A GENERATION INDEBTED? YOUNG ADULT DEBT ACROSS THREE COHORTS

by

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ABSTRACT

Popular reports—stoked by the Great Recession and rising college costs—contend that young adults today are more indebted than the generations that precede them, but little systematic research exists on patterns of indebtedness in young adulthood. This study examines how young adult indebtedness has changed across three cohorts of young adults in the 1970's, 1980's, and 2000's. To do this, I pool data from four National Longitudinal Surveys of Youth—the NLS-M 1966 cohort, NLS-W 1968 cohort, NLSY 1979 cohort, and NLSY 1997 cohort. Study findings reveal that the proportion of young people with debt and median indebtedness is relatively stable across the three cohorts of study, in contrast to popular notions of rising young adult debt. Debt burden (e.g. debt-to-asset ratio), however, has increased across cohorts in part because of declines in asset ownership and increases in unsecured debt among young adults. Implications of findings are discussed.

A GENERATION INDEBTED? YOUNG ADULT DEBT ACROSS THREE COHORTS

First job. First house. First child. These 'firsts,' when strung together, traditionally signal the arrival of adulthood. Today … piling up debt has become a new rite of passage into adulthood. If our generation had its own branding campaign, it would be "Debt—you can't leave home without it"

-Tamara Draut, "Strapped"

The economic crisis of 2008 called attention to the importance of rising household and consumer debt. In the general population, young adults are especially at risk for accumulating debt. Young adulthood is a stage of life when individuals and households have relatively low incomes and few assets (such as homes, savings, stocks and bonds) (Haveman and Wolff 2005; Wolff 2001). Yet it is also a time when young people make significant decisions and investments in their future, most of which require debt. As such, young adults tend to carry higher debt burdens than the adult population at large (Yilmazer and DeVaney 2005).

Popular media and recent evidence suggest that young adults today start their careers and complete their educations buried under more debt than previous generations of young adults (e.g. Draut and Silva 2004; Kamenetz 2006). But surprisingly little research has investigated changes in young adult indebtedness across cohorts. To date, most investigations of debt have examined broad population trends over time, but do not consider potential variability across cohorts at specific life stages (for an exception see Chiteji 2007).

This study fills this gap in research and examines debt change across three cohorts of young people in their mid-twenties age 24-28 (whom I refer to as "young adults"). At this age, most young people have completed their educations and are just beginning their adult careers

(Rindfuss 1991). Drawing from the Life Course Perspective (Elder 1994), I argue that changes in young adult debt over time reflect both *period* and *cohort* level processes. Specifically, changes in young adult debt reflect both historical *period* changes in access to credit and the prices of and demand for commodities that affect all members of the adult population, and *cohort* changes in the social meaning of what it means to be a young adult. Although I consider how cohort time and period time may influence patterns of young adult indebtedness, this study does not attempt to conduct an Age-Period-Cohort analysis.

I examine three cohorts: The Early Baby Boomers (born in 1948-1954), who entered adulthood in the mid-1970's, many of whom were married, had homes, and had children by their mid-twenties; the Late Baby Boomers (born in 1961-1965), who entered adulthood shortly after the massive financial deregulation of the Reagan Era; and Generation Y (born in1979-1983), the most recent cohort of young adults who came of age on the eve of the financial crisis of 2008. The analysis includes several indicators of debt. Specifically, I focus on total debt, home mortgage debt, automobile debt, education debt, other (revolving) debt, and the debt-to-asset ratio. The debt-to-asset ratio is a measure of debt burden (Dynan and Kohn 2007) that reflects debt relative to financial (i.e. savings, stocks, and bonds) and nonfinancial (i.e. homes and automobiles) *stocks* of resources that are saleable[1] (Wolff 2007). To do this, I pool data from the National Longitudinal Young Men and Young Women cohorts (NLS-M and NLS-W), The National Longitudinal Study of Youth 1979 cohort (NLSY-79), and The National Longitudinal Study of Youth 1997 cohort (NLSY-97).

[1] assets such as homes and automobiles, excluding pensions and retirement accounts.

Young Adult Debt in a Life Course Perspective

The life course perspective stresses the importance of historical time for shaping human lives. According to this perspective, individuals' behaviors, choices, and development are a product of the broader sociohistorical context within which they are embedded (Elder, Johnson, and Crosnoe 2004). Historical time shapes lives in two distinct ways. First, individuals are shaped by the social conditions of the historical *period* (or era) in which they are embedded. Second, the passing of historical time differentiates the life experiences of successive birth *cohorts* (Elder, Johnson, and Crosnoe 2004). Cohorts reflect the intersection of historical and biographical time. Each new birth cohort comes of age in a different historical context than those that preceded it, which shapes its development over the course of life. Differences across birth cohorts are therefore the result of growing up and coming of age in different social and historical contexts (Ryder 1965).

The life course perspective provides a useful framework for assessing indebtedness across different cohorts of young adults. Historical *period* trends, such as rising debt, could affect the propensity of young adults to become indebted (Dwyer, McCloud, and Hodson 2011; Elder 1994). The past thirty years have witnessed rising debt, increased access to credit, and rising inflation-adjusted prices of homes, automobiles and college degrees. Median household debt in the United States has risen dramatically across the past several decades, a key source of which is rising mortgage debts (Campbell and Hercowitz 2009; 2010; Maki 2002). In the early 1980's, financial deregulation accelerated the rise in debt, which coincided with massive declines in household savings (Campbell and Hercowitz 2009). The burden of debt on American households has also increased, as American households today hold debts at historically unprecedented levels relative to their incomes and assets (Kish 2006; Maki 2002). Indeed, such

historical period trends lead to the simple expectation that young adults have become more indebted across cohorts.

Cohort differences in the social meaning of young adulthood could also influence young adult indebtedness. The Early Boomers, Late Boomers, and Generation Y cohorts entered their mid-twenties with a different set of roles and social obligations which affected their investment decisions. Young adulthood has undergone tremendous changes over the last several decades, which has implications for the resources young adults command and the type of investments they make. In the early 1970's at the tail end of Post WWII-prosperity, twenty-something's were well-established; most were married, had at least one child, owned homes, and were firmly entrenched in their full-time careers. Over time, young adults have become less established. Today, less than half of twenty-something's are married or have kids, few own significant assets, and a growing proportion are recent college graduates. Young adults are also increasingly relying on their parents for financial assistance as they limp towards economic independence (Swarts 2008). For these reasons, young adults may not have become more indebted and taken on different types of debt across cohorts.

Historical Period Trends in Rising Household Debt: Trends and Sources of Debt

Household debt has risen dramatically over the past forty years. In the early 1970's total outstanding household debt totaled around 680 billion dollars (all dollar figures in this paper are real dollar values and reported in constant 2007 dollars). By 2007, household debt had ballooned to over 13.5 *trillion* dollars, or about 70 percent of GDP (Federal Reserve Board 2007; Weinberg 2006). Before debt began to rise in the 1970's, 66 percent of U.S. households carried debt, and the median debtor household owed approximately $20,000 (Projector and Weiss 1966). By 2007,

80 percent of households carried debt, and the median debtor household owed over $67,000 (Federal Reserve Board 2009).[2]

The dramatic rise in household debt over the historical period of 1970s-2007 was made possible by institutional and social policies that increased access to credit to a broader swath of American households. Most importantly, financial deregulation in the 1980's made lending a more profitable business and increased the supply of credit to consumers by giving the banks more power to control interest rates, aggressively market loans to more households, and create new credit instruments (Campbell and Hercowitz 2009).The dismantling of usury laws in the early 1980's lifted federal restrictions on the amount of interest a lender can charge, paving the way for the adjustable rate mortgage and high-interest credit cards (Ellis 1998; Mercatante 2008). The Monetary Control Act of 1980 and the Garn-St Germain Acts of 1982 also contributed to rising mortgage debts by eliminating Depression-Era restrictions on mortgage lending and relaxing equity requirements, which allowed greater access to home mortgages with very little down payments (Campbell and Hercowitz 2009; 2010; Kaufman 1986; Pearce 1985). These policies set the standard for looser lending practices for other types of consumer credit.

Home Debt

A key source of the rise in household debt was the increase in home mortgage debt (Weinberg 2006). Household level data shows that median home mortgage debt among homeowners rose from $51,000 in 1989 to over $107,000 in 2007 (Federal Reserve Board 2009).

Data on outstanding household debt show that inflation adjusted home mortgage debt increased from 419 Billion dollars in 1974 to around 10 trillion by 2007 (Federal Reserve Board 2007). By contrast, outstanding inflation adjusted consumer debt (automobile, credit card, and

[2] Household-level debt data are relatively rare. These figures are based on repeated cross-sectional data from the Survey of Consumer Finances. The Survey of Consumer Finances surveyed U.S. households in 1962, 1963 and tri-annually from 1983-2007.

other liabilities) grew from 202 billion dollars in 1974 to 2.5 trillion dollars by 2007 (Federal Reserve Board 2007).

As noted above, the rise in home mortgage debt was aided by changes in lending practices and changes in the structure of home loans (i.e. adjustable rate mortgages; lower equity requirements). Increases in home ownership and rising home prices also contributed to trends in home debt (Dynan and Kohn 2007). During the 1970's home ownership had been rising for several years, and hovered around 65 percent. Home ownership remained relatively stable through the 1980's and early 90's, and increased steadily from 1995 through 2007 (Garriga, Gavin, and Schlagenhauf 2006). From the early 1980's through mid-2000's, the prices of homes steadily increased, prompting individuals and families to borrow more to finance their new homes (Dynan and Kohn 2007). The fastest growth in home prices occurred between the mid 1990's and mid 2000's when real home prices rose by 86 percent (Shiller 2007). Before the housing bubble burst in 2007 home prices were at an all-time high (Eggers and Moumen 2008). After the housing crash, homeowners often owed more on their homes than they were worth.

Automobile Debt

Homes and automobiles account for nearly 90 percent of household debt (Campbell and Hercowitz 2009). Behind homes, automobiles are the most commonly held nonfinancial asset in the United States (Agarwal, Ambrose, and Chomisisengphet 2008). Data from the Survey of Consumer Finances show that automobile debt has increased steadily over the last forty years. In the 1960's, 27 percent of households had automobile loans, and owed an average of $1,800 in automobile loan debt. By 2007, over 35 percent of households held automobile loans, and owed an average of $12,000 on their vehicles (Federal Reserve Board 2009).

A likely contributor to the rise in automobile debt is the rise in automobile ownership and automobile prices. Automobile ownership and inflation adjusted prices have increased over the past 40 years (Pickrell and Schimek 1999). According to an analysis by Abeles (2004), the inflation-adjusted price of an average new vehicle increased steadily from around $11,700 in 1974 to $23,500 in 2001, amounting to a 2.3 percent annual increase in the price of a new automobile.

Education Debt

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). Indeed, the wage premium of a college degree has doubled over the past thirty years (Danziger and Ratner 2010:142). But the rise in the value of a college degree has been somewhat offset by rising costs.

The inflation-adjusted cost of attending private and public universities has increased dramatically since the early 1980's (College Board 2006). When the Early Baby Boomers were attending college in the early 1970's, the average yearly tuition, fee, room and board (TFRM) at a 4-year public university was around $6,200 and $14,400 at a four-year private university in 2007 dollars. When the Late Baby Boomers attended college in the early to mid 80's, inflation-adjusted TFRM had risen to $7,700 for four-year public institutions and $18,800 for four-year private institutions. By the time the Gen Y cohort attended college in the 2000's, the costs of attending college had skyrocketed: TFRM reached $13,100 at four-year public institutions, and $31,200 at four year private institutions (College Board 2006).

The rising price of college has increased the importance of financial aid and education loans for college students. When the Early Baby Boomers were in college, education loans were

rare — most financial aid came in the forms of grants — and private education loans were almost non-existent. But from the early 1990's through 2006 average inflation-adjusted debt for a college graduate who carried a positive debt balance increased from approximately $13,000 to over $20,000 (College Board 2007; Draut and Silva 2004; Rothstein and Rouse 2008). In addition, the availability of Pell grants has declined over time, and students have increasingly relied on private loans. Over two-thirds of college graduates in 2007 had private loans, which carry significantly higher interest rates than government loans (College Board 2007).

Other Sources of Debt

Other types of credit, such as credit cards and installment credit through stores also became more readily available over this historical period. In particular, credit card debt rose sharply following the financial deregulation of the early 1980's (Manning 2001; Ritzer 1995). Although the Federal Reserve does not release estimates of credit card debt, estimates from the Survey of Consumer Finances suggest the percent of American households with a credit card grew from 60 percent in the early 1980's to 75 percent in 2004(Johnson 2007; Yoo 1997). Between 1980 and 2001, the average credit card debt of American households with a positive credit card balance increased from around $1,000 in 1980 to nearly $5,000 in 2001(Draut and Silva 2004; Durkin 2000) . This type of debt can be particularly damaging, because it typically carries high interest rates (15%-30%), annual fees, and are non-collateralized (or unsecured), meaning they are debts owed on services and goods that have all ready been rendered, not on assets that can be used to build wealth. But although credit card debt increased over this period, its contribution to the overall rise in household debt was relatively small (Campbell and Hercowitz 2009).

In addition to education loans, credit card debt is one of the few areas where there is direct evidence that debt in young adulthood has increased over time. For example, research by Draut and Silva (2004) shows that inflation adjusted average credit card debt among young adults with credit card increased from $3091 in 1992 to $4790 in 2001 (in 2007 dollars). Credit card companies have been especially aggressive marketing to some subsets of young adults, especially college students (Draut and Silva 2004; Kamenetz 2006; Manning 2001).

Debt Burden

Before the financial crisis of 2008, scholars questioned whether households were becoming unduly burdened by their increased debt loads (see Kish 2006; Maki 2002). A common measure of debt burden is the debt to asset ratio[3], a measure of a household indebtedness relative to its *stocks* of financial and nonfinancial resources (Dynan and Kohn 2007; Wolff 2007) . Over time, inflation-adjusted household debt has grown at a faster pace than household income and assets (Dynan and Kohn 2007; Kennickell 2009). From the 1970's through 2006, the median household debt to asset ratio steadily increased from about .14 to .20 (Debelle 2004; Pearce 1985).[4] As a result, a growing number of households are highly indebted relative to their income and assets (Dynan and Kohn 2007).

Young Adults Coming of Age in an Historical Period of Rising Debt

[3] This study uses the debt-to-asset ratio as its primary measure of debt burden. Although there is no universally accepted measure of debt burden, social scientists have typically relied on two measures to capture debt burden when they lack information on debt service payments and interest rates: the debt-to-income ratio and the debt-to-assets ratio. The debt to income ratio reflects the amount of debt one has relative to their access to annual *flows* of money. Debt-to-annual income ratios can be misleadingly high if they include mortgage debt (as they often do), because mortgage debts are typically paid down over a 20 or 30 year period. Considering that many debts are paid off over the course of several years, the debt to asset ratio may be a better reflection debt burden than the debt-to-income ratio. Indeed, research shows that the debt-to-asset ratio is a much stronger predictor of bankruptcy, default, missed payments, and other measures of financial distress than the debt to income ratio (Tippett 2010; Dynan and Kohn 2007:25).

[4] For comparison, the debt-to-income ratio increased from 68 percent in 1983 to 81 percent in 2001, and hit an all-time high of 115 percent in 2004 (Wolff 2007).

The above historical period trends suggest that successive cohorts of young adults may have become more indebted over time. The Early Baby Boomers entered their mid-twenties in the mid-1970s at a time when overall household debt was low, homes were affordable, and access to credit was relatively restrictive. The Later Baby Boomers entered adulthood after the massive financial deregulation of the 1980's, and access to and use of credit was on the rise. Finally, the Generation Y cohort entered adulthood on the eve of the nation's deepest financial crisis since the Great Depression. Inflation adjusted home and automobile prices were at an all-time high, access to credit had continued to grow, and debt had begun to take a far more prominent role on the household balance sheet than it had in the past. These historical changes suggest that (1) total (median) debt increased across the cohorts of study; (2) the proportion of young adults with debt increased across cohorts; (3) home mortgage, auto debt, education debt, and other debt increased across cohorts of young adults; (4) debt relative to assets increased, because the increase in debt outpaced the growth of assets.

Cohort Differentiation in What it Means to be a Twenty-Something: Implications for Debt

The above historical period trends suggest that successive cohorts of young adults have become more indebted over time. A transition to adulthood perspective, however, provides a counterpoint these expectations, because the social roles and obligations associated with young adulthood have changed over time.

During the Post World War II period, most young people followed a set cultural script during their transition to adulthood. 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).

Over time, fewer young adults have followed this script. This period of life—known as the transition to adulthood—has become more destandardized and individualized. Destandardization is defined as a process by which the life course has become less predictable, structured, and orderly (Bruckner and Mayer 2005). Individualization, a similar idea, is the theory that the life course is becoming more a product of individual agency than social structure (Arnett 2000; MacMillan 2005).

As a result, the social meaning of young adulthood has changed over time. In the Early Baby Boom cohort, most young adults were established in their careers and families. Almost three-quarters had married, had a child, and established independent households (Furstenberg 2010; Stevens 1990). In contrast, the Late Baby Boomers were less established. Only about 60 percent of young adults in this cohort had been married and had at least one child (Furstenberg 2010). Young adults in the Generation Y cohort are even less established than the Boomer cohorts. 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 by young adulthood (Furstenberg 2010). A defining feature Generation Y young adults is that they, more so than the Boomer cohorts, struggle to remain economically independent and need to rely on their parents to help make ends meet (Danziger and Ratner 2010; Settersten and Ray 2010; Swarts 2008).

Such changes in young adulthood have had important implications for asset accumulation across cohorts. Haveman and Wolff (2005), for instance, finds that assets declined in young adult households over the 1990's, which suggests that new cohorts of young adults are accumulating

fewer assets than cohorts of young adults that came before them. In addition, home ownership fell among the youngest households over the past thirty years (Fisher and Gervais 2009; Segal and Sullivan 1998), despite the fact that home ownership in the general population increased over the same time period (Garriga, Gavin, and Schlagenhauf 2006). This leads to the expectation that fewer young adults have taken on home mortgage debt over time, the main source of household debt.

Across the cohorts of study, young adults have become less established in the social roles of parenthood and marriage, spent more time as students, and accumulated fewer assets. These cohort specific changes lead to the expectation that (1) the proportion of young people with home debt declined across cohorts; (2) Because home debt is the main source of household debt, total (median) debt declined across cohorts; (3) education debt increased across cohorts; and (4) debt relative to assets increased across cohorts, because of the decline in assets among young adults. Due to data limitations, I am unable to examine changes in credit card debt across cohorts of young adults.

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 (young adults in the mid 1970's), The Late Baby Boom cohort (young adults in the late 1980's) and the Generation Y cohort (young adults in the mid-2000's). Drawing insights from the life course perspective (Elder 1994), I argue that changes in young adult debt across cohorts reflect two aspects of historical time: (1) differences in the historical periods in which each cohort entered adulthood, such historical changes in access to credit, the price of and demand for commodities; (2) cohort differences in the social roles and obligations of young adults in their mid-twenties. The period and cohort

perspectives on changes in young adult debt provide somewhat competing explanations for how young adult debt has changed over historical time. A focus on the historical *period* in which these cohorts entered adulthood provides the following predictions of changes in young adult debt, if young adults were to simply follow the trends of the historical periods in which they came of age:

1. Median debt in young adulthood will increase across the cohorts of study
2. Median home mortgage debt, automobile debt, education debt, and other debt has increased across the cohorts of study
3. The proportion of young adults with any debt, mortgage debt, automobile debt, education debt, and other debt has increased across the cohorts of study
4. Debt burden (as measured by the debt-to-asset ratio) has increased across the cohorts of study, because median debt increased at a faster rate than assets.

A focus on the cohort differences in the social roles and obligations during their young adult years, on the other hand, suggests the following predictions for changes in young adult debt across the cohorts of study:

1. Median debt declined or remained stagnant across the cohorts of study, because young adults are less likely to have mortgage debt across cohorts, the main source of household debt (Campbell and Hercowitz 2009)
2. The proportion of young adults with home mortgage debts declined across the cohorts of study.
3. The proportion of young adults with education debt increased across the cohorts of study
4. Median home mortgage debt declined across the cohorts of study
5. Median education debt increased across the cohorts of study

6. Debt burden (as measured by the debt-to-asset ratio) has increased across the cohorts of study, because assets have declined across the cohorts of study.

This is the first study to examine changes in debt across three cohorts of young adults in their twenties and consider potential period and cohort influences on young adult indebtedness. Only one additional study that I am aware of has examined changes in debt among younger adults over time (Chiteji 2007). Chiteji (2007) used data from the 1963 Survey of Financial Characteristics of Consumers (SFCC), the 1980 Survey of Consumer Finances (SCF) and the 2001 SCF to examine indebtedness among head of households. The results provide important information about debt among younger householders, but the Chiteji study differs from this study in several important ways.

First, Chiteji (2007) analyzed debt among adults who are well into their thirties (up to age 35), which is well beyond the years traditionally associated with young adulthood and the transition to adulthood, particularly among earlier cohorts (Rindfuss 1991). As such, that study more closely resembles studies that examine changes in debt in the general population over time (e.g. Weinberg 2006). It also does not consider potential period and cohort influences on debt in young adulthood. Second, Chiteji (2007) does not examine education debt, which is one of the most common forms of indebtedness among young adults today. Third, the relatively small sample size of the SCF and SCFF makes it difficult to get reliable estimates of assets and debts for subpopulations (such as young people) (Scholz and Seshadri 2007).[5] In contrast, this study uses data from nationally representative longitudinal surveys that were designed to examine the labor market and financial experiences of young people. Finally, Chiteji (2007) did not analyze

[5] For example, one rather odd finding from the Chiteji study is that asset ownership has remained relatively stable across cohorts of young adults. This finding flies in the face of a great deal of research on asset ownership and net worth that shows that asset ownership among young adults has declined steadily over time (e.g. Haveman and Woolf 2005; Fisher and Gervais 2009; Segal and Sullivan 1998).

indebtedness among the most recent cohort of young people who entered adulthood just before the financial crisis of 2008. This study does. Thus, this study builds and improves on prior research by analyzing indebtedness among young people when they are in their twenties and are completing their education and entering their full time careers—during the transition to adulthood—using data from surveys that were intended to analyze the experiences of young adults.

Data & Methods

Data for this study are drawn from four nationally representative longitudinal surveys of young people collected by the Bureau of Labor Statistics, the NLS-M, NLS-W, NLSY-79, and NLSY-97. Each dataset was selected to represent the three birth cohorts of study: The Early Baby Boomers (NLS-W and NLS-M), the Late Baby Boomers (NLSY-79), and The Generation Y Cohort (NLSY-97). To ensure that debt was observed at comparable ages across surveys, analyses for each dataset were limited to respondents who were between the ages of 24-28 during the survey wave when debts and assets were measured.[6]

The Early Baby Boomers: NLS-W and NLS-M

The NLS-W is a nationally representative sample of 5,159 young women who were between the ages of 14-24 in 1968. Respondents were interviewed annually until 1971, and were followed up on a biannual basis from 1973 through 1981. Analysis of NLS-W data was limited to a subset of respondents who were between the ages of 24 and 28 in the 1978 survey wave

[6] Most prior research on debt and assets has utilized the Federal Reserve Board's Survey of Consumer Finances (SCF), a repeated nationally representative cross section of American households. Although the survey of consumer finances is considered the "gold standard" for debt and assets, its small sample size makes it difficult to examine subpopulations (Scholz and Seshadri 2007), such as young adults in their twenties (research on debt in "young households" using the SCF has looked at debt among households whose head is under 35 years of age, see Chiteji 2007). The NLS surveys are ideal in this regard because the surveys were designed to be representative of young people, and thus allow this researcher to examine debt when young adults are just completing their educations and entering their full-time careers.

when assets and debts were measured (N=2550 were age 24-28 in 1978). The number of respondents with valid sample weights and data on all variables in the study is 1,876.

The NLS-M is a nationally representative sample of 5,225 young men who were between the ages of 14-24 in 1966. Respondents were interviewed annually from 1966 through 1978, and were then interviewed at least biannually until 1997. Analysis of the NLS-M data was limited to a subset of respondents who were between the ages of 24 and 28 in the 1976 survey, when assets and debts were measured (N=2653 were age 24-28 in 1976). The number of respondents with valid sample weights and data on all variables in the study is 2,096.

The Late Baby Boomers: NLSY-79

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. Respondents were interviewed annually until 1994, and have been interviewed biannually ever since. The original 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 (which was discontinued in 1985; N=1280) is omitted from the analysis. 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=7,216). The number of respondents with valid sample weights and data on all variables in the study is 6,291.

The Generation Y Cohort: NLSY-97

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. NLSY-97 respondents have been interviewed annually since 1997. The most recent wave of data available was collected in 2008. The NLSY-97 sample includes an over sample of racial and ethnic minorities. Analysis of NLSY-97 data is limited to

respondents who were between the ages of 24 and 28 in 2007 (N=6,913). The number of respondents with valid sample weights and data on all variables in the study is 5,663.

Measures

Debt and Assets

Debt and asset data were drawn from the 1976 wave of the NLS-M, the 1978 wave of the NLS-W, the 1989 wave of the NLSY-79, and the 2005-2008 waves of the NLSY-97.[7,8]

Respondents were asked similar debt questions across the surveys of study (see Appendix 1 for a detailed list of debt questions asked to respondents across NLS surveys). Home debt is the total outstanding amount owed on a home (these questions were only asked of home owners). Automobile debt is a measure of all outstanding liabilities on all vehicles that are owned in the household. Education debt questions were only asked in the NLSY-79 and NLSY-97 surveys. Respondents were asked how much money they borrowed in student loans over the course of their college career. Although men and women in the NLS-M and NLS-W surveys were asked questions about financial aid in college, the vast majority of respondents received grants, loans,

[7] Debt and asset data were drawn from multiple waves of the NLSY-97 because the NLSY-97 changed the way they asked debt and asset questions after 2004. After 2004, respondents were asked asset and debt questions *only* in the first survey after their 25th birthday. Thus, debt data for respondents who are age 24-28 in the NLSY-97 are drawn from the 2005,2006, 2007, and 2008 surveys and reflect debt and assets when the respondent is 25 years old. To ensure that cohort comparisons were not influenced by the difference in the age at debt measurement, I ran additional analyses that compares debt among 25 year olds in NLS-66,68, and NLSY-79 to 25 year olds in the NLSY-97 (thus, I restrict the sample to 25 year olds). The results from these supplementary analyses are statistically and substantively similar to the results from the main analyses. Appendices 2-5 show the results from these supplementary analyses.

[8] Debt and assets from all surveys were adjusted for inflation and updated to 2007 dollars using the Consumer Price Index Research Series (CPI-U-RS) (see Stewart and Reed 1999; Bureau of Labor Statistics 2010). In addition, because top codes on debt and asset data were included in some surveys but not others, a consistent 2 percent top code was applied to each debt and asset item across all surveys.

or assistance from the GI Bill. Very few reported ever receiving loans to cover their college costs. Other debt is a measure of all other outstanding liabilities excluding home, automobile, education, and farm/business/other real estate debt.[9] The way in which the other debt question was asked varied across surveys. NLS66 and 68 respondents were asked simply 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.[10] In the NLSY-97 survey, respondents were asked more detailed questions about outstanding credit card debts, and any other debts owed in addition to the above reported debts. Total debt is the sum total of all household home mortgage debt, automobile debt, education debt, and other debt.

Assets are the sum total of all financial and saleable assets that were reported in the household except for retirement and pension funds (Wolff 2007). This includes the value of stocks, bonds, checking and savings account balances, the market value of the home, and the market value of automobiles. Research shows that asset measures in the National Longitudinal Surveys are valid and accurately reflect asset ownership among young adults (Zagorsky 1999).

Debt-to-Asset ratio is a measure of debt burden calculated by dividing total debt over total assets (debt/assets). One dollar was added to households that reported zero assets to calculate a valid debt to asset ratio. Because the mean debt-to-asset ratio may obscure changes in the number of young adults who are severely indebted relative to their assets (Dynan and Kohn 2007), I also construct two additional dummy variables meant to capture young adult households whose debt exceeds the value of their assets. Debt exceeds assets is a dummy variable that

[9] Farm, Business, and Other Real Estate debt are not included in this study, as these types of debt reflect business rather than household debt.
[10] 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.

indicates young adult debt exceeds the value of their assets (1=yes). Debt exceeds 2x assets is a variable that captures young adult households whose debts exceed at least twice the value of their assets (1=yes).

Social Roles and Obligations of Young Adults

For descriptive purposes this chapter also includes measures of educational attainment, marital status, employment status, and parental status measured when respondents were 24-28 years old. Educational Attainment is an ordinal measure that indicates whether respondents have less than a high school degree, a high school degree or equivalent, some college experience (a 2 year degree or less), or a bachelor's degree or higher. Marital status is an ordinal measure that indicates whether respondents have been never married, currently married, divorced/separated, or widowed. Employment status is a dichotomous measure that indicates whether respondents were employed in the full-time labor market in the past year (1=employed full time). Parental status is a dichotomous measure that indicates whether or not respondents have at least one child (1=yes).

Analysis Strategy

The analysis strategy is as follows. First, Table 1 shows descriptive statistics that document changes in the social roles and obligations of young adults across the three cohorts of study. The remaining analyses examine how young adult debt and debt burden has changed across the three cohorts of study. Table 2 shows cohort differences in the proportion of young adults who hold any debt (total and by type) across the cohorts of study. Table 3 shows mean and median debt for each cohort among all respondents (panel b) and debt holders only (panel a).

Table 4 shows median and mean assets and debt burden (debt to asset ratio) across the three cohorts of study. All analyses are weighted to correct for survey design effects and oversampling.

Results

Table 1 shows the major social roles and obligations—educational attainment, marital status, employment status, and parental status—among young adults across the three cohorts of study. Over 75 percent of the Early Baby Boomers were married by their mid-twenties, while only 60 percent of the Late Baby Boomers and 35 percent of the Generation Y cohort were married by their mid-twenties. The proportion of young adults with children also decreased across cohorts. According to reports from women, 60 percent of Early Baby Boomers had a child by the time they were young adults, while 53 percent of the Late Baby Boomers and 47 percent of Generation Y women reported having a child. The proportion of young adults who are employed full time also differs across cohorts, but not in the expected direction. Full-time employment is highest among the Late Baby Boomers (83%), followed by the Generation Y cohort (80%), and the Early Baby Boomers (76%). However these differences hide important gender differences in employment trends among young adults that have been observed in other studies (e.g. Danzinger and Ratner 2010). The proportion of young adult men who are employed full-time declines across the cohorts of study, while the proportion of young adult women who are employed full time increases across cohorts.

Educational attainment also increased over time, as more young adults went beyond high school across cohorts. The differences in educational attainment across the Early and Late Baby

Boom cohorts is similar to findings in other studies (Western and Bloome 2010). Overall, these descriptive results demonstrate that the major social roles and obligations of young adults, and the social meaning of young adulthood, have changed across the cohorts of study.

Table 1 Social and Demographic Characteristics of Young Adults in the Early Baby Boom (Cohort 1), Late Baby Boom (Cohort 2) and Generation Y (Cohort 3)

	Cohort 1 1976/1978 (n=3972)	**Cohort 2** 1989 (n=6246)	**Cohort 3** 2007 (n=5663)
Educational Attainment			
Less than a HS Degree	.119	.130	.095
HS Degree or equivalent	.363	.437	.275
Some College	.271	.206	.361
Bachelor's Degree or Higher	.246	.228	.269
Marital Status			
Never Married	.236	.396	.654
Married	.659	.487	.293
Divorced/Separated	.102	.116	.053
Widowed	.003	.000	.001
Employed Full Time (1=yes)	.760	.831	.796
Men	.892	.890	.823
Women	.632	.767	.765
Parental Status (1=parent)	.512	.459	.403
% Women who report being a parent	.602	.535	.474
Race			
White	.871	.825	.727
Black	.121	.145	.160
Other	.008	.029	.114

Source: NLS 66/68 (1976-1978 Survey Wave); NLSY-79 (1989 Survey Wave); NLSY-97 (2007 Survey Wave)

How Has Debt Changed Across Cohorts?

Proportion of Young Adults with Debt

Table 2 shows the proportion of young adults with any debt, home debt, auto debt, education debt (Late Boomers and Generation Y cohort only) and other debt across the cohorts of study. The results in Table 2 do not support the notion that *more* young adults have become indebted over time. The proportion of young adults who report having any debt is relatively similar across the cohorts of study. Seventy-seven percent of Early Baby Boomers, 77 percent of Late Baby Boomers, and 75 percent of Generation Y young adults report any debt. In fact, although the differences are substantively small, young adults in the Generation Y cohort are significantly less likely to have any debt than young adults in the Early Baby Boom and Late Baby Boom cohorts ($p<.01$).

Table 2 Percent of Young Adults (age 24-28) Holding Debt Across Three Cohorts

	Cohort 1 1976-1978 (n=3972)	**Cohort 2** 1989 (n=6347)	**Cohort 3** 2007 (n=5262)
% w/ Any Debt	.772 [3]	.772 [3]	.749 [1,2]
Debt by Type			
% w/ Home Debt	.394 [2,3]	.263 [1,3]	.176 [1,2]
% w/ Auto Debt	.452 [2,3]	.491 [1,3]	.387 [1,2]
% w/ Education Debt	x	.237	.253
% w/Other Debt	.475 [2,3]	.420 [1,3]	.530 [1,2]

[1]*significantly different from Cohort 1 at p<.01 level*
[2]*significantly different from Cohort 2 at p<.01 level*
[3]*significantly different from Cohort 3 at p<.01 level*

The proportion of young adults with home debt significantly declines across the cohorts of study ($p<.01$). Nearly 40 percent of the Early Baby Boomers report any home debt, while only

26 percent of Late Baby Boomers and 18 percent of Generation Y young adults report having home debt. Automobile debt also varies across cohorts. The Early and Late Baby Boomer cohorts are significantly more likely to have automobile debt than young adults in the Generation Y cohort ($p<.01$), and the Late Baby Boomers are more likely to have auto debt than the Early Baby Boomers ($p<.01$). Forty-five percent of Early Baby Boomers, 49 percent of Late Baby Boomers, and 39 percent of Generation Y young adults report any automobile debt. The proportion of Late Baby Boomers and Generation Y young adults with any education debt is relatively similar; 24 percent of Late Baby Boomers and 25 percent of Generation Y young adults report having education debt. Finally, the proportion of young adults who report that they owe other debts is significantly higher in the Generation Y cohort than both the Early Baby Boom and Late Baby Boom cohorts ($p<.01$). Surprisingly, young adults in the Late Baby Boom cohort are significantly less likely than Early Baby Boomers to have any other debts ($p<.01$). Forty eight percent of Early Baby Boomers, 42 percent of young adults in the Late Baby Boom cohort, and 53 percent of young adults in the Generation Y cohort report having other debts. The rise in the proportion of young adults with other debts in the Generation Y likely reflects the increased use of credit cards by young adults over time (Draut 2005; Draut and Silva 2004).

Overall, the results from Table 2 reveal that while the proportion of young adults in debt is relatively similar across the cohorts of study, the key sources of debt are not. With few exceptions, the proportion of young adults with asset-based debt (i.e. home debt and automobile debt) declined across the cohorts of study, education debt emerged as a significant source of debt for Late Baby Boomers and Generation Y young adults, and the proportion of young adults with other debt —the money owed to banks, stores, hospitals, and credit card companies—is highest among the Generation Y cohort.

Median Debt.

Table 3 reports mean and median total debt, home debt, automobile debt, education debt, and other debt among the Early Baby Boomers, Late Baby Boomers, and Generation Y cohorts. Panel A shows the average debt among respondents who report having any debt and Panel B shows the average debt among all respondents in each cohort. Although I report both mean and median debt, I limit my focus to median debt because debt is highly skewed. When a variable is skewed, mean values are biased upwards. Therefore, the mean debt overstates the indebtedness in the typical young adult household.

Total Debt.

The results from Table 3 provide little evidence that young adults have become more indebted over time. Among respondents who report any debt (Panel A) and all respondents (Panel B), there are no significant differences in median debt across the cohorts of study. Among the indebted, median debt is $20,065 among Early Baby Boomers, $19,063 among Late Baby Boomers, and $6,985 among Generation Y young adults.

However, the results show that *mean* total debt increases significantly across the cohorts for all respondents (Panel A) and debt holders (Panel B). As mentioned above, the mean is a misleading indicator of central tendency for skewed variables, such as debt. Increases in mean total debt across cohorts may therefore reflect increases in the number of *highly indebted* young adult households across cohorts. Thus, although Generation Y young adults may not have higher median debt, there does appear to be more young adults with extremely high debt levels (that are pulling up the mean).

Home Debt.

Recall that Table 2 showed that the proportion of young adults with home debt has declined across cohorts. Table 3, however, shows that among young adults with debt on their homes (Panel A), median home debt has increased significantly across the three cohorts of study ($p<.01$). The typical young adult household with debt on their homes owed $61,489 in the Early Baby Boom cohort, $72,698 in the Late Baby Boom cohort, and $106,157 in the Generation Y cohort. The rise in home debt across cohorts *among* respondents with home debt likely reflects the inflation-adjusted increase in home prices over the historical period in which these cohorts came of age (Eggers and Moumen 2008) and the corresponding rise in household debt in the general population (Weinberg 2006). Among all respondents (Panel B) median home debt is 0, because more than half of respondents in each cohort did not have any home debt.

Automobile Debt.

Panel A of Table 3 shows median automobile debt across the three cohorts of study among respondents who reported any automobile debt. Median automobile debt increased significantly across the three cohorts of study ($p<.01$, all cohort comparisons statistically significant). The typical young adult household with automobile debt owed $5300 on their automobiles in the Early Baby Boom cohort, $9693 in the Late Baby Boom cohort, and $10,288 in the Generation Y cohort. The rise in automobile debt among the indebted likely reflects the rising prices of automobiles over this historical period (Abeles 2004). Panel B shows automobile debt among all respondents. However, median automobile debt is zero across all cohorts because the majority of respondents reported zero auto debt.

Education Debt.

Panel A of Table 3 shows median education debt among young adults in the Late Baby Boom and Generation Y cohort. Not surprisingly, the results show that median education debt increased across the latter two cohorts of study. The typical Late Baby Boomer with education debt owed approximately $6,400 in student loans, while the typical Generation Y young adult with education debt owed more than double that amount ($15,000) ($p<.01$). These findings concur with previous research that shows student loan debt has increased rapidly over the past twenty years and reflects the rising costs of college (College Board 2006; Rothstein and Rouse 2008).

Table 3. Mean and Median Debt Across Three Cohorts of Young Adults (age 24-28) for (a) Debt Holders and (b) All Households/Respondents

		A. Debt Holders			*B. All Respondents*		
		Cohort 1	**Cohort 2**	**Cohort 3**	**Cohort 1**	**Cohort 2**	**Cohort 3**
		1976-1978	1989	2007	(n=3972)	(n=6320)	(n=5262)
Total Debt	*mean*	41017 [2,3]	44002 [1,3]	47393 [1]	31657 [2,3]	33962 [1]	35508 [1]
	median	20065	19063	16985	9385	11309	8493
	std dev.	(45363)	(60776)	(73681)	(43410)	(56496)	(67001)
Debt by Type							
Housing		65325 [2,3]	83935 [1,3]	126780 [1,2]	25710 [2,3]	22085 [1]	22355 [1]
		61489 [2,3]	72698 [1,3]	106157 [1,2]	0 [2,3]	0 [1,3]	0 [1,2]
		(41450)	(68901)	(91426)	(41166)	(51133)	(61702)
Automobile		7388 [2,3]	11255 [1,3]	12483 [1,2]	3339 [2,3]	5526 [1,3]	4827 [1,2]
		5831 [2,3]	9693 [1,3]	10288 [1,2]	0 [3]	0 [3]	0 [1,2]
		(5844)	(8768)	(10022)	(5381)	(8331)	(8706)
Education		x	9422 [3]	20595 [2]	x	2229 [3]	5219 [2]
		x	6462 [3]	15000 [2]	x	0 [3]	0 [2]
		x	(11778)	(20782)	x	(6988)	(13771)
Other (i.e. credit card, etc)		5493 [2]	9816 [1,3]	5859 [2]	2608 [2,3]	4122 [1,3]	3107 [1,2]
		2484 [2,3]	4362 [1,3]	2263 [2]	0 [2,3]	0 [1,3]	200 [1,2]
		(11265)	(19407)	(12487)	(8231)	(13476)	(9551)

Standard deviations in Parentheses [1]significantly different from Cohort 1 at p<.01 level; [2]significantly different from Cohort 2 at p<.01 level; [3]significantly different from Cohort 3 at p<.01 level

Other Debt.

Panel A of Table 3 also shows median other debt among young adults across the three cohorts of study. Unlike household and automobile debt, median other debt shows no clear directional trend across cohorts. Among respondents with other debt, median other debt is significantly higher for Late Baby Boomers than Early Baby Boomers and Generation Y young adults ($p<.01$). The typical young adult household in the Late Baby boom Cohort with other debt owes $4,362 in other debts, $2,484 in the Early Baby Boom cohort, and $2263 in the Generation Y cohort. Median other debt in the Early Baby Boom and Generation Y cohorts are not significantly different at the $p<.01$ level. Thus, despite the fact that the Late Baby Boomers are less likely to have other debts than Early Baby Boomers and Generation Y young adults (see Table 2), when they do have other debt they owe significantly more money on these debts than the other two cohorts.

Overall, the results from Table 3 reveal several patterns. First, they provide mixed evidence that young adults have become more indebted across cohorts. Median total debt does not differ significantly across cohorts. Among the indebted, the amount owed on home, automobile, and education debt increases significantly the cohorts of study, which likely reflects the rising prices for homes, automobiles, and college costs over the historical period of study.

Debt Burden: Debt Relative to Assets.

Table 4 reports changes in young adult assets and debt-to-asset ratios over time. Panel A reports assets and debt-to-asset ratios among young adults that carry a positive debt balance. Panel B reports assets, debt-to-asset ratios, and two additional indicators of debt burden: the percent of young adult households whose debt exceeds the value of their assets; and the proportion of young adult households whose debt exceeds at least twice the value of their assets.

Median Assets.

Panel A of Table 4 shows median assets across the three cohorts of study among young adults who have a positive debt balance. The results show that, among the indebted, median assets have decreased significantly across the cohorts of study ($p<.01$, all cohort comparisons statistically significant). The typical young adult household with debt held $44,337 worth of assets in the Early Baby Boom cohort, $29,887 in assets in the Late Baby Boom cohort, and $15,000 in assets in the Generation Y cohort. Panel B shows a similar decline in assets among all respondents ($p<.01$, all cohort comparisons statistically significant). The typical young adult household in the Early Baby Boom cohort owned $23,324 in assets, $21,002 in assets in the Late Baby Boom cohort, and $10,000 in assets in the Generation Y cohort. These findings are consistent with research that shows that young adult assets have declined over time (Wolff 2007).

Table 4. Mean and Median Debt Relative to Assets Across Three Cohorts of Young Adults (age 24-28) for (a) Debt Holders and (b) All Households/Respondents

		A. Debt Holders			*B. All Respondents*		
		Cohort 1	**Cohort 2**	**Cohort 3**	**Cohort 1**	**Cohort 2**	**Cohort 3**
		1976-1978	1989	2007	(n=3972)	(n=6347)	(n=5262)
Total Assets	*mean*	74907 [3]	80070 [3]	57823 [1,2]	62124 [3]	65482 [3]	46285 [1,2]
	median	44337 [2,3]	29887 [1,3]	15000 [1,2]	23324 [2,3]	21002 [1,3]	10000 [1,2]
	sd	(85249)	(133787)	(98243)	(81175)	(123157)	(89266)
Debt to Asset Ratio		26.60 [2,3]	97.11 [1,3]	1301.45 [1,2]	21 [2,3]	75 [1,3]	975 [1,2]
		.59 [2,3]	.63 [1,3]	.94 [1,2]	.46 [3]	.47 [3]	.68 [1,2]
			(1278)	(10641)	(231)	(1125)	(9228)
% Debt Exceeds Value of Assets					.134 [2,3]	.195 [1,3]	.342 [1,2]
% Debt Exceeds 2x Value of Assets					.074 [2,3]	.093 [1,3]	.214 [1,2]

Standard deviations in Parentheses [1]significantly different from Cohort 1 at p<.01 level; [2]significantly different from Cohort 2 at p<.01 level; [3]significantly different from Cohort 3 at p<.01 level

Debt Burden: Median Debt-to-Asset Ratios.

The debt-to-asset ratio, a measure of debt burden, is a simple measure of total debts / total assets. Thus, a debt-to-asset ratio of .5 indicates that a household's debts are fifty percent of the value of its assets. Panel A of Table 4 shows the median debt-to-asset ratio across the three cohorts of study. Among respondents who have debt, the median-debt-to asset ratio increases significantly across the three cohorts of study ($p<.01$, all cohort comparisons statistically significant). The median debt-to-asset ratio is .59 among indebted young adults in the Early Boom cohort, .63 among indebted young adults in the Late Baby Boom cohort, and .94 among indebted young adults in the Generation Y cohort. Panel B shows a similar increase in debt-to-asset ratio across the cohorts of study. Among all respondents, the median debt-to-asset ratio in the Generation Y cohort is significantly higher than the Early and Late Baby Boom cohorts ($p<.01$, median debt-to-asset ratio is not significantly different across the two Baby Boom cohorts). The median debt-to-asset ratio is .46 in the Early Baby Boom cohort, .47 in the Late Baby Boom cohort, and .68 in the Generation Y cohort. These results indicate that the burden of debt (as measured by the debt-to-asset ratio) has increased across cohorts, and most dramatically for the Generation Y cohort.

Debt Burden at the Extremes: When Debt Exceeds the Value of Assets.

Panel B of Table 4 provides the results for two additional indicators of debt burden: the percent of young adults whose debts exceed the value of their assets (i.e. debt-to-asset ratio>1), and the percent of young adults whose debts exceed at least twice the value of their assets (i.e. debt-to-asset ratio>=2). These two additional measures provide additional information over the median debt-to-asset ratio and show changes in extreme debt burden across cohorts of young adults.

The results from Panel B of Table 4 show that the percent of young adult households whose debts exceeds the value of their assets has increased significantly across the cohorts of study ($p<.01$, all cohort comparisons statistically significant). In the Early Baby Boom cohort, thirteen percent of young adult households had debt that exceeded the value of their assets, twenty percent of the Late Baby Boomers, and over one-third (34%) of the Generation Y cohort reported debts that exceed the value of their assets. The more extreme measure of debt burden shows a similar pattern. Panel B of Table 4 also shows that the percent of young adult households whose debts exceed at least *twice* the value of their assets increased significantly across the cohorts of study ($p<.01$, all cohort comparisons statistically significant). Seven percent of young adult households in the Early Baby Boom cohorts reported debts that exceeded at least twice the value of their assets, nine percent of young adults in the Late Baby Boom cohorts, and twenty one percent of young adults in the Generation Y cohort reported debts that exceeded at least twice the value of their assets. These results show that the proportion of young adult households who are highly burdened by debt has increased across the cohorts of study, and that the Generation Y cohort has a much greater debt burden than the Early and Late Baby boom cohorts.

Overall, the results from Table 4 reveal several patterns. First, asset holdings among young adults have declined precipitously across the cohorts of study. Second, because median debt has remained relatively stable but assets have declined, the debt-to-asset ratio has significantly increased across cohorts, and is particularly high among the Generation Y cohort. Moreover, the proportion of young adults who are very highly indebted relative to their assets has significantly increased across cohorts, and over one-third of young adult households in the Generation Y cohort hold debts that exceed the value of their assets.

Discussion

For young people, taking on debt is often an investment in their future, but it is an investment that comes with a great deal of risk (Dwyer, McCloud, and Hodson 2011). Popular concerns and media reports suggest that young adults in their mid-twenties today are leaving school and entering their careers more indebted than the generations that precede them, because they are burdened by rising education debt and credit card debt (Draut 2005; Draut and Silva 2004; Kamenetz 2006). Such accounts, however, do not consider that the social meaning of young adulthood has changed over time in ways that affect debt. For instance, young adults today are spending more time in school and have greater education debt than ever before, but they are less likely to have the home mortgages and automobile loans that prior cohorts of young adults held when they were in their mid-twenties. This is an important distinction, as purchasing (and financing) a home is how most U.S. families build equity and wealth (Levy and Michel 1991; Spilerman 2000).

This study draws from the life course perspective (Elder 1994) to consider how patterns of young adult indebtedness across three cohorts are influenced by historical *period* trends in rising debt, prices, and demand for commodities; and *cohort* differentiation in the social meaning of young adulthood. I find that young adults in the Generation Y cohort are no more likely to carry debt than the Early and Late Baby Boomers, despite the fact that young people have come of age in a historical era of rising access to credit. Instead, the results suggest that young adults changed their borrowing patterns over time in ways that reflect changes in the social roles and obligations associated with being a twenty-something. For example, young adults in the Early and Late Baby Boomer cohorts were more likely to owe debt on homes and automobiles, while

the Generation Y cohort instead took out loans for their education and were more likely to have "other" types of debt, such as credit card debt.

This study also finds no evidence to support the popular notions that young adults are carrying higher (median) debt balances today than prior cohorts of young adults. Contrary to historical period trends of rising household debt, this study finds that median total debt holdings are similar for the Early Baby Boomers, Late Baby Boomers, and Generation Y cohorts. I speculate that this is likely because young adults over time were less likely to carry debt on the "big ticket" items that contribute most to household debt, such as homes and automobiles. However, among young adults who do hold debt, the consequences of rising prices of homes and cars over historical time for young adult debt was evident. Generation Y young adults (followed by Late Baby Boomers) had significantly higher debts to repay on their homes and automobiles than did the Early Baby Boom cohort.

Finally, this study finds that debt burden—as indicated by the debt-to-asset ratio—increased across the cohorts of study. Although the results suggest that young adults borrow similar amounts of money across cohorts, the Late Baby Boomers and Generation Y cohort in particular borrowed on a much smaller foundation of assets than the Early Baby Boomers. The Generation Y cohort in particular is plagued by extremely high debt-to-asset ratios, as over a third of young adults in this cohort have debts that exceed the value of their assets, and about one-fifth of young adults in this cohort have debt that exceed at least twice the value of their assets. High debt-to-asset ratios are associated with a host of negative financial outcomes—including bankruptcy, default, missed loan payments, and financial distress (Dynan and Kohn 2007).

This study also shows additional evidence that Gen Y young adults face higher debt burdens than the cohorts that preceded them. Although I find no differences in median debt across cohorts, Table 3 shows that *mean* total debt increases significantly across the cohorts of study, among all respondents and among respondents with debt. Because the mean is biased upwards by young adults with very high levels of debt, this finding suggests that the number of highly indebted young adults has increased across cohorts.

Ultimately, it may be more difficult for the Generation Y cohort to pay off their debt, and they may be more likely to be delinquent and default on their loans, because they have relatively fewer resources to ensure that their debts can be repaid. In addition, young adults in Generation Y are having more difficulty finding stable, high paying jobs than previous cohorts of young adults (Danzinger and Ratner 2010), which may further hamper their ability to accumulate assets and pay off their debts. Future research should continue to follow the Generation Y cohort into adulthood to assess how their debt burdens affect their future financial well-being, wealth acquisition and socioeconomic attainment across their adult life course.

This study provides a portrait of young adult indebtedness across three cohorts, The Early Baby Boomers, the Late Baby Boomers, and Generation Y, and has several strengths. Unlike prior research on debt that takes a historical *period* approach and analyzes trends in debt over historical time for the population as a whole (e.g. Campbell and Hercowitz 2010; Dynan and Kohn 2007; Maki 2002), this study considers how both historical time and the intersection of historical and biographical time influence debt in young adulthood. Second, it considers how young adult debt has changed in representative samples of young adults across a broad range of debt indicators, including home debt, automobile debt, education debt, and other debt. Prior research on young adult debt has almost exclusively focused on credit card and education debt

among college educated young adults (Draut and Silva 2004; Kamenetz 2006) to draw conclusions about how debt has changed for young adults over time.

The study findings dovetail with scholarly notions about how the social meaning of young adulthood has changed over time. Arnett's (2000) concept of *emerging adulthood* suggests that, over time, young adulthood has become a time for identity exploration, when young people are free to explore the range of possible life directions that are open to them. According to Arnett, young adults in more recent cohorts have few social pressures to move quickly into their adult roles, and many spend this time exploring their options instead of settling down. As a new stage of life, *emerging adulthood* may have consequences for youth indebtedness. Indeed, the findings from this study show that twenty-somethings are less likely to take on types of debt that signal their entry into traditional adult roles—such as home mortgage debt—and are more likely to take on debt that allows them to delay their entry into adult roles, such as student loan debt. The decline in asset ownership and the rise in debt burden among young adults may also reflect the social realities of this life stage. As young adults take longer to settle into their adult roles, and spend more time exploring their options, they accumulate fewer assets and more *unsecured* debt than the cohorts before them, leading to higher debt burdens.

Moreover, the opening of credit markets to young adults over time may have helped bring about the new life stage of *emerging adulthood*. As credit markets opened up, over time young adults had more access to credit that they could use to engage in the types of identity exploration that Arnett discusses in his theory of young adulthood. There is therefore potential for a bidirectional relationship between young adult's social roles, obligations and youth indebtedness over time.

This study is not without limitations. Although this study examines a broad range of debt sources (i.e. home, education, automobile) among young adults, the debt measures are not as ideal as they could be. First, debt questions in the National Longitudinal Surveys vary somewhat across surveys, such that the more recent cohort of young adults (NLSY-97) are asked more detailed questions about their debts than the prior two cohorts (see Appendix 1), which may influence the cohort comparisons. Theoretically, however, detailed debt questions should elicit respondents to report more debt than simple debt questions. Because of this, differences in debt across surveys may be overstated, leading to conservative estimates. Another limitation of the debt measures in this study is that these measures cannot assess cohort differences in credit card debt. Although NLSY-97 respondents were directly asked questions about credit card debt, NLSY-79 and NLS66/68 respondents were asked broad questions about debts on medical bills, store credit, and money owed to other people. Another limitation of the debt measures is that it could be problematic to rely on measures of debt that are recorded at one point in time, as this study does. Repeated measures of debt over a two or three year period would reduce measurement error and increase confidence in cohort comparisons. Finally, this study does not empirically test the hypothesis that cohort differences in young adult debt are influenced by cohort differences in social roles and obligations in young adulthood. Future research should continue to explore how cohort and period-level processes affect debt in young adulthood.

In sum, the results of this study challenge but also provide some support for popular notions that young adults are completing their educations and entering their careers more indebted than prior cohorts. Although young adults today carry similar amounts of debt as young adults in the Baby Boomer cohorts, the burden of that debt (relative to the resources they possess) is much greater for young adults today. Importantly, this study suggests that changes in

young adult debt across cohorts do not necessarily track with population level, historical period, trends in indebtedness. Future research should examine cohort differences in debt accumulation across the full adult life course to get a better understanding of how debt evolves across cohorts over historical time. Moreover, to the extent that population trends in debt obscure differences in debt across subgroups over time, future research should continue to examine how race/ethnic and socioeconomic differences in debt accumulation have evolved over time and across cohorts.

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