin their adulthood with balance sheets that catalyze them toward economic mobility rather than chip away at their financial well-being.

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Appendix A: Descriptions of Control Variables

Age. Young adults' age was a continuous variable ranging from 18 to 40 (TAGE).

Gender. Young adults' gender was measured based on their reports of being male or female (ESEX; male = 1; female = 0 [reference]).

Race. Young adults' race included those who were white, black, Asian / Pacific Islander), and Native American / First Peoples (ERACE). Given the low percentage in the sample who were Native American / First Peoples and Asian / Pacific Islander and their very similar estimates in the models when compared to blacks, Native American / First Peoples and Asian / Pacific Islanders were combined with blacks and identified as non white (white = 1; non white = 0 [reference]).

Marital status. Marital status (EMS) was measured by asking young adults to report monthly whether they were married, widowed, divorced, separated, or never married. Young adults' responses were collapsed into married or not married categories (married = 1; not married = 0 [reference]).

Family household type. Each quarter, young adults were asked their relationship to the household reference person (ERRP) — the person for the household whose name appeared on the lease or mortgage and who was identified by the 1996 SIPP as being the household head or person of reference. The 1996 SIPP recorded a range of relationship statuses, from a spouse or relative of the reference person to a housemate or other non-relative. The range of relationships were categorized into young adults who were listed as the reference person, child of the reference person, relative, or non-relative. Forty-three percent of young adults were listed as the reference person, potentially indicating that they were responsible for households of their own. Twenty-two percent of young adults reported that they were the child of the reference person, potentially indicating that they continued to reside with their families of origin. The remaining 35% reported that they were relatives or non-relatives of the household reference person. These responses were categorized as family or non-family for the purposes of analyses (family = 1; non-family = 0 [reference]).

New head of household. The change in household relationship status tracked young adults quarterly and retrospectively over one previous calendar year, identifying whether young adults changed from being listed as a child, relative, or non-relative to a household reference. Approximately 3% of the sample reported becoming a new reference person at some point during the panel. This change in household relationship status served as a proxy for young adults who became heads of households during the course of the panel (new head of household "yes" = 1; not a new head of household "no" = 0 [reference]).

Education level. Young adults were asked to report the highest grade completed or degree received each month, ranging from less than first grade to doctorate degree (EEDUCATE). Responses were collapsed to indicate having received primary school education through grade eight, some high school education through grade 12, a high school degree, some college, or a four-year college degree or more (college degree or more = 3; some college = 2; high school degree = 1; some high school or less = 0 [reference]).

College enrollment. Young adults' college enrollment status (RENROLL) was measured by asking whether or not they were enrolled in school in the previous quarter. Young adults who were enrolled full- or part-time during the quarter were considered to have been enrolled in college, whereas those who were not enrolled in the quarter were considered to have not been enrolled (enrolled in college = 1; not enrolled = 0 [reference]).

Employment status. Young adults were asked whether or not they were employed during the month (RMESR). Those who responded that they were with a job for the entire month were coded as employed. Young adults who reported being with a job for part of the month were coded as being partially employed. Those who were without a job, including being absent without pay, laid off, or looking for work, were coded as unemployed (employed = 1; not employed = 0 [reference]).

Quarterly mean income. Young adults' total earned income was available for a given month (TPEARN), which was averaged across the months leading up to the fourth reference month in the quarter, winsorized (Cox, 2006), and transformed using the natural log to account for skewness. In the analyses predicting liquid assets, quarterly mean income was divided by 1,000.

Home ownership. Young adults were asked whether they lived in a home being bought or currently owned or whether they rented or otherwise occupied the residence in which they were living (ETENURE; home owner = 1; not a home owner = 0). Their responses were measured monthly. These monthly responses were used to track changes in home ownership between one quarter and the next. A young adult who originally said they owned a home and then did not was considered to have sold their home (owned a home "yes-yes" = 3; purchased a home "no-yes" = 2; sold a home "yes-no" = 1; and never owned a home "no-no" = 0 [reference]).

Geographic region. The 1996 SIPP asked young adults whether they lived in a metropolitan region or rural or suburban region (TMETRO; metropolitan = 1; rural or suburban = 0). Young adults were also asked in which state their household resided (TFIPSST). States were re-coded into geographical regions (west = 3; north central = 2; south = 1; north east = 0 [reference]). Southern states included Alabama, Arkansas, Delaware, Washington DC, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia. North central states included Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, Ohio, North Dakota, South Dakota, Wisconsin, and Wyoming. Western states included Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, and Washington. North eastern states included Connecticut, Maine, Vermont, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, and Rhode Island.

Table 1: Sample Characteristics (N = 43,455) [a]

Covariates	Total Household Debt		Household Secured Debt		Household Unsecured Debt	
	debt = $0 ($n$ = 7,801)	debt > $0 ($n$ = 35,654)	debt = $0 ($n$ = 15,011)	debt > $0 ($n$ = 28,444)	debt = $0 ($n$ = 15,212)	debt > $0 ($n$ = 28,243)
	% or Mean		% or Mean		% or Mean	
Age	31.349	32.596	31.180	33.002	32.234	32.447
Sex						
Male	43	56	46	58	50	56
Female	57	44	54	42	50	44
Race						
White	70	86	75	87	76	87
Non White	30	14	25	13	24	13
Marital Status						
Married	26	61	33	67	41	62
Not married	74	39	66	34	59	38
Family Household Type						
Family	65	76	64	80	71	76
Non Family	35	24	36	20	29	24
New Head of Household [b]						
Yes	10	7	10	6	9	7
No	90	93	90	94	91	93
Education Level						
College Degree or More	12	29	18	30	20	29
Some College	24	34	29	34	26	35
High School Degree	36	29	33	29	34	29
Some High School or Less	28	8	20	7	20	7
College Enrollment Status						
Enrolled in College	10	10	13	8	8	11
Not Enrolled in College	90	90	87	92	92	89
Employment Status						
Employed	69	89	76	91	78	90
Not Employed	31	11	24	9	22	10
Household Quarterly Earned Income	$1,404	$3,850	$1,891	$4,213	$2,599	$3,848
Home Ownership						
Owned a Home	12	53	13	64	37	51
Purchased a Home	1	5	1	6	3	5
Sold a Home	7	4	8	3	6	5
Never Owned a Home	79	37	78	27	54	40
Geographic Region						
Metropolitan	83	82	84	82	82	83
Rural or Suburban	17	18	16	18	18	17
North East	18	17	19	16	17	17
West	22	22	24	21	21	22
North Central	22	26	23	27	25	26
South	38	35	34	36	38	34

Source: Data from the 1996 Survey of Income and Program Participation (SIPP).
Notes. Sample characteristics are provided by whether or not households held debt. Debt = $0 indicates that households did not report owning debt, whereas debt > $0 indicates that households reported owning debt greater than $0. Means are reported for continuous variables and percentages are reported for categorical variables. [a] The sample characteristics reported from this table are drawn from reference month data and topical module data (N = 43,455 individuals). [b] Young adults in the topical module data were limited to reference persons because annual

debt data was only available at the household level. This avoided, for example, having a young adult in the data who was age 18 and still living with their families of origin. In this case, the young adult met sampling criteria based on their age; however, the debt that would have been captured would have more accurately represented their parents' households' debt, rather than young adults' own households' debt. However, whether or not young adults became a new reference person or head of household within the sampling frame was measured as an indicator of their tenure as head of household.

Table 2: Savings Account and Accumulated Value of Household Debt (N = 43,455) [a]

Savings Account [b]	Percent			
Savings Account Ownership	46			
Savings Account Acquisition	4			
Savings Account Closure	5			
No Savings Account Ownership	45			
Accumulated Value of Household Debt [c]	**Non-Transformed Value Median (SD)**		**Log-Transformed Value Mean (SD)**	
	(w/ debt = $0) [d]	(debt > $0) [e]	(w/ debt = $0) [d]	(debt > $0) [e]
Total Household Debt	$18,000 ($64,925)	$33,800 ($66,957)	8.264 (4.175)	10.075 (1.733)
Household Secured Debt	$10,000 ($62,189)	$50,000 ($66,245)	6.766 (5.072)	10.338 (1.543)
Household Unsecured Debt	$1,200 ($10,707)	$4,150 ($12,240)	5.326 (4.092)	8.200 (1.489)

Source: Data from the 1996 Survey of Income and Program Participation (SIPP).
Notes. Percentages are reported for categorical variables and means or medians and standard deviations are reported for continuous variables. [a] The characteristics reported from this table are drawn from the topical module sample (N = 43,455 individuals). [b] Percentages for savings account are presented for young adults who ever reported owning these account types during the course of the panel using lagged quarterly level information. [c] Accumulated values of household debt are presented for young adults based on annual level information. The accumulated median and mean values are reported after winsorizing household debt at 99 percent. [d] W/ debt = $0 indicates the median and mean values of debt including households that did not report owning debt, or otherwise had debt of $0. In other words, the median and mean are calculated by including households that did not have debt. [e] Debt > $0 indicates the median and mean values of debt excluding households that had debt of $0 and including only households who reported owning debt > $0. In other words, the median and mean are calculated only for households that reported having debt.

Table 3: Accumulated Median Value of Household Debt by Savings Account and Age, Education, and Household Quarterly Earned Income

	Savings Account			
	No Ownership (No-No)	**Closure** (Yes-No)	**Acquisition** (No-Yes)	**Ownership** (Yes-Yes)
Total Household Debt	$17,000 ($57,622)	$25,600 ($64,487)	$24,400 ($63,469)	$59,000 ($70,731)
Household Secured Debt	$22,000 ($58,596)	$40,000 ($65,089)	$33,000 ($64,368)	$68,200 ($68,476)
Household Unsecured Debt	$4,000 ($12,419)	$4,200 ($11,368)	$4,775 ($12,604)	$4,400 ($12,150)
	Percentiles of Age			
	< 25th (< Age 28)	**25th to < 50th** (Age 28 to < Age 33)	**50th to < 75th** (Age 33 to < Age 37)	**≥ 75th** (≥ Age 37)
Total Household Debt	$14,000 ($43,603)	$33,000 ($65,420)	$52,000 ($71,173)	$56,385 ($73,237)
Household Secured Debt	$13,000 ($44,215)	$50,000 ($63,989)	$64,000 ($68,895)	$66,050 ($70,934)
Household Unsecured Debt	$4,200 ($13,034)	$4,700 ($12,961)	$4,000 ($11,719)	$4,000 ($11,116)
	Education Level			
	Some High School or Less	**High School Degree**	**Some College**	**College Degree or More**
Total Household Debt	$10,675 ($46,385)	$22,501 ($55,898)	$31,000 ($60,981)	$74,600 ($78,864)
Household Secured Debt	$18,412 ($48,421)	$32,000 ($55,421)	$47,001 ($59,808)	$85,000 ($77,121)
Household Unsecured Debt	$2,100 ($8,297)	$3,500 ($9,402)	$4,300 ($10,774)	$6,000 ($15,862)
	Percentiles of Household Quarterly Earned Income			
	< 25th ($0 to < $1,641)	**25th to < 50th** ($1,641 to < $3,002)	**50th to < 75th** ($3,002 to < $4,848)	**≥ 75th** (≥ $4,848)
Total Household Debt	$8,000 ($41,645)	$16,260 ($45,949)	$45,000 ($58,021)	$96,400 ($78,476)
Household Secured Debt	$11,000 ($62,189)	$19,000 ($46,116)	$53,000 ($56,264)	$97,850 ($74,907)
Household Unsecured Debt	$3,000	$3,500	$4,801	$5,500

	($11,815)	($10,905)	($11,449)	($13,962)

Source: Data from the 1996 Survey of Income and Program Participation (SIPP).
Notes. Medians and standard deviations are reported for values of household debt and are drawn from the topical module sample (N = 43,455 individuals). The accumulated median values are reported for households with debt > $0 and after the values were winsorized at 99 percent.

Table 4: Cragg's Double-Hurdle Models Predicting Total Household Debt (Log Transformed; $N = 43{,}455$)

	Model 1			
	Hurdle 1		Hurdle 2	
	Probability of Acquiring Total Household Debt		Value of Accumulated Total Household Debt	
	β	(SE)	β	(SE)
Age	–.010***	(.002)	.004*	(.002)
Female	.043	(.022)	–.041*	(.019)
White	.267***	(.025)	.131***	(.026)
Married	–.460***	(.026)	–.318***	(.027)
Family Household	–.028	(.028)	.077**	(.030)
New Head of Household	−.024	(.032)	–.035	(.032)
College Degree or More	.583***	(.038)	.855***	(.040)
Some College	.614***	(.032)	.553***	(.039)
High School Degree	.354***	(.030)	.336***	(.040)
Enrolled in College	.176***	(.032)	.096***	(.027)
Employed	.388***	(.027)	.105***	(.031)
Household Quarterly Earned Income / 1000	.098***	(.006)	.101***	(.009)
Owned a Home	.854***	(.026)	1.860***	(.022)
Purchased a Home	.938***	(.055)	1.964***	(.032)
Sold a Home	.093*	(.037)	.136**	(.040)
Metropolitan Region	–.043	(.025)	–.296***	(.025)
West Geographic Region	.117***	(.034)	.163***	(.028)
North Central Geographic Region	.113**	(.033)	.013	(.028)
South Geographic Region	.078*	(.031)	–.039	(.027)
Savings Account (Reference: No Account Ownership)				
Savings Account Ownership	.296***	(.023)	.104***	(.019)
Savings Account Acquisition	.318***	(.044)	.040	(.037)
Savings Account Closure	.321***	(.043)	.098**	(.033)
R^2	.172		--	
Model Constant	−.141	(.110)	8.316***	(.113)
Sigma Constant	1.256***	(.010)	1.256***	(.010)

Source: Data from the 1996 Survey of Income and Program Participation (SIPP), accounting for individual-level clustering.

Notes. There were 7,801 young adult households that did not accumulate any debt and 35,654 that accumulated debt greater than $0. β = regression coefficient; SE = Robust standard error.

***$p < 0.001$, **$p < 0.01$, *$p < 0.05$

Table 5: Average Partial Effects (APE) of Age, Education Level, and Household Quarterly Earned Income on Total Household Debt (N = 43,455)

		Age		**Education Level**		**Household Quarterly Earned Income**	
		APE of Age		APE of Education Level		APE of Income	
	Percentiles	β	(SE)	β	(SE)	β	(SE)
Lowest	1	–.019***	(.003)	.685***	(.024)	.331***	(.012)
	2	–.014***	(.003)	.673***	(.023)	.297***	(.012)
	3	–.013***	(.003)	.610***	(.019)	.256***	(.009)
	4	–.012***	(.003)	.555***	(.016)	.209***	(.006)
Highest	5	–.012***	(.003)	.452***	(.011)	.157***	(.003)

Source: Data from the 1996 Survey of Income and Program Participation (SIPP), accounting for individual-level clustering.
Notes. Median total household debt is reported for young adult households that report accumulating debt > $0. Among households that accumulated debt, the median total household debt for the entire sample was $33,800. Percentiles for age in ascending order include < 28, 28 to < 33, 33 to < 37, 37 to 39, and ≥ 3. The mean APE of age for the entire sample was –.014. Education levels in ascending order include less than high school, some high school, high school degree, some college, and a college degree or more. The mean APE of education level for the entire sample was .559. Percentiles for household quarterly earned income in ascending order include $0 to < $1,641, $1,641 to < $3,002, $3,002 to < $4,848, $4,848 to < $7,083, and ≥ $7,083. The mean APE of income for the entire sample was .251. Results were calculated using bootstrapping at 250 replications. β = regression coefficient; SE = Robust standard error.***$p < 0.001$

Table 6: Cragg's Double-Hurdle Models Predicting Total Household Debt (Log Transformed; $N = 43{,}455$), with Age, Education Level, and Household Quarterly Earned Income Interactions

	Model 1 w/ Interactions			
	Hurdle 1		**Hurdle 2**	
	Probability of Acquiring Total Household Debt		Value of Accumulated Total Household Debt	
	β	(SE)	β	(SE)
Interactions of Savings Account with Age (Reference: No Account Ownership)				
Savings Account Ownership	.009***	(.001)	.004***	(.001)
Savings Account Acquisition	.010***	(.001)	.002	(.001)
Savings Account Closure	.010***	(.001)	.004***	(.001)
Interactions of Savings Account with Education Level (Reference: No Account Ownership)				
Savings Account Ownership	.094***	(.006)	.067***	(.004)
Savings Account Acquisition	.105***	(.012)	.048***	(.009)
Savings Account Closure	.104***	(.012)	.061***	(.008)
Interactions of Savings Account with Household Quarterly Earned Income / 1000 (Reference: No Account Ownership)				
Savings Account Ownership	.077***	(.006)	.065***	(.003)
Savings Account Acquisition	.106***	(.015)	.062***	(.006)
Savings Account Closure	.110***	(.017)	.070***	(.007)

Source: Data from the 1996 Survey of Income and Program Participation (SIPP), accounting for individual-level clustering.

Notes. There were 7,801 young adult households that did not accumulate any debt and 35,654 that accumulated debt greater than $0. Given consistency of the results in Table 4, only interaction results are presented here in order to conserve space. β = regression coefficient; SE = Robust standard error.

***$p < 0.001$, **$p < 0.01$, *$p < 0.05$

Table 7: Cragg's Double-Hurdle Models Predicting Household Secured Debt (Log Transformed; $N = 43{,}455$)

	Model 2			
	Hurdle 1		Hurdle 2	
	Probability of Acquiring Household Secured Debt		Value of Accumulated Household Secured Debt	
	β	(SE)	β	(SE)
Age	–.008***	(.002)	.007***	(.002)
Female	–.008	(.020)	–.010	(.017)
White	.171***	(.024)	.065**	(.024)
Married	–.278***	(.025)	–.251***	(.025)
Family Household	–.080**	(.028)	.090**	(.028)
New Head of Household	.003	(.029)	−.009	(.030)
College Degree or More	.319***	(.035)	.506***	(.039)
Some College	.401***	(.032)	.309***	(.038)
High School Degree	.265***	(.032)	.152***	(.039)
Enrolled in College	–.066*	(.032)	–.030***	(.024)
Employed	.347***	(.028)	.016	(.029)
Household Quarterly Earned Income / 1000	.098***	(.008)	.087***	(.010)
Owned a Home	1.291***	(.021)	1.988***	(.021)
Purchased a Home	1.331***	(.043)	2.099***	(.029)
Sold a Home	.105**	(.034)	.194***	(.042)
Metropolitan Region	–.057*	(.027)	–.364***	(.024)
West Geographic Region	.171***	(.029)	.184***	(.027)
North Central Geographic Region	.229***	(.030)	–.038	(.025)
South Geographic Region	.228***	(.028)	–.061*	(.025)
Savings Account (Reference: No Account Ownership)				
Savings Account Ownership	.236***	(.021)	.150***	(.018)
Savings Account Acquisition	.160***	(.037)	.037	(.035)
Savings Account Closure	.216***	(.036)	.106**	(.034)
R^2	.200		--	
Model Constant	−.919***	(.105)	8.519***	(.105)
Sigma Constant	1.053***	(.010)	1.053***	(.010)

Source: Data from the 1996 Survey of Income and Program Participation (SIPP), accounting for individual-level clustering.

Notes. There were 15,011 young adult households that did not accumulate any secured debt and 28,444 that accumulated secured greater than $0. β = regression coefficient; SE = Robust standard error.

***$p < 0.001$, **$p < 0.01$, *$p < 0.05$

Table 8: Average Partial Effects (APE) of Age, Education Level, and Household Quarterly Earned Income on Household Secured Debt (N = 43,455)

		Age		**Education Level**		**Household Quarterly Earned Income**	
		APE of Age		APE of Education Level		APE of Income	
	Percentiles	β	(SE)	β	(SE)	β	(SE)
Lowest	1	–.020***	(.004)	.331***	(.019)	.294***	(.011)
	2	–.016***	(.003)	.333***	(.019)	.329***	(.012)
	3	–.014***	(.004)	.350***	(.019)	.313***	(.011)
	4	–.012***	(.003)	.352***	(.019)	.280***	(.009)
Highest	5	–.013***	(.003)	.331***	(.016)	.216***	(.006)

Source: Data from the 1996 Survey of Income and Program Participation (SIPP), accounting for individual-level clustering.
Notes. Median secured household debt is reported for young adult households that report accumulating secured debt > $0. Among households that accumulated secured debt, the median secured household debt for the entire sample was $50,000. Percentiles for age in ascending order include < 28, 28 to < 33, 33 to < 37, 37 to 39, and ≥ 3. The mean APE of age for the entire sample was –.016. Education levels in ascending order include less than high school, some high school, high school degree, some college, and a college degree or more. The mean APE of education level for the entire sample was .343. Percentiles for household quarterly earned income in ascending order include $0 to < $1,641, $1,641 to < $3,002, $3,002 to < $4,848, $4,848 to < $7,083, and ≥ $7,083. The mean APE of income for the entire sample was .302. Results were calculated using bootstrapping at 250 replications. β = regression coefficient; SE = Robust standard error.***$p < 0.001$

Table 9: Cragg's Double-Hurdle Models Predicting Household Secured Debt (Log Transformed; N = 43,455), with Age, Education Level, and Household Quarterly Earned Income Interactions

	Model 2 w/ Interactions			
	Hurdle 1		Hurdle 2	
	Probability of Acquiring Secured Household Debt		Value of Accumulated Secured Household Debt	
	β	(SE)	β	(SE)
Interactions of Savings Account with Age (Reference: No Account Ownership)				
Savings Account Ownership	.007***	(.001)	.005***	(.001)
Savings Account Acquisition	.005***	(.001)	.002	(.001)
Savings Account Closure	.007***	(.001)	.004***	(.001)
Interactions of Savings Account with Education Level (Reference: No Account Ownership)				
Savings Account Ownership	.065***	(.005)	.063***	(.004)
Savings Account Acquisition	.048***	(.010)	.034***	(.009)
Savings Account Closure	.063***	(.010)	.048***	(.008)
Interactions of Savings Account with Household Quarterly Earned Income / 1000 (Reference: No Account Ownership)				
Savings Account Ownership	.075***	(.005)	.063***	(.002)
Savings Account Acquisition	.073***	(.010)	.049***	(.006)
Savings Account Closure	.083***	(.011)	.057***	(.007)

Source: Data from the 1996 Survey of Income and Program Participation (SIPP), accounting for individual-level clustering.

Notes. There were 15,011 young adult households that did not accumulate any secured debt and 28,444 that accumulated secured greater than $0. Given consistency of the results in Table 7, only interaction results are presented here in order to conserve space. β = regression coefficient; SE = Robust standard error.

***$p < 0.001$, **$p < 0.01$, *$p < 0.05$

Table 10: Cragg's Double-Hurdle Models Predicting Household Unsecured Debt (Log Transformed; N = 43,455)

	Model 3			
	Hurdle 1		**Hurdle 2**	
	Probability of Acquiring Unsecured Household Debt (n = 15,212)		Value of Accumulated Unsecured Household Debt (n = 28,243)	
	β	(SE)	β	(SE)
Age	–.009***	(.002)	–.003	(.002)
Female	.055**	(.018)	–.035	(.024)
White	.261***	(.022)	.098**	(.033)
Married	–.448***	(.022)	–.204***	(.031)
Family Household	.076**	(.025)	.074*	(.036)
New Head of Household	–.074**	(.029)	–.054	(.036)
College Degree or More	.445***	(.032)	.828***	(.045)
Some College	.567***	(.028)	.530***	(.042)
High School Degree	.362***	(.027)	.358***	(.042)
Enrolled in College	.227***	(.026)	.311***	(.033)
Employed	.341***	(.024)	.096**	(.038)
Household Quarterly Earned Income / 1000	.028***	(.006)	.049***	(.010)
Owned a Home	.083***	(.020)	−.077**	(.025)
Purchased a Home	.146***	(.034)	.059	(.043)
Sold a Home	.030	(.033)	−.018	(.047)
Metropolitan Region	–.032	(.022)	–.033	(.029)
West Geographic Region	.032	(.028)	–.011	(.036)
North Central Geographic Region	–.021	(.027)	–.116**	(.035)
South Geographic Region	–.026	(.026)	–.117***	(.033)
Savings Account (Reference: No Account Ownership)				
Savings Account Ownership	.211***	(.018)	–.136***	(.024)
Savings Account Acquisition	.295***	(.034)	–.028	(.044)
Savings Account Closure	.240***	(.033)	–.015	(.041)
R^2	.059		--	
Model Constant	–.246**	(.094)	7.805***	(.137)
Sigma Constant	1.461***	(.008)	1.461***	(.008)

Source: Data from the 1996 Survey of Income and Program Participation (SIPP), accounting for individual-level clustering.

Notes. There were 15,212 young adult households that did not accumulate any unsecured debt and 28,243 that accumulated unsecured greater than $0. β = regression coefficient; SE = Robust standard error.

***$p < 0.001$, **$p < 0.01$, *$p < 0.05$

Table 11: Average Partial Effects (APE) of Age, Education Level, and Household Quarterly Earned Income on Household Unsecured Debt (N = 43,455)

		Age		**Education Level**		**Household Quarterly Earned Income**	
		APE of Age		APE of Education Level		APE of Income	
	Percentiles	β	(SE)	β	(SE)	β	(SE)
Lowest	1	–.027***	(.004)	.480***	(.017)	.105***	(.008)
	2	–.027***	(.004)	.494***	(.018)	.111***	(.008)
	3	–.027***	(.004)	.528***	(.020)	.111***	(.008)
	4	–.027***	(.004)	.536***	(.019)	.109***	(.008)
Highest	5	–.027***	(.004)	.523***	(.017)	.107***	(.007)

Source: Data from the 1996 Survey of Income and Program Participation (SIPP), accounting for individual-level clustering.

Notes. Median unsecured household debt is reported for young adult households that report accumulating unsecured debt > $0. Among households that accumulated unsecured debt, the median unsecured household debt for the entire sample was $4,150. Percentiles for age in ascending order include < 28, 28 to < 33, 33 to < 37, 37 to 39, and ≥ 3. The mean APE of age for the entire sample was –.027. Education levels in ascending order include less than high school, some high school, high school degree, some college, and a college degree or more. The mean APE of education level for the entire sample was .525. Percentiles for household quarterly earned income in ascending order include $0 to < $1,641, $1,641 to < $3,002, $3,002 to < $4,848, $4,848 to < $7,083, and ≥ $7,083. The mean APE of income for the entire sample was .108. Results were calculated using bootstrapping at 250 replications. β = regression coefficient; SE = Robust standard error.***$p < 0.001$

Table 12: Cragg's Double-Hurdle Models Predicting Household Unsecured Debt (Log Transformed; N = 43,455), with Age, Education Level, and Household Quarterly Earned Income Interactions

	Model 3 w/ Interactions			
	Hurdle 1		Hurdle 2	
	Probability of Acquiring Unsecured Household Debt		Value of Accumulated Unsecured Household Debt	
	β	(SE)	β	(SE)
Interactions of Savings Account with Age (Reference: No Account Ownership)				
Savings Account Ownership	.005***	(.001)	−.004***	(.001)
Savings Account Acquisition	.008***	(.001)	−.001	(.001)
Savings Account Closure	.006***	(.001)	−.001	(.001)
Interactions of Savings Account with Education Level (Reference: No Account Ownership)				
Savings Account Ownership	.058***	(.004)	.008	(.006)
Savings Account Acquisition	.087***	(.009)	.034**	(.011)
Savings Account Closure	.073***	(.009)	.033**	(.011)
Interactions of Savings Account with Household Quarterly Earned Income / 1000 (Reference: No Account Ownership)				
Savings Account Ownership	.019***	(.003)	.008*	(.004)
Savings Account Acquisition	.058***	(.009)	.031***	(.008)
Savings Account Closure	.044***	(.009)	.025**	(.009)

Source: Data from the 1996 Survey of Income and Program Participation (SIPP), accounting for individual-level clustering.
Notes. There were 15,212 young adult households that did not accumulate any unsecured debt and 28,243 that accumulated unsecured greater than $0. Given consistency of the results in Table 10, only interaction results are presented here in order to conserve space. β = regression coefficient; SE = Robust standard error.
***$p < 0.001$, **$p < 0.01$, *$p < 0.05$