

A GENERATION INDEBTED: YOUNG ADULT DEBT ACROSS THREE COHORTS

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ABSTRACT

In this study I examine how young adult indebtedness has changed across three cohorts of young adults in the 1970's, 1980's, and 2000's. I pool data from four National Longitudinal Surveys of Youth cohorts—the NLS-M 1966, NLS-W 1968, NLSY 1979, and NLSY 1997. I have three key findings: first, debt burdens (debt relative to economic resources) have increased substantially across the three cohorts of study. Despite the fact that the most recent cohort of young adults are earlier along in their debt accrual career and have yet to hit many of the major adult milestones that often lead to debt, they are burdened with more debt than previous cohorts of young adults who achieved these milestones earlier. Second, young adult debt portfolios have shifted towards non-collateralized (unsecured) and student loan debt over time, the latter replacing home mortgage debt as the primary form of wealth-building debt among young adults. Third, cohort changes in debt have occurred unequally across social class lines. Young adults from lower social class backgrounds have disproportionately taken on more unsecured debt over time, relative to their more advantaged counterparts. The growth in debt burden across cohorts, however, has been most pronounced among college educated young adults.

1. INTRODUCTION

The economic crisis of 2008 called attention to the risks associated with rising household and consumer debt. Over the last forty years, inflation adjusted household debt has increased dramatically, and debt has become more difficult to repay for American families (Campbell and Hercowitz 2009; 2010; Maki 2002). More recently, rising debt has stoked popular and scholarly concern that young adults are increasingly at risk for starting their adult careers buried under a mountain of debt with no hope of repayment (Draut 2005; Draut and Silva 2004; Kamenetz 2006). Little is known, however, about how young adult indebtedness has changed over time. In this paper I examine how credit use and debt burdens have shifted across three cohorts of young adults.

For many, young adulthood is the beginning of the debt accrual career. It is a stage of life when individuals and households have relatively low incomes and few assets (Haveman and Wolff 2005; Wolff 2001). Yet it is also a time when young people make significant decisions and investments in their future — such as completing their education, purchasing a home, and getting married — most of which lead them to acquire debt. On the one hand, access to credit and taking on debt provides young adults with the financial resources necessary to achieve many of these milestones. On the other hand, recent literature on debt in the transition to adulthood suggests that becoming overburdened with debt at this critical life stage is likely to diminish young adults' ability to attain economic independence, increase their risk of bankruptcy, and have consequences for their economic and psychological well-being (Atkinson 2010; Drentea 2000; Dwyer, McCloud, and Hodson 2011; 2012).

But despite a growing focus on the consequences of youth indebtedness, surprisingly little research has investigated cohort differences in credit use and debt burdens in the early young adult years. Nearly all debt research focuses on historical trends in debt across the entire population (Campbell and Hercowitz 2009; 2010; Maki 2002), and does not consider that young adulthood may differ from other stages of the life course. This is important because newer cohorts of young adults face unique risks and circumstances in young adulthood that earlier born cohorts did not, which may alter their patterns of early debt accumulation and debt trajectories as they move through the life course. Moreover, existing research on young adult indebtedness is limited to student loan debt and credit card debt among college goers (Draut and Silva 2004; Kamenetz 2006; Project on Student Debt 2011), and thus has not considered all types of debt or examined debt among those who do not go on to college.

In this study I ask how young adults' debt portfolios and debt burdens (debt relative to assets and income) have changed across three cohorts. I also examine the intersection of social class and debt, and ask how cohort differences in indebtedness have unfolded across social class lines. The primary analyses focus on young adults in their mid-twenties (age 24-28). At this age, most young adults have completed their educations and are just beginning their adult careers (Rindfuss 1991). I examine three cohorts: The Early Baby Boomers, who entered adulthood in the mid-1970's and often were married, had homes, and had children by their mid-twenties; the Late Baby Boomers, who entered adulthood in the late 1980s after the massive financial deregulation of the Reagan Era; and Generation Y, the most recent cohort of young adults who came of age in the mid-2000s on the eve of the Great Recession¹.

2. YOUNG ADULT DEBT IN A LIFE COURSE PERSPECTIVE

The life course perspective stresses the importance of time for shaping human lives and notes that individuals' behaviors, choices, and development are a product of the broader sociohistorical context within which they are embedded (Elder, Johnson, and Crosnoe 2004). It emphasizes two aspects of time for the study of change. First, individuals are shaped by the social conditions of the *historical era* (or period) in which they are embedded. Historical changes in credit policies (Campbell and Hercowitz 2009), have increased debt burdens and made debt more difficult to repay, which could impact young adult indebtedness (Atkinson 2010; Elder 1994). Second, successive *birth cohorts* experience the passing of historical time differently (Elder, Johnson, and Crosnoe 2004) given that cohorts reflect the intersection of historical and biographical time. Differences across birth cohorts result from growing up and coming of age in different social and historical contexts (Ryder 1965). Across cohorts, the social roles, obligations associated with young adulthood have changed, which has important implications for their credit use and debt burdens. I discuss each of these in turn.

2.1. Credit, Debt, and the Burden of Repayment: Historical Trends, 1970-Present

Young adults have increasingly come of age in a historical era of rising debt. In the past several decades inflation adjusted median household debt has risen and household savings have declined (Campbell and Hercowitz 2009). From 1970 through present day, the proportion of households with debt has increased, and median household debt has risen from \$20,000 to over \$67,000 in constant inflation adjusted 2010 dollars. (Federal Reserve Board 2009; Projector and Weiss 1966). While most of the rise in debt was driven by rising home mortgage debt, all types of debt—including automobile loans, credit card debt, and student loan debt—rose during this time (Federal Reserve Board 2009).

The dramatic run-up in debt was made possible by a range of financial deregulation policies in the late 1970's and 1980's that made lending more profitable. These deregulatory, or neoliberal, policies increased the supply of credit to consumers by giving the banks more power to control interest rates, aggressively market loans to more households who previously did not have access to credit, and create new credit instruments (Campbell and Hercowitz 2009; Campbell 2010). For instance, the landmark 1978 Supreme Court decision in *Marquette National Bank vs. First Omaha Service Corp* loosened restrictions on interstate banking, which led states to compete for banks' business and ratchet up usury interest rate caps (Campbell 2010). Rising interest rates increased bank profits and allowed banks to further expand consumer credit and mortgages to those who were traditionally denied credit—such as socioeconomically disadvantaged groups and college students. Moreover, the repeal of Depression-era banking regulation policies in the late 1990's led to massive bank mergers, which gave banks more capital to lend and allowed for the creation of asset-backed securities—both of which were key to the continued expansion of both consumer credit and home mortgages (Campbell 2010). These changes transformed credit from an industry based on low-interest collateralized installment loans, to one that is based around non-collateralized revolving credit, where consumers are charged high interest rates for carrying their balances forward (Campbell 2010; Hyman 2011). Consumer credit, once a marginally profitable business, has thus become a multibillion dollar industry and a key profit mechanism for banks.

But what was profitable for the banks proved problematic for the American consumer as debt became harder to repay. The aggressive marketing of credit to the less affluent, the rise of revolving credit, and ballooning interest rates increased the financial burden of repayment for American families. Debt burden (debt relative to income or assets) has increased dramatically

over the past three decades, and indicates that debt has become more difficult for many Americans to repay (DeBelle 2004; Pearce 1985).ⁱⁱ The rise in debt burdens have been further compounded by stagnating wages; armed with expanded access to credit, lower and middle class families who feel the crunch of stagnating wages have increasingly borrowed money to maintain their standard of living (Campbell 2010; Dwyer, McCloud, and Hodson 2011; Leicht and Fitzgerald 2007; Mishel, Bernstein, and Allegretto 2007).

In sum, recent cohorts of young adults have come of age in a historical context where access to credit is increasing, credit is being used to supplement stagnating incomes, and debt repayment is becoming more burdensome on family's economic resources. But over time young adults have also faced unique circumstances in their transition to adulthood that preceding cohorts have not—and such circumstances are likely linked to their use of credit.

2.2. Debt and Debt Burden Across Cohorts of Young Adults

The transition to adulthood—the period of life when young people move from adolescent into adult roles — has changed over time in ways that have implications for young adults' economic resources and debt. In the early 1970's Early Baby Boom young adults followed a standardized script to adulthood and moved quickly into their adult roles. They left their parents' home, completed their educations, entered the full time labor market, got married, and had a child in quick succession (and typically in that order) by the time they were in their mid-twenties (see Shanahan 2000 for review). This was aided by a booming economy and high paying jobs which enabled young people to attain economic independence and start their families at a young age (Settersten and Ray 2010). By their mid-twenties, almost three-quarters of the Early Baby Boom cohort had married, had a child, owned homes, and were firmly entrenched in their full-time careers (Furstenberg 2010; Stevens 1990).

Over time, fewer young adults have followed this script. Young adults are taking longer to settle into their adult roles (Arnett 2000; MacMillan 2005). These changes in the transition to adulthood reflect a variety of structural and cultural changes, notably the expansion of postsecondary education, changing labor market and economic conditions (Furstenberg 2010), as well as the diffusion of contraceptives and women's increased participation in the labor market and higher education (DeNavas-Walt, Proctor, and Smith 2013). In contrast to the Early Baby Boom cohort, only about 60% of young adults in the Late Baby Boom cohort had been married and had at least one child (Furstenberg 2010). Young adults in the Generation Y cohort are even less established; less than half of the Generation Y cohort was married or had a child in young adulthood (Settersten and Ray 2010), and a growing proportion are recent college graduates that have not yet gained steady economic footing (Furstenberg 2010).

That young adults are becoming less established in adult roles have implications for the economic resources they command. Although wealth in the general U.S. population has grown in recent decades, this is not true for young adults (Steuerle, McKernan, Ratcliffe, and Zhang 2013). Young adults in later born cohorts tend to have lower incomes, are less likely to own homes, and have fewer assets than the cohorts that preceded them (Haveman and Wolfe 1994; Taylor et al. 2011). A defining feature Generation Y young adults is that they struggle to become economically independent and need to rely on their parents to make ends meet (Danziger and Ratner 2010; Settersten and Ray 2010; Swartz 2008). In addition, young adults in Generation Y are having more difficulty finding stable, high paying full-time jobs than previous cohorts of young adults (Danziger and Ratner 2010; Sironi and Furstenberg 2012), which further hampers their ability to accumulate assets, and may lead them to become over-burdened with debt.

Perhaps the most obvious shift in the transition to adulthood with implications for debt is the expansion of postsecondary education and its rising costs. During the latter half of the 20th century changes in the structure of the labor market made it increasingly necessary for young adults to get a college degree to attain high-paying, competitive jobs (Danziger and Ratner 2010). Yet the rise in the value of a college degree has been somewhat offset by rising costs. Over the past thirty years, college costs have skyrocketed and outpaced inflation while state and federal funding for higher education have fallen (College Board 2006; National Center for Education Statistics 2012).

Rising college costs and declining grant-based financial aid have led young people to turn to student loans to bridge the gap between rising costs and their own and their family's resources (Houle 2014). When the Early Baby Boomers were in college, most financial aid came in the forms of grants and private education loans were almost non-existent. Today, student loans are one of the most common forms of financial aid (College Board 2010). From the early 1990's through 2010 average inflation-adjusted debt for a college graduate who carried a positive debt balance increased from \$13,000 to over \$25,000 in constant 2010 dollars (College Board 2010; Project on Student Debt 2011; Rothstein and Rouse 2008).

The growth in student loan debt poses unique challenges for recent cohorts of young adults because it is unlike other forms of debt. Although student loan debt, like home mortgage debt may be considered a good investment in one's future, it comes with unique risks. Student loan debt cannot be discharged by filing bankruptcy and there are often heavy financial penalties for missing loan payments (Carey and Dillon 2011). College graduation rates have flat-lined while college enrollment has risen, which means more students are leaving their postsecondary education in debt without a degree (Porter 2012) and thus will not receive the wage surplus that

comes with a college degree. Indeed, student loan default rates have climbed in recent years, suggesting that student loan debt is becoming harder for many to repay (College Board 2010). Thus, student loan debt poses a unique and new risk for Generation Y young adults that previous cohorts did not face.

2.2.1 Debt and Social Class in the Transition to Adulthood

Although young adulthood has changed from a short and narrow path to a long and winding road (Furstenberg et al. 2013), these changes have not been universal across social class lines. Youth from lower social class backgrounds and those who do not go on to college have very different trajectories in the transition to adulthood than their more advantaged counterparts (Furstenberg 2003; Furstenberg 2009). Young adults who delay entry into traditional adult roles tend to be from socioeconomically advantaged families, and are college educated. Meanwhile, socioeconomically disadvantaged youth tend to forgo postsecondary education, move quickly into their adult roles, and struggle to make ends meet in an economy where the value of a high school degree is declining. As noted by Furstenberg and colleagues (2013:39), “these social class differences probably stem from the reality that young people with more limited means do not have the luxury of investing in school or experimenting with complex career paths.”

Social class divisions in the transition to adulthood raise important questions about how credit use and debt burdens have changed over time for young adults across social class lines, but little research has addressed this topic. College educated youth, as well as youth from more affluent backgrounds, may increasingly use debt to build wealth and attain a postsecondary education in their quest for a middle class lifestyle. Those from less affluent backgrounds, and those who do not go on to college, however, may be more burdened by unsecured debt, as they use debt to supplement their stagnating incomes and struggle to make ends meet.

3. THE PRESENT STUDY

The purpose of this study is to provide a systematic analysis of changes in young adult debt across three cohorts: the Early Baby Boom cohort, Late Baby Boom cohort and Generation Y cohort. Drawing insights from the life course perspective (Elder 1994), I argue that youth indebtedness is influenced both by changes in the availability of credit across historical time and by cohort shifts in the transition to adulthood. I also ask to what extent cohort shifts in credit use and debt burden have occurred across social class lines, focusing on parents' income, parents' education, and respondents' educational attainment. I ask four research questions in this study. First, I ask how debt portfolios and debt burdens among young adults have changed across the three cohorts of study. Thus, I build on the growing literature on debt in young adulthood (Atkinson 2010; Drentea 2000; Dwyer, McCloud, and Hodson 2012) and provide insight on the consequences of growing up in an era of rising access to credit. Prior to this study, there has been little work on how debt in the early young adult has changed across cohorts (but see Chiteji 2007).

Second, I ask to what extent cohort differences in the social roles and obligations among young adults bias or influence estimates of cohort differences in youth indebtedness. For example, the primary analyses in this paper compare young adult indebtedness across cohorts at similar ages (ages 24-28). However, the cohort shifts in the transition to adulthood described above may imply that later born cohorts are at an earlier stage of their debt accrual career relative to earlier born cohorts at the same age.ⁱⁱⁱ As such, this comparison may lead to apples-to-oranges comparisons, and could under or overstate differences in debt accrued in the course of young adulthood. Thus, in multivariate models, I control for a range of characteristics related to the transition to adulthood, such as age, marital status, school enrollment, parental status and co-

residence with parents. I describe additional steps I take to test to address this issue in the supplementary analysis section below.

Finally, given that changes in the transition to adulthood across cohorts have occurred unequally across social class lines (Furstenberg 2009), I ask how social class differences in indebtedness and debt burdens have changed across the cohorts of study. Although credit is often viewed as a resource that families can use to supplement their stagnating income or achieve upward mobility (Sullivan 2012), stratification scholars have not considered how social class shapes debt in young adulthood, which is a key stage of life for status attainment (Furstenberg 2009). Thus, I add to knowledge on the intersection of social stratification and debt, by examining how debt burdens and credit use are linked to social class among young adults across cohorts.

4. DATA AND METHODS

I draw data from four nationally representative longitudinal surveys of young people collected by the Bureau of Labor Statistics to represent three birth cohorts: the Early Baby Boomers (NLS-W and NLS-M), Late Baby Boomers (NLSY-79), and Generation Y cohort (NLSY-97). I limited the primary analyses to respondents who were between the ages of 24-28 during the survey wave when debt was measured.

The NLS-W and NLS-M are nationally representative surveys of young women (n=5,159) and young men (n=5,225) who were between the ages of 14-24 in the late 1960's. I used debt data from the 1978 survey of the NLS-W and the 1976 survey of the NLS-W, and analysis was limited to a subset of respondents who were between the ages of 24-28 at these survey waves (NLS-W N=2,550; NLS-M N=2,653). I further limited my analysis to respondents

who had valid data on all study covariates and survey weights (NLS-W N=1,816; NLS-M N=1,920; Combined N=3,736).

The NLSY-79 is a nationally representative sample of 12,686 young men and women who were between the ages of 14-22 in 1979^{iv}. Analysis of NLSY-79 data is limited to respondents who were between the ages of 24 and 28 in 1989, when debts and assets were measured (N=7,217), and further limited to respondents who had valid data on all study covariates (N=5,744).

The NLSY-97 is a nationally representative sample of 8,984 young men and women who were between the ages of 12-16 in 1997. Analysis of NLSY-97 data is limited to respondents who were over age 25 and, thus, eligible to for the debts and assets module, which was administered to respondents once between 2005 and 2009 between the ages of 24 and 28 (N=7,975).^v The number of respondents with valid sample weights and data on all variables in the study is 7,010.

4.4. Measures

Debt was reported for all respondents when they were between the ages of 24 and 28. Respondents were asked similar debt questions across the surveys of study. These include home debt, automobile debt, educational loan debt, and other (consumer) debt. Other debt is a measure of all other outstanding unsecured liabilities (i.e., debts not tied to assets) that includes debt owed to stores, banks, bank cards (e.g., credit cards), and hospitals.^{vi} The wording of the other debt question varies somewhat across surveys. NLS-M and NLS-W respondents were asked to report any other debts in addition to the above reported debts. NLSY-79 respondents were asked to report the value of any outstanding debts over \$500 that they owed in addition to the above reported debts. NLSY-97 respondents were asked about outstanding credit card debts, and any

other debts owed in addition to the above reported debts.^{vii} I also construct measures that reflect debt by type as a proportion of total debt (e.g., other debt/total debt; home debt/total debt) to examine differences in young adult's debt portfolios. Debt and assets from all surveys were adjusted for inflation and updated to 2010 dollars using the Consumer Price Index Research Series (CPI-U-RS) (see Stewart and Reed 1999; Bureau of Labor Statistics 2010) and a 2 percent top code was applied to each debt and asset item across all surveys.

I construct three measures of debt burden that are used in prior research on debt (e.g., Campbell and Hercowitz 2009; Chiteji 2007; Choy and Carroll 2000; Drentea 2000; Kish 2006; Maki 2002). The *Debt-to-Asset Ratio* is a measure of debt relative to assets, and is calculated by dividing total debt over total assets. Assets are the sum total of all financial and saleable assets that were reported in the household including stocks, bonds, checking and savings account balances, the market value of the home and automobiles, and other assets (Wolff 2007). The *Debt-to-Income* ratio is a measure of total non-mortgage debt relative to annual household income. Income is total household annual income from wages and salary, self-employment, and "other" sources of income. Taken together, these measures provide a more complete picture of debt burden than any single measure alone. Young adults without income or assets were not included in the measures of debt burden. However, in supplementary analyses I add \$100 to assets/income to those with no assets/income, which reveals substantively similar results to the results presented here (not shown, available upon request).

I construct several variables that reflect the social roles and obligations of young adults. These variables are constructed to reflect the social roles and obligations of youth at the survey wave when debt is measured. These include: educational attainment (less than or equal to a high school degree, some college, college degree or more [referent]), marital status (never married,

divorced, widowed, married [referent], and dummy variables indicating full time employment status (R is employed full time for at least half the survey year), parental status (respondent has a child), whether or not the respondent lives in the parental home, whether the respondent is enrolled in school at the time debt is measured, and the age at which debt is measured. Finally, I also include a measure of cohabitation (1=unmarried respondent lives with a romantic partner). However, it is not possible to ascertain cohabitation status for the NLS-66 and 68 cohorts. Thus, this measure reflects cohabitation among NLSY-79 and NLSY-97 respondents. I show cohort differences in the social roles and obligations in Appendix 1.

I measure parents' social class via parents' highest education (less than or equal to a high school degree, some college, college degree or higher [referent]) and parents' income. I follow Bloome and Western's (2011) strategy to create a comparable measure of parents' income across cohorts. To do this, I recoded parents' income for each cohort into tertiles to reflect low income, middle income, and high income. This measure therefore reflects one's standing in the income distribution in their given cohort (see Bloome and Western 2011 for more details).

I also I control for and assess the effect of two additional measures of family background: race/ethnic background (white = reference, other categories include black and other race) and family structure in adolescence (two parent biological family = reference, other categories include single parent family, step family, and other family structure).

4.5. Analysis Strategy

To address the first research question — how have patterns of young adult indebtedness shifted over time? — I begin by showing bivariate cohort differences in young adult's debt portfolios and debt burdens (Table 1). Specifically, I show cohort differences in the proportion of

young adults' total debt that is composed of automobile debt, home debt, student loan debt, and other (consumer) debt, and test for significant differences using independent sample two-tailed t-tests (Panel A). I also test for significant mean and median differences in debt burden, including the proportion of young adults with negative net worth, and mean debt-to-income and debt-to-asset ratios (Panel B). Then, I ask whether cohort differences in debt burdens persist net of cohort differences in sociodemographic and young adult characteristics. As noted earlier, cohort differences in debt may be understated because young adults from earlier born cohorts are “further along” in their debt accrual career, and have transitioned into more adult roles, than young adults from earlier born cohorts. To do this, I use quantile regression models to predict cohort differences in median debt burden before and after controlling for differences in young adults' social roles. Quantile regression models are useful when dependent variables are highly skewed, such as debt burden, because the median provides a better measure of central tendency than the mean.

Finally, I present two sets of analyses to ask how social class differences in credit use and debt burden have changed across cohorts. I first examine social class differences in debt portfolios in Tables 3 and 4. Then, I use quantile regression models and including cohort by social class interaction terms to examine whether social class differences in debt burdens have shifted across cohorts. Estimates from these models are displayed graphically in Figures 2, 3, and 4. All analyses are weighted to correct for survey design effects and oversampling. Although I primarily focus on debt portfolios and debt burdens, mean and median debts adjusted for inflation are available from the author upon request.

5. RESULTS

5.1. Cohort Differences in Young Adult Indebtedness

Table 1 shows debt portfolios and debt burden across cohorts. Independent sample t-tests denote significant cohort differences at the $p < .01$ level. Surprisingly, I find that the percent of young adults who hold debt declined slightly across the cohorts of study. Seventy five percent of young adults in the Generation Y cohort report having debt, compared to 78% of young adults in the Early Boomer cohort ($p < .01$). Though this difference is statistically significant, it is a small difference and may be due to the fact that young adults in their mid-twenties in the later born cohorts are at an earlier stage of their debt accrual career than earlier-born cohorts, as noted earlier. Supporting this, supplementary analyses (not shown, available upon request) reveal that after accounting for cohort differences in social roles and obligations in young adults in logistic regression models, young adults from the Generation Y cohort are actually significantly more likely to have debt than young adults from the Boomer cohorts.

I also find that credit use, or debt portfolios, have shifted across cohorts. In the Early Boomer cohort, home mortgages were the predominant liability on the household balance sheet, comprising 43% of total household debt, compared to 19.8% of all household debts in the Generation Y cohorts ($p < .01$). The trend of falling mortgage debt among young adults stands in stark contrast to the adult population as a whole, where home mortgage debt has driven most of the increase in debt (Federal Reserve Board 2009). Education debt, meanwhile, comprises a larger percentage of household debts over time, representing 5.1% of debts among the Late Boomers, and 26% of all debts among the Generation Y cohort ($p < .01$). Other unsecured debts—such as credit card debts, hospital bills, and money owed to banks and stores also increased across cohorts. Nearly 1/3 of Generation Y's total debts are other unsecured debts, compared to 28% of Early Boomers and 26% of Late Boomers' total debts ($p < .01$). Thus, these findings suggest that credit use in young adulthood has changed across cohorts in ways that are consistent

with changes in the transition to adulthood described above. As the transition to adulthood has protracted, and the costs of education have risen, young adults have shifted their credit use away from home mortgage debt and towards student loan and consumer debt.

[Table 1 About Here]

In Panel B, I show that debt burdens have increased across the cohorts of study. Across all measures of debt burden, the findings suggest that Generation Y cohorts are more indebted than the cohorts that preceded them. Thirty-five percent of Generation Y young adults have debts that exceed the value of their assets, compared to 17% of Early Boomers and 16% of Late Boomers. Similarly, median and mean debt to asset ratios increased significantly across the cohorts of study. The median Generation Y household owes seventy-three cents for every dollar in assets that they possess (debt to asset ratio). This implies that the median household in the Generation Y cohort would have to liquidate 73% of their assets to pay off all of their debts, a significantly higher figure than the early and late boomer cohorts. Moreover, the extremely high mean debt-to-asset ratio in the Generation Y cohort (22.44), suggests that a small proportion of Generation Y households have very high debt-to-asset ratios (and are thus pulling up the mean).

Debt-to-income ratios also increased across the cohorts of study, but not as markedly as the debt-to-asset ratio. The median Generation Y cohort household could pay off their nonmortgage debts with 13% of their annual household income, compared to 9% of annual incomes for the Early Boomer cohorts ($p < .01$). Mean debt-to-income ratios were considerably higher. Taken together, these findings suggest that the Generation Y cohort is more burdened with debt than previous cohorts, and it will likely be more difficult for them to repay.

I now turn to my second research question: do cohort differences in young adult debt persist net of cohort differences in sociodemographics and the social roles and obligations in young adulthood? Put differently, does the Generation Y cohort only look more indebted because they are delaying their transitions into adult roles (e.g., marriage and parenthood) that tend to increase debt loads? Or, would accounting for cohort differences in adult roles lead us to find bigger differences in debt across cohorts? Table 2 shows results from quantile regression models predicting cohort differences in median debt to asset ratios (Panel A) and median debt to income ratios (Panel B). In Model 1, I include cohort dummies and controls for age at debt measurement, race, family structure of origin, and parents' education and income. I add young adults' educational attainment, employment status, marital status, parental status, co-residence with parents, school enrollment, and cohabitation status in Model 2.

The results from Model 1a and 1b are substantively similar to the results presented in Table 1. That is, controlling for sociodemographic characteristics does not alter the observed cohort differences in debt-to-income and debt-to-asset ratios. When young adult characteristics are added in Models 2a and 2b, I find a suppression effect. After accounting for social roles and obligations in young adulthood, the differences in debt burden across cohorts widen, such that Generation Y has even higher debt burdens relative to the boomer cohorts. Thus, although many young adults in the Generation Y cohort have yet to achieve many of the social role transitions that are associated with higher debt (e.g., leaving the parental home, becoming a parent, getting married), they already have higher debt burdens than earlier cohorts who achieved these milestones earlier. This suggests that the findings reported here may be conservative, and that young adults in the most recent cohort may become more burdened with debt over time as they transition into adult roles.

The results from supplementary analyses further support this argument. As an alternative way to account for the fact that young adults in different cohorts at the same ages are likely at different life stages, I compared debt levels of the Early Boomer cohorts and Late Baby Boomer cohorts when they are younger. Specifically, I compared debt and debt burden among the Early Boomers at ages 19-23 (average age: 22; debt and assets drawn from 1971 NLS-M survey and 1973 NLS-W survey), the Late Boomers at ages 20-24 (average age: 23; debt and assets drawn from 1985 NLSY79 survey), and the Generation Y cohort at ages 24-28. These findings (available from author) reveal larger cohort differences in debt and debt burden than the findings presented in the paper. Taken together, suggest that cohort differences in debt presented here are downwardly, rather than upwardly biased.

For my final research question, I ask how social class differences in young adult indebtedness have changed across cohorts. In Table 3 I show cohort differences in debt portfolios by Parents' Income (Panel A) and Parents' Education (Panel B). For simplicity of interpretation, In panel B I compare youth with parents who have less than a four year college degree to those with a four year degree or more (complete results comparing young adults from families with a high school degree or less, some college, and a four-year degree or more are available from the author upon request.) I find that, across cohorts, the debt portfolios of youth from lower socioeconomic backgrounds have shifted more towards unsecured (other) debt across cohorts, while the debt portfolios of more advantaged young adults have shifted towards wealth building debt, particularly education debt. For example, unsecured debt increased significantly among low income youth and less educated youths across the three cohorts of study, but unsecured debt did not significantly increase across cohorts for young adults from high income or more educated backgrounds. In other words, young adults from low social class backgrounds

have disproportionately taken on more unsecured debt than their more advantaged counterparts across cohorts.

In Table 4 I show cohort differences in debt portfolios by respondents' educational attainment. Again, for simplicity, I compare young adults with less than a four year college degree to those with a four year college degree or more (complete results comparing young adults with a high school degree or less, some college, and a four-year degree or more are available from the author upon request.) There are three notable findings. First, the growth in unsecured (other) debt across cohorts disproportionately hit young adults with less than a college degree. In Generation Y, other debt comprises 38% of all debt among young adults with a high school degree or less, compared to only 16% of debt among college educated young adults. Moreover, non-wealth building debt (auto debt + other debt) comprises nearly 70% of total debt among young adults with less than a college degree, and only 36% among those with a college degree. College educated adults, instead, have taken on more education debt, which comprises 43% of their total household debt.

Taken together, the findings from Table 3 and Table 4 suggests that youth from lower social class background and non-college going young adults are increasingly taking on unsecured debt across cohorts, perhaps to help them pay their bills and support their stagnating incomes, while youth from more advantaged social class backgrounds and college going youth are increasingly taking on wealth-building student loan debt in the pursuit of a middle class-lifestyle.

Finally, I ask how debt burdens have changed across cohorts by social class. I focus here on debt-to-asset ratios due to space limitations, but the results are similar for debt-to-income ratios and negative net worth. Figures 1, 2, and 3 show cohort differences in median debt burden, stratified by parents' income (Figure 1), parents' education (Figure 2) and respondents'

education (Figure 3). I derive these figures from quantile regression models that control for age at debt measurement, race, and family structure in adolescence. There are two key findings from these figures. First, as shown in Figures 1 and 2, debt burden) has increased for young adults of all social class backgrounds over time. There are few significant differences in debt burdens by parents' income and parents' education.

However, turning to Figure 3, I find that the growth in debt burdens across cohorts is concentrated amongst young adults who attended college. In the Generation Y cohort, young adults with college experience have significantly higher debt burdens than young adults with a high school degree or less, while there are much smaller differences in debt burden by educational attainment in the boomer cohorts. Supplementary analyses reveal that these differences are partially driven by high levels of student loan debt among those who went to college in the Generation Y cohort.

In sum, I find that credit use has changed across three cohorts of young adults in the late 20th and early 21st centuries. Young adult debt portfolios have shifted towards student loan debt and unsecured debt, and away from home mortgage debt—which likely reflects cohort shifts in the transition to adulthood. Young adults have also become increasingly burdened with debt over time. However, these changes have not occurred equally across social class lines. While young adults from lower social class backgrounds and who have lower levels of educational attainment have disproportionately taken on more unsecured debt over time, debt burdens have grown fastest among college-going young adults, who are increasingly taking on student loan debt.

[Figures 1, 2, and 3 about here]

6. DISCUSSION

Transition to adulthood scholars have long noted that, because of the underdeveloped

welfare state in the United States, young adults and their parents are often financially responsible for making investments in their future (Furstenberg 2010). This study shows that in an era of rising credit, such financial investments have increasingly been made with debt—whether that debt has been used by young adults to invest in education, or, for paying bills and purchasing consumer goods. But while young adults often use debt to invest in their future or to aid in their present consumption, the rise of credit has created new risks for the most recent cohorts of young adults, who are likely to be burdened by repaying that debt for years to come (Atkinson 2010).

In this study, I ask how young adult credit use and debt burdens have changed across three cohorts of young adults. There are four key findings. First, I find that debt burdens are extremely high among the Generation Y cohort, suggesting that debt will be harder for them to repay than previous cohorts. Additional analyses (not shown) reveal that one-fifth of Generation Y young adults have debt that exceed *twice* the value of their assets. This underscores the depth of the debt burden faced by this cohort. Moreover, despite the fact that the Generation Y cohort has yet to hit many of their major adult milestones that may lead them to take on more debt (e.g., leaving the parental home, getting married, having kids), they already have higher debt burdens than young adults in the Baby Boom cohorts, who achieved these milestones at an earlier age. This suggests that the results presented here are conservative, and that Generation Y young adults may become even more indebted as they continue their transition to adulthood. Future research should continue to follow the Generation Y cohort into adulthood to assess how their debt burdens affect their future financial well-being, life transitions, wealth acquisition and socioeconomic attainment across their adult life course.

Second, I find that young adult credit use has shifted away from home mortgage debt and towards unsecured debts—including money owed on credit cards and to banks, stores, and

hospitals—as well as student loan debt, which has replaced home mortgage debt as the primary form of wealth building debt among Generation Y young adults. The rise of unsecured debt comes with inherent risks for young adults, as it does not help them build wealth and carries high interest rates, making it more difficult to repay. Student loan debt, though it arguably promotes wealth building, also brings new risks, because it cannot be discharged in bankruptcy except in very rare circumstances (Hancock 2009), and there are no guarantees that young adults will graduate with a degree or be able to find a job in a down labor market (Porter 2012).

Third, I find that debt in young adulthood intersects with social class in complex ways. Across cohorts, young adults from less advantaged backgrounds (low income, less educated parents) and those who currently lack a college degree are disproportionately taking on unsecured debt, compared to their more advantaged counterparts. College educated youth and those from more advantaged social class backgrounds, however, are increasingly taking on more wealth building debt, especially education debt. This widening disparity in debt portfolios suggests that more advantaged young adults are taking on debt that helps them pursue a middle class lifestyle and build their wealth, while less advantaged young adults are taking on debt to pay their bills and keep their heads above water. Thus, it is plausible that rising debt is mirroring rising inequalities in the U.S., and it is possible that debt could come to play an important role in the social reproduction of inequalities across generations (Houle 2014). Future research should interrogate this possibility, and also investigate the role of race and gender for youth indebtedness.

Although economically advantaged young adults are taking on more wealth-building debt, it is not without risk. Debt burdens are growing fastest among college educated young adults. This suggests that the pursuit of a middle class lifestyle and a college degree is more

burdensome than it has been in the past, reflecting the rising costs associated with a middle class lifestyle and postsecondary education in the United States (Leicht and Fitzgerald 2007).

Supporting this notion, evidence suggests that young adults under 25 are the fastest growing group of bankruptcy filers in the United States (US Congress Senate Committee on Banking 2002), and that young adults with a college degree are especially at risk of bankruptcy and financial ruin (Linfield 2011).

Although this study is one of the first to map out cohort differences in early adult indebtedness, it has several limitations that are worth noting. While I examine a broad range of debt sources (i.e. home, education, automobile) among young adults, the debt measures are limited. First, debt items vary somewhat in NLS surveys, such that NLSY-97 respondents are asked more detailed questions about their debts than the prior two cohorts. It is not clear how this may bias the findings. However, differences in debt questions likely reflect changes in debt and credit (e.g., the rise of home equity loans and credit cards) across historical time, and thus differences in question wording may not be a source of bias, but rather reflect social changes. Second, this paper is primarily descriptive, and cannot adjudicate between potential causes and consequences of rising debt in young adulthood. For example, I am unable to speak to whether rising debt has altered the transition to adulthood (e.g., rising debt has led young adults to marry later), or whether changes in the transition to adulthood have led young adults to be more indebted (e.g., the expansion of postsecondary education is leading young adults to be more indebted). Surely both causal processes are at work, and recent research has begun interrogating this question (Addo 2013). Moreover, I am not able to speak to how selection may influence cohort and social class differences in debt—such as differential selection into college across cohorts—and my control variables provide little insight into such selection processes. Similarly,

my social role variables are relatively crude, and may not reflect the increasing complexity of the transition to adulthood. Finally, this study is limited because debt is measured at only one point in time during young adulthood. Future research should draw from longitudinal data and compare differences in trajectories in young adult indebtedness across cohorts.

Despite these limitations, this study provides new information about how indebtedness has changed across three cohorts of young adults and adds to our understanding of the changing economic risks of young adulthood. Debt may be a unique resource for individuals and families, because credit can provide them with opportunities they might not otherwise have. But debt can be burdensome to repay, and can constrain the choices and well-being of individuals and families. My findings suggest that high debt burdens are an emerging social problem for today's young adults, who are taking an unprecedented amount of financial risk as they navigate an increasingly complex transition to adulthood. In an era of credit expansion, rising prices, and stagnating wages, debt is now an integral part of social life for young adults, and could come to play an important role in the maintenance and reproduction of socioeconomic inequalities across generations.

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Table 1: Debt and Debt Burdens Across Three Cohorts of Young Adults (age 24-28)

| | <i>Early Boomers</i> | <i>Late Boomers</i> | <i>Gen Y</i> | |
|--|--------------------------|-------------------------|----------------------|----------------------|
| % of Respondents with Debt | 78.2 ³ | 76.5 | 75 ¹ | |
| Panel A: Debt Type As % of Total Debt Holdings | | | | |
| Home Debt | 43.1 ^{2,3} | 29.9 ^{1,3} | 19.8 ^{1,2} | |
| Auto Debt | 27.7 ² | 37.4 ^{1,3} | 26.2 ² | |
| Education Debt | — | 5.1 ³ | 22.4 ² | |
| Other Debt | 26.0 ³ | 27.5 ³ | 31.5 ^{1,2} | |
| Panel B: Debt Burden | | | | |
| % w/ Negative Net Worth | 15.60 ³ | 16.68 ³ | 34.91 ^{1,2} | |
| Debt-to-Asset Ratio ^a | mean | 1.78 ³ | 3.28 ³ | 23.10 ^{1,2} |
| | median | .50 ³ | .48 ³ | .74 ^{1,2} |
| Non-Mortgage Debt-to-Income Ratio ^b | | .23 ^{2,3} | .40 ^{1,3} | .73 ^{1,2} |
| | | .07 ^{2,3} | .13 ¹ | .13 ¹ |

Source: *Early Boomers: NLS 66/68 (N=3736); Late Boomers: NLSY-79 (1989 N=5744); Gen Y: NLSY-97 (N=7,010)*

^aamong respondents with nonzero assets; ^bamong respondents with nonzero income

¹significantly different from *Early Boomers* at $p < .01$ level; ²significantly different from *Late Boomers* at $p < .01$ level

³significantly different from *Generation Y* at $p < .01$ level

Table 2: Coefficients from Quantile Regression Models Estimating Median Differences in Debt Burden Across Cohorts

| Debt Burden Measure: | Debt/Asset Ratio ^a | | Debt/Income Ratio ^b | |
|--|-------------------------------|---------------------|--------------------------------|---------------------|
| | <i>Model 1a</i> | Model 2a | Model 1b | Model 2b |
| <i>Cohort (Ref=Early Boomers)</i> | | | | |
| Late Boomers | -.018 (.016) | .026 (.017) | .056 *** (.006) | .060 *** (.006) |
| Generation Y | .236 *** (.018) | .271 *** (.020) | .051 *** (.007) | .066 *** (.007) |
| Educational attainment (ref=4 year college degree) | | | | |
| Less than a High School Degree | | -.136 *** (.019) | | -.064 *** (.007) |
| Some College | | -.032 *** (.019) | | -.023 *** (.007) |
| Enrolled in School | | .101 *** (.021) | | .041 *** (.008) |
| Marital Status (ref=never married) | | | | |
| Married | | .144 *** (.018) | | .060 *** (.007) |
| Divorced/Separated | | .086 *** (.026) | | .024 ** (.009) |
| Lives with partner (cohabitor) | | .052 ** (.025) | | -.001 (.009) |
| R is a Parent | | .098 *** (.017) | | -.010 * (.006) |
| Employed Full Time | | .043 *** (.015) | | .029 *** (.005) |
| Resides with Parents | | -.115 *** (.020) | | -.045 *** (.007) |
| Constant | .568 *** (.139) | .799 *** (.147) | .142 ** (.056) | .231 *** (.055) |

***p<.001; **p<.01; *p<.05

All models adjust for race, age at debt measurement, family structure in adolescence, parents'

education, and parents' income. Analysis limited to respondents with ^anonzero assets

(N=13,987); ^bnonzero income (N=15,369)

Table 3: Debt Type as a Proportion of Total Debt Across Three Cohorts by Parents' Social Class

| | Panel A: Parents' Income | | | Panel B: Parents' Education | | |
|----------------|--------------------------|---------------------|---------------------|--|---------------------|---------------------|
| | <i>Early Boomers</i> | <i>Late Boomers</i> | <i>Gen Y</i> | <i>Early Boomers</i> | <i>Late Boomers</i> | <i>Gen Y</i> |
| | <u>Low Income</u> | | | <u>Parent(s) lack a college degree</u> | | |
| Home Debt | 37.3 ^{2,3} | 22.5 ^{1,3} | 16.0 ^{1,2} | 44.1 ^{2,3} | 30.3 ^{1,3} | 19.7 ^{1,2} |
| Auto Debt | 30.5 ² | 39.1 ^{1,3} | 27.2 ² | 27.3 ² | 38.4 ^{1,3} | 27.9 ² |
| Education Debt | – | 4.3 ³ | 18.8 ² | – | 3.7 ³ | 18.6 ² |
| Other Debt | 28.6 ^{1,2} | 34.1 ^{1,3} | 38.0 ^{2,3} | 25.5 ³ | 27.3 ³ | 33.8 ^{1,2} |
| | <u>Middle Income</u> | | | <u>Parent(s) have college degree</u> | | |
| Home Debt | 46.6 ^{2,3} | 25.0 ^{1,3} | 19.6 ^{1,2} | 37.0 ^{2,3} | 28.5 ^{1,3} | 19.9 ^{1,2} |
| Auto Debt | 26.6 ² | 39.1 ^{1,3} | 27.3 ² | 30.0 ³ | 34.3 ³ | 22.7 ^{1,2} |
| Education Debt | – | 4.5 ³ | 21.5 ² | – | 9.8 ³ | 30.7 ² |
| Other Debt | 25.3 ^{2,3} | 31.4 ¹ | 31.5 ¹ | 29.2 | 27.5 | 26.7 |
| | <u>High Income</u> | | | | | |
| Home Debt | 45.5 ^{2,3} | 32.0 ^{1,3} | 21.8 ^{1,2} | | | |
| Auto Debt | 26.5 ² | 36.7 ^{1,3} | 25.4 ² | | | |
| Education Debt | – | 5.6 ³ | 24.9 ² | | | |
| Other Debt | 24.6 | 25.7 | 27.8 | | | |

Source: *Early Boomers: NLS 66/68 (N=3736); Late Boomers: NLSY-79 (1989 N=5744); Gen Y: NLSY-97 (N=7,010)*

¹significantly different from *Early Boomers* at $p < .01$ level; ²significantly different from *Late Boomers* at $p < .01$ level

³significantly different from *Generation Y* at $p < .01$ level

Table 4: Debt Type as a Percentage of Total Debt Holdings Across Three Cohorts by Educational Attainment

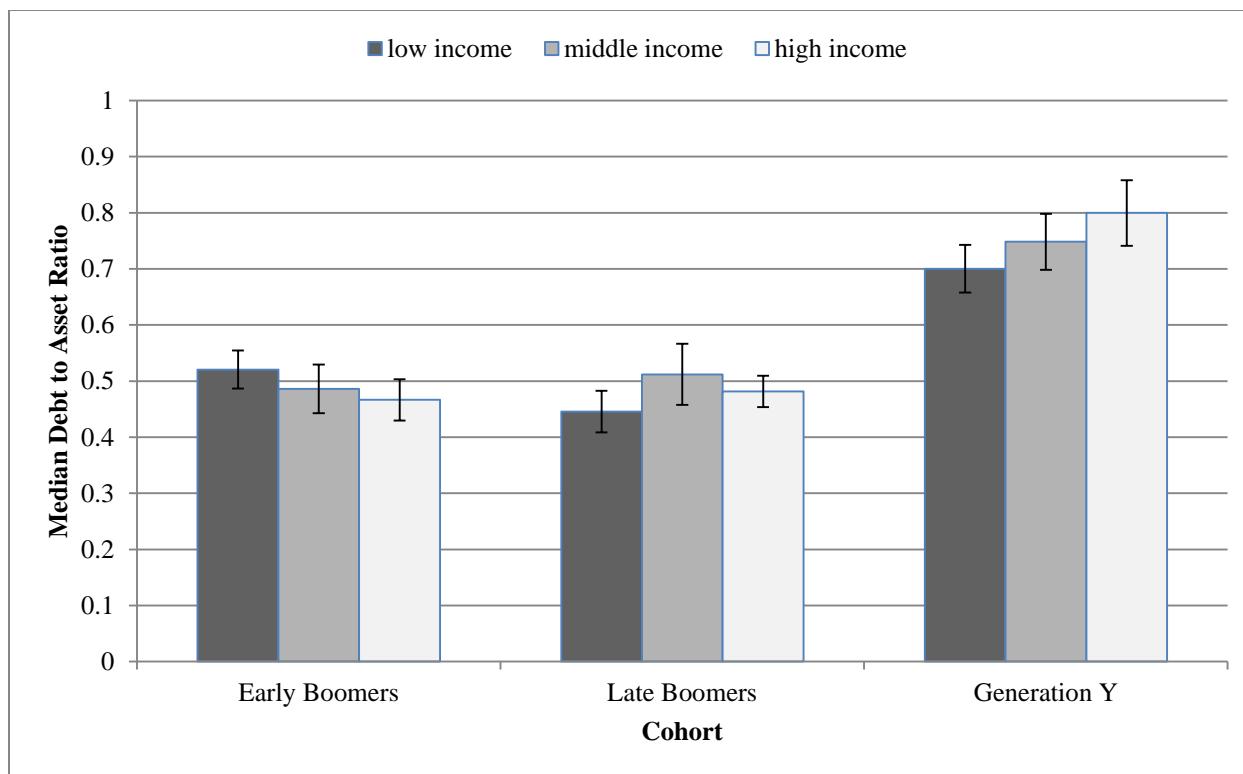
| | <i>Early Boomers</i> | <i>Late Boomers</i> | <i>Gen Y</i> |
|---|----------------------|---------------------|----------------------|
| <u>< Four Year College Degree</u> | | | |
| Home Debt | 44.2 ^{2,3} | 30.5 ^{1,3} | 19.1 ^{1,2} |
| Auto Debt | 26.9 ² | 39.2 ^{1,2} | 29.2 ³ |
| Education Debt | – | 2.49 ³ | 13.66 ² |
| Other Debt | 25.7 ³ | 27.7 ³ | 37.98 ^{1,2} |
| <u>Four Year College Degree or More</u> | | | |
| Home Debt | 39.8 ^{2,3} | 28.5 ^{1,3} | 21.4 ^{1,2} |
| Auto Debt | 30.1 ¹ | 32.8 ³ | 19.2 ^{2,3} |
| Education Debt | – | 12.1 ³ | 42.89 ² |
| Other Debt | 26.8 ³ | 26.65 ³ | 16.43 ² |

Source: *Early Boomers: NLS 66/68 (N=3736); Late Boomers: NLSY-79 (1989 N=5744); Gen Y: NLSY-97 (N=7,010)*

¹significantly different from Early Boomers at $p < .01$ level; ²significantly different from Late Boomers at $p < .01$ level

³significantly different from Generation Y at $p < .01$ level

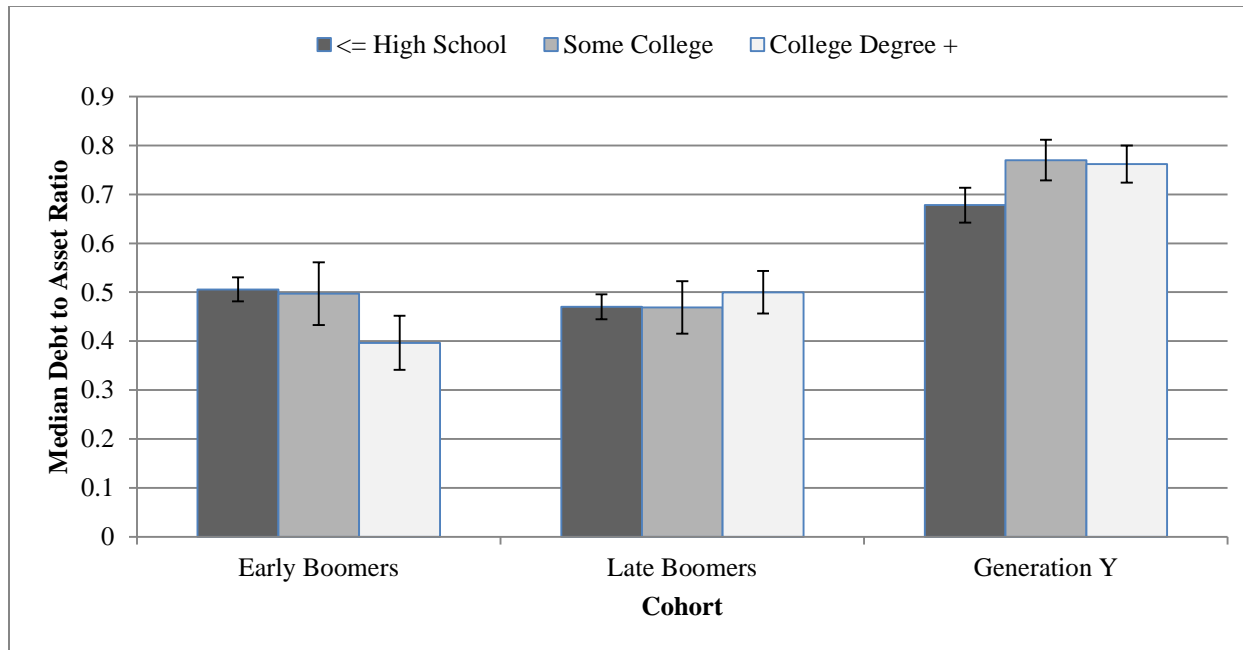
Figure 1: Median Debt Burdens Across Three Cohorts of Young Adults by Parents' Income, with 95% Confidence Intervals



Note: Estimates derived from quantile regression models, adjusted for race, age at debt measurement, and family structure in adolescence.

Figure 2: Median Debt Burdens Across Three Cohorts of Young Adults by Parents' Education, with 95% Confidence

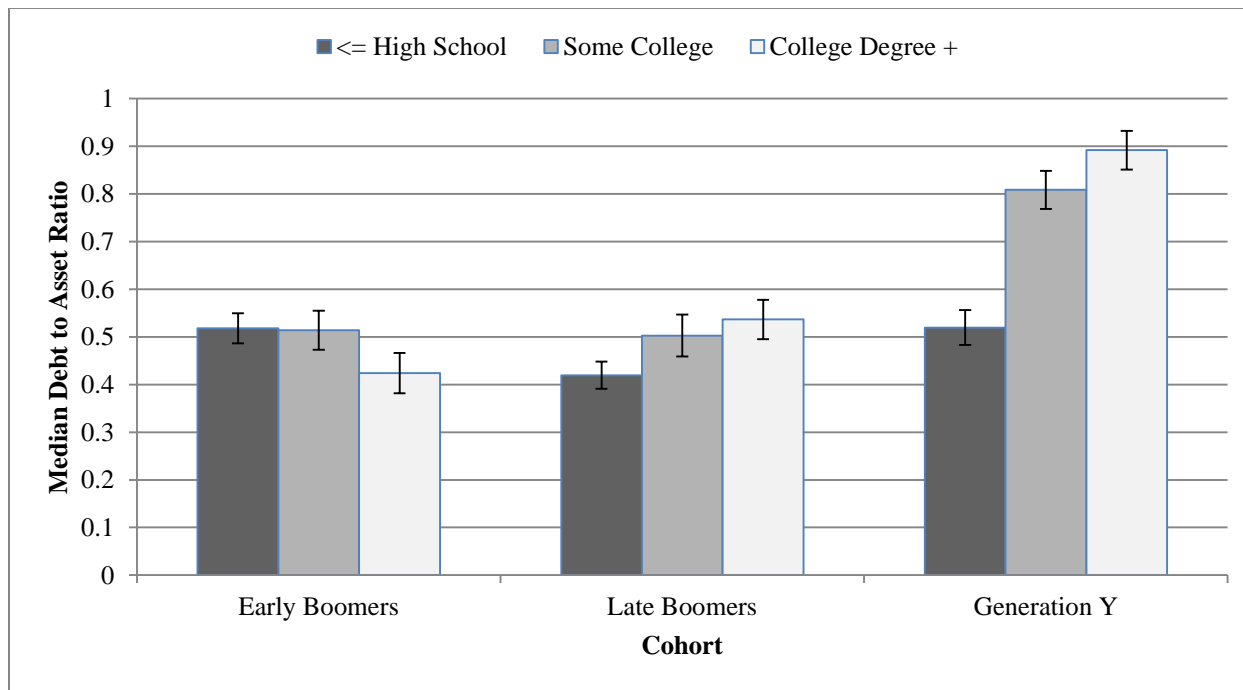
Intervals



Note: Estimates derived from quantile regression models, adjusted for race, age at debt measurement, and family structure in adolescence.

Figure 3: Median Debt Burdens Across Three Cohorts of Young Adults by Educational Attainment, with 95% Confidence

Intervals



Note: Estimates derived from quantile regression models, adjusted for race, age at debt measurement, and family structure in adolescence.

Appendix 1: Social Roles and Obligations Across Three Cohorts of Young Adults

| | <i>Early Boomers</i> | <i>Late Boomers</i> | <i>Gen Y</i> |
|---|--------------------------|-------------------------|---------------------|
| Educational Attainment | | | |
| <i>Less than or = to High School Degree</i> | 47.9 ^{2,3} | 55.1 ^{1,3} | 44.2 ^{1,2} |
| <i>Some College</i> | 27.0 ^{2,3} | 21.1 ^{1,3} | 29.3 ^{1,2} |
| <i>Bachelor's Degree or Higher</i> | 25.1 | 23.8 ³ | 26.4 ² |
| Enrolled in School | 1.0 ^{2,3} | 6.1 ^{1,3} | 22.4 ^{1,2} |
| Marital Status | | | |
| <i>Never Married</i> | 23.3 ^{2,3} | 39.1 ^{1,3} | 68.6 ^{1,2} |
| <i>Married</i> | 66.2 ^{2,3} | 49.3 ^{1,3} | 26.7 ^{1,2} |
| Cohabiting with partner | 0.0 ^{2,3} | 9.1 ^{1,3} | 19.6 ^{1,2} |
| Employed Full-Time | | | |
| <i>Men</i> | 67.1 ^{2,3} | 70.0 ^{1,3} | 62.6 ^{1,2} |
| <i>Women</i> | 85.7 ^{2,3} | 79.0 ^{1,3} | 67.9 ^{1,2} |
| <i>Women</i> | 50.0 ^{2,3} | 60.5 ^{1,3} | 56.9 ^{1,2} |
| Resides with Parents | 10.6 ^{2,3} | 14.3 ^{1,3} | 26.9 ^{1,2} |
| R is a Parent | 51.2 ^{2,3} | 45.0 ^{1,3} | 37.1 ^{1,2} |

Source: *Early Boomers: NLS 66/68 (N=3736); Late Boomers: NLSY-79 (1989 N=5744); Gen Y: NLSY-97 (N=7,010)*

¹significantly different from *Early Boomers* at $p < .01$ level; ²significantly different from *Late Boomers* at $p < .01$ level

³significantly different from *Generation Y* at $p < .01$ level

ENDNOTES

ⁱ I define the cohorts in the following way: Early Baby Boomers are young adults who were age 24-28 in 1976-1978; Late Baby Boomers are young adults who were ages 24-28 in 1989; Generation Y are young adults who were ages 24-28 in 2005-2009.

ⁱⁱ Debt burden is typically measured as the proportion of monthly income that is devoted to debt payments (i.e., the ratio of “debt service” to income) or as the ratio of debt to financial resources, where the latter can be specified as: (1) the ratio of all non-mortgage debts to family income (i.e., the debt-to-income ratio); and (2) the ratio of all debt to the sum of all financial and nonfinancial assets (i.e., the debt-to-asset ratio), and is associated with a range of negative financial outcomes, including missed loan payments, financial distress, and even bankruptcy (Dynan and Kohn 2007; Wolff 2007).

ⁱⁱⁱ I thank an anonymous reviewer for this valuable insight.

^{iv} The NLSY-79 sample includes an over sample of economically disadvantaged racial and ethnic minorities, and a military sample. For the purposes of this analysis, the military sample is omitted, because it was discontinued after 1985, and to increase comparability with the other NLS surveys (see Sironi and Furstenberg 2012).

^v Debt and asset data were drawn from multiple waves of the NLSY-97 because respondents were asked asset and debt questions once, in a survey year closest to their 25th birthday. Although NLSY intended to interview respondents in the first survey year after their 25th birthday, respondents were administered the debts and asset module once when they were 24, 25, 26, 27, or 28 in either 2005, 2006, 2007, 2008, or 2009.

^{vi} NLSY respondents were also asked about debts related to their farm, business ventures, or other real estate debt. I do not include these types of debt in this study, as these types of debt are not typically included in measures of household and consumer debt. However, it is possible that young adults are using home equity loans or credit card debt to pursue business ventures.

^{vii} Because NLSY-79 respondents were only asked to report other debts that were over \$500, other debt will be slightly underreported in the NLSY-79. To account for this difference, supplementary analyses (not shown) limit other debt to 500 dollars or more in other cohorts. The results are substantively and statistically identical to the results below.