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Debt, Cohabitation, and Marriage in Young Adulthood

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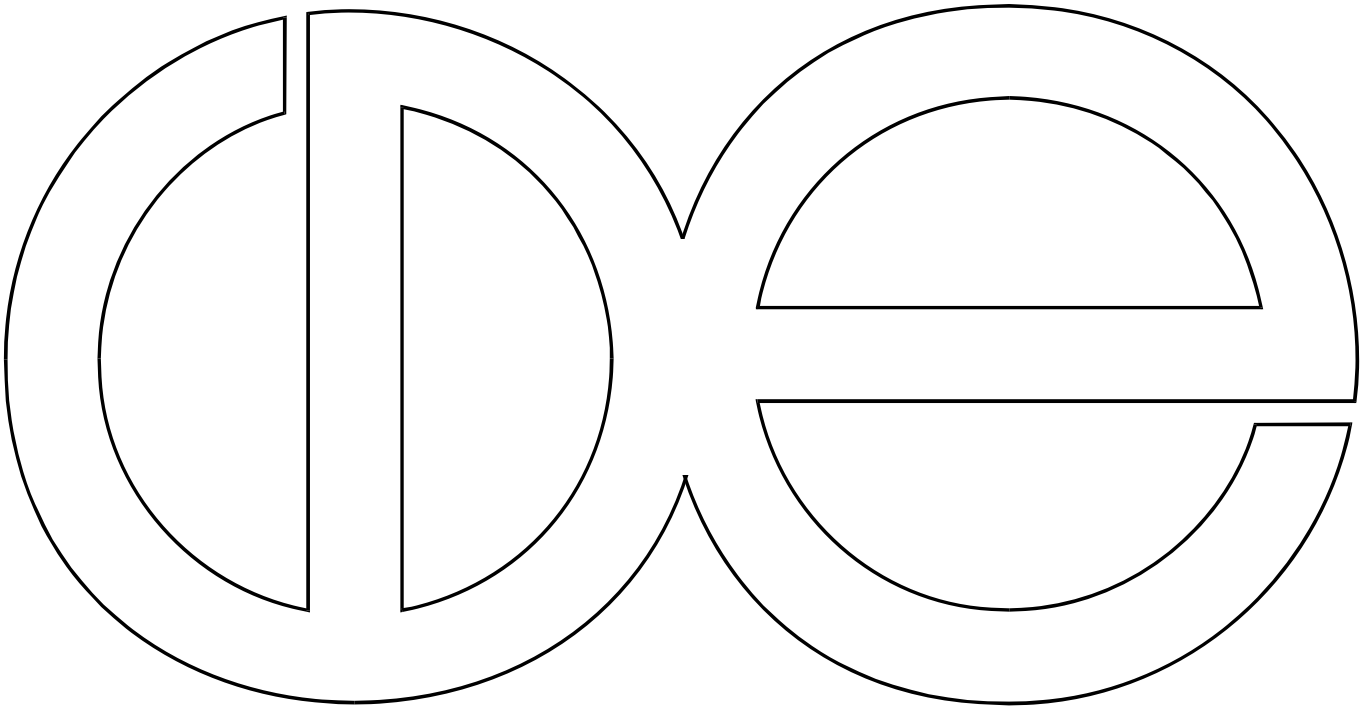

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Many scholars believe both the delay and the decline in the number of young adults transitioning into a marital union can be linked to the increasing difficulty of achieving full economic and financial independence (Danziger and Rouse 2007; Furstenberg et al. 2004; Sassler and Goldscheider 2004). Delays in labor market entrance and barriers to advancement, high housing costs, and the increasing influence of large debts are often highlighted as contributing factors to this prolonged transition into marriage (Settersen and Ray 2010; Arnett 2004). There exists a sizable literature on the relationship between educational attainment, labor market rewards, and other conventional measures of current and future economic stability and success and first marital union (see Smock, Manning, and Porter 2005 for comprehensive overview). Numerous studies document the importance of economic wellbeing and financial stability as a predictor of marriage (Sassler and Goldscheider 2004; Sweeney 2002; Xie et al. 2003), with economic stability and the acquisition of economic resources mattering less for cohabitation (Xie et al. 2003; Clarkberg 1999). Yet, little scholarly attention is paid to how debts shape union formation decisions.

Young adulthood is the period in the life course when most people first have independent contact with credit markets and assume the role of debtor (Chiteji 2007; Lyons 2008). It is surprising that until recently studies on initial access, utilization, and the influence of credit markets by young adults is so scarce. Youth born in the early 1980s came of age during a period of expansive credit markets and increased college attendance, with changes in federal financial aid policy for post-secondary schooling leading to shifts away from grants towards loan aid.

Analysis based on data from the Survey of Consumer Finances indicates a 104% increase in average credit card debt between 1992 and 2001 for 18 to 24-year old headed households (Draut and Silva 2004), and a 427% increase in average education loans from 1983 to 2001 (Chiteji 2007). Debt is increasingly a significant proportion of young adults' wealth portfolios.

The union formation processes of young adults have also changed over the past half-century. The median age at first marriage continued its ascent since the late 1960s, rising from 22.0 in 1980 to 26.1 by 2010 for American women, and from 24.7 to 28.2 for men, while the overall share of young adults who married by age thirty declined (Taylor 2011; U.S. Census Bureau 2011). At the same time, cohabitation rates have increased for young adults. By 2002, the majority of young adult women (59%) could expect to cohabit by age 24 (Schoen, Landale, and Daniels 2007). Cohabitation and marriage are similar in practice but differ extensively in social and legal recognition. Cohabitation allows young adults to benefit from cost sharing and economies of scale without the legal ramifications and financial requirements of marriage. These divergent financial underpinnings of the two institutions impact decisions to transition into cohabitation versus marriage as well as the behaviors young adults exhibit both prior to entering and within the relationship.

A recent study found that for cohorts born in the late 1950s and early 1960s, a person's net wealth was a significant predictor for getting married. For men, wealth influenced their marriageability and also contributed to differences in marital chances by education and by race (Schneider 2011). Building on research examining the increasing importance of consumption-based measures on marital transitions, this study tests whether individual debt, or the lack thereof, has an independent and significant impact on the decision to transition into a first coresidential union above and beyond the traditional socioeconomic indicators of financial and

economic stability. Using data are from the 1997 National Longitudinal Study of Youth (NLSY97), a cohort of young adults born in the early 1980s, this study tests whether debt and the type of debt held contributed to both the increase in cohabitation and marital using discrete-time competing risk models. Two distinct types of credit obligations are analyzed given their prevalence and relevance to the study population: unsecured debt (e.g., credit cards, bank loans) and education loan debt. For young adults, credit card debt is most common. For those with education loan debt, however, it tends to comprise the largest share of their asset portfolio.[1] Analysis will investigate whether the same consumption, economic, and social factors predicting transitions into marriage also explain entrance into cohabiting unions. Particular attention is paid to whether the economic burden of debt is treated differentially in the relationship markets for young adult women and men.

Growth in Credit Card Debt and Education Loan Debt in Young Adulthood

Americans experienced almost thirty years of unprecedented availability and access to both unsecured and secured credit markets between the mid-1980s through the Great Recession (2007-2009) (Athreya 2001; Dynan and Kohn 2007; Lyons 2003). Driven in large part by companies' ability to diversify risks across households and offer more attractive products to increase their market share (Mann 2009; Watkins 2000), these financial innovations increased the debt of households that may have already had access as well as increased the population of those able to gain access, like low-income and young adult populations (Dynan 2009; Mann 2009; Weller 2010).

For young adults the rise in debt was in largely driven by changes in the market for credit

[1] From 2003 to 2009 young adults with education loan debt were also less likely to hold other forms of secured debt, e.g. mortgage debt (Brown and Caldwell 2013).

card and education loan debt.[2] Some scholars point to the slowdown in real wage growth, which has not kept pace with the rate of inflation, as an explanation for the rise in debt, especially among this age group. The inability to repay debt as easily as expected when the money was originally borrowed increases the likelihood of rolling over debt with compounding interest into future periods. Between 1992 to 2001 average credit card debt of 18 to 24 year olds increased 104%, rising from $1,461 to $2,985, compared to 38% for all households (Draut and Silva 2004). Synthetic cohort analysis on credit card behavior of young adults born between 1980 and 1984 indicated that the average credit card debt borrowed exceeded their parents' generation by $5,689 and grandparents' generations by $8,156 (Jiang and Dunn 2013).

Post-secondary schooling would be an unattainable goal for many without receiving some form of financial aid or grant assistance (Bound, Lovenheim, and Turner 2007; Fitzpatrick and Turner 2007; Kane 1996). The majority of financial assistance programs are loan-based despite various funding options available for low-income students (e.g., Pell grants, student loans) and tax incentives for those coming from middle to high-income households (e.g. tuition tax credits, 529 plans). Loans have replaced the dominance of grant aid offered throughout the middle to late twentieth century (Fitzpatrick and Turner 2007). According to the National Center for Education Statistics (NCES), thirty-four percent of undergraduates held federal loans in 2007, compared with twenty-seven percent who received Pell grants ($2,600). The average college graduate left school with approximately $23,000 worth of debt in college loans in 2008; in 1996

[2] In the sample data analyzed 1.69% of the person-years (n=355) reported owning a home, and they have either transitioned to the first coresidential relationship prior to the study period or were assisted financially by family and friends to make the purchase.

the average debt was $17,000 (Hinze-Pifer and Fry 2010). This replacement of grant assistance with financial aid in the form of student loans means more young adults entering their adult years with a significant amount of debt, which can take years to pay down (King and Bannon 2002).

In spite of all the tuition assistance, college enrollment is still an expensive undertaking for most. Recent work links financial difficulties related to college costs, access to credit, and credit constraints associated with the decision to stay enrolled (Stinebrickner and Stinebrickner 2008). Additional fees such as room and board, books, and health insurance can add up. Both qualitative research and survey data of young college students indicate that a majority relies on credit cards to supplement costs (Lyons 2008; Draut and Silva 2004). As of 2008, only two percent of undergraduates had no credit history, half held at least four credit cards (Sallie Mae 2009), and one in four students report using credit cards to finance their education (Draut and Silva 2004).

Access and utilization of credit card markets is not limited to the post-secondary school attending population, yet most empirical studies on debt behavior in young adulthood focus on college graduates of four-year institutions. Less than six in ten students who started a 4-year degree in 2001 completed in six years (57%) and only 27.5% of 2-year program students completed their associates within three years (NCES 2012). Only 39.6% of 18-24 year olds were enrolled in degree-granting institutions in 2008 (NCES 2012), leaving a large proportion of the young adult population understudied. Credit card debt coupled with educational loans accumulated while in school is setting many young adults up for a life in debt (Jiang and Dunn 2013), with the potential to impact subsequent phases of the life course, such as college completion, earnings, homeownership, and potentially family formation, the focus of this study.

Credit card debt and education loan debt vary significantly in their structural dynamics

influencing their societal perceptions. Both could be considered investment debts given the stage in the life course (most young adults do not have enough income to acquire many of the goods they need), yet they are regarded differently. Outstanding credit card debt oftentimes carries large penalties in the form of high interest rates (Baek and Hong 2004). As a result, the accumulation of credit card debt is associated with negative financial practices and poor fiscal management skills (Drentea 2000). Given its attachment to higher education, education loan debt is viewed as more normative. Federal loan amounts are means-tested and repayment is relegated until after school completion or withdrawal. Federal and local policies can also influence individual behavior towards debt (Poterba 2001). For example, interest payments on education loans (and mortgages) are tax-deductible. And unlike credit card debt and other unsecured debts, education loans are deferrable but not absolvable in the event of financial uncertainty or insolvency (e.g., bankruptcy). To summarize, credit card debt was easily accessible during the study period and average rates of indebtedness are low compared to average education loans. There are strong market incentives to pay off credit card debt faster, whereas the incentives to pay off education loan debt quickly are low for the post-secondary school attending population who has them.

The Role of Economic Resources on Cohabitation and Marriage in Young Adulthood

Coresiding with a partner in a sexual relationship without a legal marital commitment, or cohabitation, has become the modal relationship form for young adults (Amato et al. 2008; Sassler 2010). By 2006-2010 more than half, 52%, of women aged 15 to 44 reported that they have ever cohabited with an opposite sex partner and close to half the men between those same ages (49.0%) had ever cohabited (NCHS 2012). Over the same period, transitions into direct marriage from singlehood are increasingly becoming stratified by religious background, region,

and educational attainment (Uecker and Stokes 2008; Sassler and Miller 2011).

Similar proxies for economic resources used to predict marital formation and marital timing have also been used to examine transitions into cohabitation. Studies based on data from the 1970s, 1980s, and early 1990s found educational attainment either uncorrelated or negatively associated with transitions into cohabitation for both women and men (Clarkberg 1999; Thornton et al. 1995) or declines over time in the positive association between greater educational attainment and transitions into cohabitation (Goldscheider, Turcotte, and Kopp 2001). It has been a consistently positive predictor of marriage for men (Goldstein and Kenney 2001; Oppenheimer et al. 1997; Sassler and Goldscheider 2004), and also for better-educated women with full-time employment after a prolonged search (Goldscheider and Waite 1986; Qian and Preston 1993; Sassler and Schoen 1999). Labor market earnings and earnings potential were either not significant or positively associated with cohabitation for both men and women (Clarkberg 1999; Xie et al. 2003). Men who struggled in the labor market, like low-skilled and low-wage earners, have also experienced the largest declines in the likelihood of being married (Cherlin 2004). These findings suggest economic underpinnings were different for the formation of a cohabitation compared with a marriage and impacted not only who would enter a cohabiting union but also when (Clarkberg 1999; Sassler and Goldscheider 2004).

Contemporary young adults now emphasize individual financial and personal responsibility as a necessary precursor for marriage, with a shift away from shared obligations and asset accumulation starting early in one's adult life. Cherlin (2004) argues that this is due to the social norms attached to marriage weakening contributing to marriage's deinstitutionalization in American life. Marriage has come to represent the finish line rather than a starting point of young adult life, and no longer entered into early or directly by the majority of young adults.

Despite young adults across the social class spectrum expressing similar sentiments with regards to perceptions of readiness for marriage transitions into cohabitation and marriage have not occurred uniformly across the population (Clarkberg, Stolzberg, and Waite 1995; Gerson 2007; Sassler and Schoen 1999). These include the desire to be financially established, economically stable, and to have secured stable work; in recent decades, economic readiness has also come to entail having some savings and decreasing outstanding debt (Cherlin 2009; Manning, Longmore, and Giordano 2007; Smock et al. 2005). College graduates and young adults from high-income households are less likely to cohabit (Kennedy and Bumpass 2008), more likely to delay fertility, and often view cohabitation as a precursor to marriage (Sassler and Miller 2010). They are also more likely to transition to marriage, both from a single state as well as from cohabitating unions (McLanahan and Percheski 2008; Schwartz and Mare 2005).

Schneider (2011) argues that single people with greater wealth have the requisite resources that are highly valued in the societal ideals of a wealth-based and asset-valued marriage market allowing them to fare better and achieve marriageable status. He finds wealth is both a positive and significant predictor of marriage for a cohort of young adults coming of age during the 1980's. In this study I argue that acquisition of debt in young adulthood, when combined with the decreased scrutiny of premarital cohabitation and the laxer social norms associated with it, have contributed to delays in marriage in young adulthood for recent cohorts of young adults. Incidentally, in pursuit of those traditional markers of financial and economic stability and good fortune debt accumulation has become a part of the process of achieving financial independence and social mobility.

How does debt operate in the relationship market for young adults?

Studies indicate that the informal versus formal distinction between cohabitation and marriage deters cohabitors from investing in relationship-specific capital and impacts their behaviors within the union. Research on intra-household resource allocation finds that whereas married couples generally pool income and manage resources jointly, cohabitors are more likely to have independent money management systems splitting the cost of resources (Brines and Joyner 1999; Treas 1993; Winkler 1997). Cohabitors are more likely to maintain separate bank accounts, for example; this system negatively influences relationship quality and relationship commitment (Addo and Sassler 2010).

The social and legal distinctions between formal marriage and informal cohabitation can also impact the criteria (e.g., financial and economic support) young adults assign to entering a cohabiting versus marital arrangement (Oppenheimer 2003; Sassler and Goldscheider 2004; Smock et al. 2005). More explicitly, in contrast to the marriage model proposed by Cherlin (2004) in which people are economically stable and financially secure prior to entering a marriage, cohabitation does not share these same social and financial requirements. It can be viewed as an economically attractive living arrangement since couples often benefit from the advantages of a shared living without bearing the legal and social costs of marriage. Interviews with cohabiting people and couples in major urban areas find that respondents view the arrangement as more economical than maintaining two separate residences (Sassler 2004), and close to a third of adults cited finances as a main factor in the decision to live together (Sassler and Miller 2011; Taylor 2010). Dew and Price (2010) argue cohabitation prior to marriage allows couples to familiarize themselves with one another's financial situation. They can become better acquainted with their partners while trying to sort out or improve, if needed, their own financial situation.

Given these behavioral differences, one can operationalize how debt would impact the allocation of resources within a marriage versus cohabitation and the decision to enter into one versus the other.[3] In a marital union, debt can be considered an individual financial burden that one brings into the union and removes financial resources from the *joint* household. In a cohabiting union, debt remains the responsibility of that person, decreasing only one partner's resources assuming cohabitors maintain separate financial systems. If young adults prefer to be financially established prior to a marital union (Cherlin 2004), marriage will be more likely if debt is low or non-existent, and cohabitation if debt is high. This is independent of whether the respondent has revealed their debt to potential partners.[4] It is hypothesized that the formation of a union occurs in the presence of non-zero debt if there has been a consensus to share assets for marriage or not share assets for cohabitation. Although this analysis is not modeling an exchange model explicitly, the relationship market chosen may reveal a preference of not only the respondent but the partner as well.

If a young adult chooses marriage, they have revealed their preferred union as well as the ranking of relationship choices to be married over cohabitation and remaining single. In the

[3] There are at least two ways in which debt could directly impact union formation through individual decision-making. The first way is if access to borrowing credit is constrained. The second way is if the amount of debt held provides signals about an individual's financial well being to the debtor and to others, impacting their perceived readiness for cohabitation versus marriage. The latter is the mechanism tested in this study.

[4] The directionality of the association remains the same even if it is assumed that debt values are revealed: marriage will be more likely when an individual has found a partner willing to assume their current debt.

current analysis cohabitation and marriage are modeled as competing risks. A person not only chooses to enter a union but also jointly decides the type of union entered, cohabitation, marriage, or remaining single. Modeling the choices as separate binary outcomes might misrepresent the relationship given the three states are correlated, interdependent events. The decision to transition into a coresidential relationship is not necessarily sequential, with the decision to form a union followed by the selection between cohabitation or marriage (Manning and Smock 2005). The three choices are separate and distinct but not substitutable events.

There is a reason to believe that the type of debt held by the young adult matters for a youth's attractiveness in the respective relationship market. Outstanding credit card debt may be a signal of present financial independence and accessible current financial resources. But it can also be a marker of current and potentially future instability- an unattractive trait in the marriage market. A significant credit card debt load may act as a signal of financial irresponsibility, making someone an unattractive (low quality) mate in the marriage market but not in the cohabitation market where financial requirements are lower due to the decreased likelihood of income (or debt) pooling. Youth holding non-zero credit card debt may fare better in the cohabitation market, for which entry is cheaper, and may therefore choose to cohabit instead of marry. They may also actively seek cohabitation as a means to cost share. Therefore, credit card debt reduces the relative price of cohabitation by increasing the price of marriage. The ability to take on credit card debt will decrease transitioning time, (e.g., help defray moving costs, pay rent) and increase the attractiveness of cohabitation relative to remaining single. At the same time it may reduce the likelihood of marriage, with cohabitation serving as an alternative market composed of people less willing to share a negative financial asset.

Education loans are considered an investment debt on an appreciating asset, education. It

is representative of future earnings potential and economic stability. Youth holding non-zero education debt are potentially attractive partners in the marriage market given their expected future earnings potential; however, they are also more likely to delay marriage, prioritizing career and financial stability over marriage (Fry 2010). It is this relationship that is expected to dominate during young adulthood. Additionally, the structure of post-secondary enrollment (e.g., dormitory living, delayed employment or difficulties with full-time employment) may act as an indirect deterrent to union formation in early and young adulthood allowing a person to prolong their search.

METHOD

Data

The NLSY97 (Bureau of Labor Statistics 2009) is an annual study following a nationally representative sample of youth living in the U.S. who were 12 to 16 years old as of December 31, 1996. The NLSY97 extensively questions youth on their labor market experiences, educational, familial, and relationship backgrounds. The survey also ascertains information on wages, income, and educational debt at every survey year. The interview after reaching their twentieth and twenty-fifth birthdays, respondents were asked to complete an assets module containing extensive questions of all financial and non-financial asset holdings, assets values, and outstanding debts. My study follows youth starting in the first survey wave after completing the age twenty assets module through the 2009 survey year. The panel nature of the data allows me to follow the youth up to eight years after the age twenty assessment.

Two sample restrictions were imposed on the data. First, any youth who already transitioned to a first cohabitation or first marriage prior to the age twenty-asset module are not included in the analysis, removing 1,095 women and 572 men. Including youth with previous

coresidential experience would increase the difficulty of separating out whether their debt at age twenty is independent from their previous relationship experience. Second, any youth missing complete union history and who missed two consecutive interviews during the study period and experienced a union transition were removed, eliminating an additional 548 young adults. Imposing these restrictions creates a final sample that is more proportionally male, more likely to come from two-parent households with parents having on average a full year more of schooling than the dropped sample, and with wealthier parents. Compared to the dropped group, the final sample contains fewer Hispanics but more Blacks, which is inline with previous research indicating the ethnoracial differences in the timing to first coresidential union (Addo 2012).[5] Finally, although the dropped sample reported higher rates of full time employment, they were on average less likely to have completed college, hold advanced degrees, or be currently enrolled in a post secondary program.

Multiple imputation using the chained equations method in STATA is applied to maintain maximum sample size for those missing information on independent variables. The variables, described in detail in the next section, include residence in rural region in childhood (15.3 percent missing person-years), grew up with both parents in household (10.7 percent), paternal education (19.3 percent), current region of residence (3.6 percent), and total value of all assets (9.0 percent). This is an estimation method that works well with categorical and binary variables (White, Royston, and Wood 2011). The final analytic sample follows 3,025 women and 3,744 men, contributing 14,681 and 19,373 person-years to the analysis.

[5] The excluded consists of 88% female cohabitors (12% married) and 90% male cohabitors (10% married). The restrictions increase the average age of first cohabitation for women (men) from 20.89 to 22.65 (21.93 to 23.02) and first marriage from 22.49 to 23.61 (23.42 to 23.96).

Cohabitation and Marriage

The main dependent variables are union transitions. Young adults can transition from a single state into first cohabitation or first marriage. Cohabitation is defined in the NLSY97 as a sexual relationship in which a respondent resides with a person of the opposite sex with a minimum stay of at least one month. Each survey round respondents are asked their current marital status and month and year of first cohabitation and first marriage.

Debt Measures

For the credit card debt measure, the variable is coded based on responses to the following question: "Do [you or your spouse/partner] have any other debts that you CURRENTLY OWE MONEY ON that we have not already talked about? (Examples include store bills, credit cards, loans obtained through a bank or credit union, margin loans through a stockbroker, and other installment loans. Include credit cards only if the respondent carries a balance.)" Educational loans data was asked every survey year (by semester) for youth currently enrolled in any type of post-secondary or advanced degree program after high school. The variable is created using a summated yearly figure of all the currently outstanding government and private loans taken out by the respondent, and not their parents, for educational study. It was generated from the questions: "Other than assistance you received from relatives and friends, how much did you borrow in government subsidized loans or other types of loans while you attended this school/institution?" and "How much is still owed on (this/these) loan(s)?" For both measures, if the youth responded in the affirmative, they were then asked to provide total or estimated amounts. The median value is assigned to those youth who choose to only enter in a range (i.e., $0-$1000, was assigned a value of $500). Along with the logged continuous debt measure that has been lagged one period, an indicator variable equal to one if the respondent has

no debt, credit card debt, or education loan debt is included in the respective models. This is done to distinguish both qualitatively and quantitatively between those with no debt and those with some non-zero amount (see Sweeney 2002).

Education, Labor Market, and Financial Characteristics

The youth's current educational attainment is categorized into less than a high school degree, high school degree, some college, and bachelors or more. Current enrollment status is disaggregated into the unenrolled, two and four-year programs, grouping those enrolled in K-12 with the unenrolled and professional degree or post-secondary enrollees with the four-year group due to small cell size. Including those with less than a high school degree and the unenrolled population along with the college-goers and the graduates is important as they are also accessing credit markets and making decisions related to relationship formation.

Labor market controls include a measure of the youth's logged predicted annual earnings lagged one year. This measure, preferred given the high volatility of earnings early adulthood, was estimated from the young adults hourly wage earnings if they worked full-time year round using all available waves of the young adult pre- and post- transition and are estimated separately by gender (Haurin, Hendershott, and Wachter 1997; Whittington and Peters 1996). Measures of current employment status include indicators for fulltime work, having worked thirty or more weeks and at least 30 hours per week in the previous year. All education and labor market explanatory variables are time varying.

The total value of all financial and nonfinancial assets, except the value of primary residence, at the start of the study period are included as a proxy for their wealth position to gain a better perspective of the youth's current economic and financial environment (Schneider, 2011). Also included is an indicator for bank account ownership, which captures respondents'

connectedness to formal bank institutions and serves as marker of economic disadvantage (Garasky, Nielsen, and Fletcher 2008). A dummy variable equal to one indicates those who are unbanked, lacking a checking or savings account. Young adult households under the age of 24 have the highest rates of unbanked persons with percentages declining with age (FDIC 2011).

Additional Controls

Factors expected to impact union formation and timing and considered exogenous to the youth's relationship type and timing decision are also included. Time-invariant controls for family background consist of the mother and father's educational attainment as of 1997, whether the youth resided in a rural area at age 12, a variable equal to one if the youth lived with both biological parents from birth through age fourteen, and an indicator equal to one if the parental respondent reported negative net wealth in the 1997 survey. Given racial and ethnic differences in young adult cohabitation and marital rates (Addo 2012; Amato et al. 2008), the sample is categorized into four ethnoracial categories: non-Hispanic white (reference group), non-Hispanic black, Hispanic, and a small but notable percentage of respondents identify as mixed race. In addition, all models control for whether the youth currently resides in a rural area, their birth year, age, and age squared.

Analysis Plan

To estimate the role of early debt holdings while controlling for the other covariates on transitioning to cohabitation and marriage in early adulthood, hazard function estimates are generated using maximum likelihood (Allison 1984). This modeling technique is preferable in that it allows for both time varying and invariant regressors in the estimation. Respondents are followed for every year they are at risk of transitioning from single status into a union type. For the competing risks (hazard) models, when the decision to cohabit or marry is jointly determined,

multinomial logistic regressions are estimated. As the outcome can be one of two events, cohabitation or marriage, the hazard rates estimated here represent the conditional probability that a youth will transition out of singlehood into a coresidential union given the other event has not occurred.

Standard errors are clustered at the individual level using the robust method (Huber 1967), which assumes that observations are independent across respondents and not within. The final dataset is arranged in a person-year format, with each young adult contributing an observation for every survey year they remain single starting from age 20 until they transition to their first union. All observations after transitioning censored. Not only is this important to avoid reverse causation, as prior union history can influence current debt levels, but also, it allows us to model the importance of financial health in the relationship market during this transitional phase in the life course. All tables list the relative risk ratios, the antilog of the estimated coefficients. A relative risk ratio greater than one indicates an increased probability of transitioning from singlehood and a ratio less than one signifies a decreased probability. Likelihood ratio test comparing a pooled model of both gender and distinct models rejected the null at $p<0.000$, therefore all models were run separately for women and men.

[Figure 1 about here]

RESULTS

Descriptive Statistics

Figure 1 plots the unconditional hazard rates of transitioning to cohabitation and marriage by gender over the study period. At every age, both men and women have a greater hazard of cohabiting than marrying. Women transition to cohabitation at earlier ages than men and at greater rates across the study period. The hazard of experiencing a first union increases with age,

yet the hazard rates for marriage are low and exhibit a slow and steady increase over the study period until the end when they peak at age 29 for both women and men. The majority of the sample remains single over the study period: 52% for women and 62% of the men. Women were nearly twice as likely to transition to cohabitation first (31%) than directly marry (16.9%), compared with 24.9% of men who cohabit and only 13% who marry. These transition rates are not surprising and are in line with current research showing cohabitation as the modal pathway to coresidential relationships in young adulthood (Sassler 2010).

Over 34% of the young women hold credit card debt (averaging $2,582), compared with 29% of the men (averaging approximately $3,057). Table 1 compares the rates of indebtedness and average debt for young women and men by first union status. For both women and men, the average debt held is greatest amongst those who experience a transition over the study period, and the proportion of women holding credit card debt outnumber men in all three relationship categories. The difference between men and women who directly marry, however, is not statistically different. The rates of credit card indebtedness differ between those who remain single and those who cohabit for women, whereas fewer men who remain single hold credit card debt than those who transition into cohabitation or marriage. There is no significant difference in means between cohabitors and those who marry for women or men. Female cohabitors hold the most debt on average, $1,327, whereas men who marry differ from their cohabiting male counterparts by just $1. The only significant difference between credit card debt exists between women who remain single ($2,428) and those who transition into a first cohabitation ($3,509).

Differences, however, emerge between cohabitors and married people with education loan debt. There are more women in the sample attending college at age 20 at the beginning of the study period than men, (19% compared to 11% of the male sample), which explains why

women with education loans outnumber men. Over 17% of women held some kind of government or private loan averaging $6,549, compared with 10.7% of the men, with average debt of $5,932. The average amount of outstanding non-zero education loans does not differ significantly by sex. Men and women who remain single have the highest average education loan debt. For men, the overall average and median levels are not significantly different by first transition type, whereas for young women average debt for those who remain single differs from both cohabitors and those who marry. Among those with non-zero educational loan debt, the debt amounts are significantly different between single women and cohabitors. Close to seven percent of the women in the sample report holding both credit card and education loan debt, compared with only three percent of the men. A little more than half of the women in the sample report not having either debt but more than sixty percent of the men in the sample report having neither forms of debt. Women hold debt at higher rates in every union category. These results support Chiteji's (2007) findings that the majority do not have outstanding credit card debt, with high debt loads concentrated amongst a minority of young adults. Descriptive statistics for all independent variables used in the analysis are provided in Appendix A.

[Table 1 about here]

Competing Risks Models: The decision to cohabit or directly marry versus remain single

Table 2 presents the multinomial logistic regression models for women and Table 3 for men. The set of results presented in Model A utilizes all explanatory variables including the educational, labor market, and financial measures.[6] Model, B adds in the combined credit card

[6] Results from the family background and demographic estimates reveal black women and men are less likely to transition to either union, and Hispanic women and men have a lower probability of cohabiting. Having a child is positively associated with transitioning into

and education loan debt measure or total debt measure, and Model C enters in the debt measures separately. Introducing debt into the model as an additional explanatory variable along with the youth's educational attainment and labor market characteristics allows one to test whether debt is acting as a mediator or operates independently from the other economic resources previously used as predictors of relationship formation. While debt values can independently signal one's financial state, it could also work in tandem with other financial and economic measures to provide an overall assessment of financial health. If debt is sending its own independent signal on the relationship market about the respondent, there should be no significant change in the magnitude of the estimates on the other economic resource measures. Asterisks indicate significant differences relative to remaining single, underlined risk ratios represent significant difference between cohabitation and marriage (i.e. when cohabitation is the reference category).

The multivariate competing risks model results for the sample of young women are presented in Table 2. In Model A the estimates indicate that educational attainment is positively associated with a first union transition. Young currently single women with less than a high school diploma have decreased risk of directly marrying whereas having some postsecondary schooling increases ones risk of marriage relative to having only a high school degree. The least educated women are also at greater risk to cohabit than marry as indicated by the underlined ratios. There does not appear to be a significant correlation between transitioning from single to

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cohabitation first for women, but men who report having a child are more likely to cohabit and marry than remain single. Maternal education increases the risks of cohabitation, but paternal education decreases the risks of cohabitation for young women. Being raised in a rural area increases the likelihood of direct marriage and currently residing in a rural area decreases cohabitation.

first cohabitation and women's current education level. These results are consistent with the education results reported for women utilizing other data sources (Sassler and Schoen 1999; Sweeney 2002). Women with more education are more likely to marry directly even among recent cohorts.

Relative to being unenrolled, current enrollment in any type of post-secondary degree program deters cohabitation, and four-year college enrollment decreases the risk of marriage. The results indicate that school enrollment is perceived as incompatible with early union formation. On the other hand women who report holding full-time jobs have an increased probability of cohabitation and direct marriage. The estimated coefficient on the predicted annual earnings measures, although not significant in this specification, also suggests that women with independent and positive economic gains have a decreased likelihood of direct marriage. Having positive financial and non-financial assets aids in the transition from single to both cohabitation and marriage. Among this recent cohort of young women, positive economic attributes are associated with transitioning out of singlehood into a first coresidential union.

[Table 2 about here]

With the addition of the total debt measure in the second specification (Model B) the relative risk ratio of a one-unit increase in logged total debt is 1.035 for transitioning to cohabitation relative to remaining single and 0.985 for direct marriage both relative to cohabiting. In other words, the expected risk of remaining single is lower for young women with non-zero debt, and they have an increased risk of cohabitation relative to remaining single and relative to directly marriage, as indicated by the underlined odds ratios. It is also interesting to note that when the debt measure is added to the model, the magnitude of the ratios on the other economic resource measures mostly strengthen in magnitude compared to the Model A, or

remain statistically significant if the magnitude decreases as is the case with the enrollment controls. This indicates that total debt has an additive impact on the other socioeconomic attributes in the relationship market, and is an independent predictor of union formation. The financial status indicators show that being unbanked increases a young woman's odds of cohabitation relative to marriage in any given year. Net financial assets are positively and significantly related to transitions into a first cohabitation or direct marriage.

The final results, Model C, assess whether the type of debt held matters for the union decision choice. The competing risks models reveal that relative to remaining single, cohabitation is the preferred relationship choice for women with positive credit card debt. A one-unit increase in logged credit card debt is associated with a risk ratio of 1.057 for transitioning to cohabitation relative to remaining single. Young women with education loan debt exhibit a decreased risk of directly marrying relative to remaining single of 0.928. The results also suggest women with education loan debt are not only less likely to transition to marriage, but are also more likely to experience a first cohabitation.

The regression results for young men, whose economic attributes have historically mattered more for union formation and marital timing, are provided in Table 3. In Model A, the competing risks model indicates more than anything, the lack of secondary completion and post-secondary education is associated with remaining single for this sample of men. Holding less than a high school degree decreases the risk of transitions into cohabitation and marriage relative to remaining single and increases the chances of cohabitation over direct marriage. Men with less than a high school degree are about half as likely to marry in any given year compared to men with high school degrees. Men with bachelor's degrees or more are more likely to directly marry than cohabit when compared to men with only a high school degree.

For this sample of young men being currently enrolled in a two or four-year degree program significantly deters cohabitation when contrasted with the unenrolled population. Those enrolled in four-year degree programs also have a decreased odds of directly marrying. This is consistent with previous studies that found current enrollment deters marriage (Sassler and Goldscheider 2004; Axinn and Thornton 1992). The relative odds of transitioning to cohabitation are slightly higher if the young man is in a two-year secondary degree program, 37% less likely compared with 55% for the four-year enrollees. Men enrolled in 4-year degree programs are more likely to transition to marriage over cohabitation as indicated in Table 3. Additional tests (not shown) indicate that relative to the 2-year college enrollees, the unenrolled are more likely to transition to first cohabitation and the 4-year enrollees are less likely. Although school enrollment tends to deter cohabiting relationships, advanced degrees increase the probability of a transition, particularly into marriage.

With regards to the labor market characteristics, being employed full-time is only significant for transitioning into cohabitating unions, whereas a one-unit increase in logged annual earnings is associated with a relative risk ratio of 1.187 for cohabitation and 0.865 for direct marriage. The expected risk of cohabitation over remaining single and directly marrying is increasing in young adult men's earnings. And finally, indicators of current financial status show results similar to those of the young women. The risks of cohabitation and direct marriage relative to remaining single as well as direct marriage relative to cohabitation is increasing in the value of total assets. Unbanked young men, however, have greater odds of cohabitation over the other two relationship states.

[Table 3 about here]

The addition of the combined debt measure to the male competing risk models (Model B)

does not significantly alter the relationships of the other measures of economic stability and earnings potential, with one exception. Men with at least a bachelor's now have a decreased risk of cohabiting relative to remaining single though they are still more like to directly marry than cohabit. In contrast to the female results where positive debt was significantly associated with their transition risks into cohabitation, having no debt is negatively associated with transitioning from single into a coresidential state for young men. From simple comparisons between Table 2 and 3, it is interesting to note the sizeable difference in significant estimates on the predictor economic resource variables. Men's economic attributes are concentrated toward predicting the probability of first cohabitation, whereas the same characteristics are stronger predictors of direct marriage for women. Not only are women's economic attributes a significant predictor of their first coresidential union, but also appear to matter more for marital formation than when contrasted with this sample of young men.

For men, the estimates in Model C corresponding to the credit card debt indicate a positive correlation related to transitioning into cohabitation for those with non-zero debt. Similar to the no debt indicator in Model B, reporting zero credit card debt is associated with decreased odds of transitions from single into either cohabitation or direct marriage. The relationships between education loan debt and no education debt and transitioning into either cohabitation or marriage from single are negative, but not significant. For this sample of young adult men education loan debt does not increase the risks of transitioning into cohabitation over marriage and remaining single nor does it decrease their risks of marriage as it did for the female sample. The results suggest that it is the lack of debt that may matter more for men, specifically no credit debt. Contrary to what was hypothesized, the financial underpinnings for the two union types when debt is used as a financial indicator do not appear to differ for men, with only credit

card debt increasing transitions into cohabitation relative to remaining single.

In additional sensitivity analysis (available upon request), the multinomial regression models were run on young adults with at least some college (sample size of 1,305 women and 1,025 men) and only college graduates (1,061 women and 800 men). The association between the debt measures and union transitions did not change substantially in magnitude or significance for young women. The negative relationship between women enrolled in two-year degree progression and cohabitation and four-year degree programs were no longer significant relative to remaining single, nor was the positive relationship between transitioning into cohabitation with total assets. For the young men, the models on the restricted samples made the relationship between total debt and direct marriage relative to remaining single negative and significant; however, none of the debt measures when delineated by debt type were significant.

It is possible that the relationships between education debt and educational attainment could be driving these associations, especially for those who have not completed their studies. Therefore. models interacting education debt with education were tested given the significant rate at which young adults enter and leave post-secondary schooling without completion. Only male college graduates displayed a significant interaction result; men with and without education loan debt have an increased risk of cohabitation relative to remaining single.

All models were then run on a pooled dataset combining women and men and added gender and non-zero debt interactions to address whether the gender differences in the relationship between debt amount and debt types are significant. The interaction of being female and positive total debt is significant at $p<0.10$ both for transitions into cohabitation relative to single as well as cohabitation relative to marriage. When delineated by debt type, gender did not appear to have an added impact on positive credit debt for women. Positive education loans for

women, however, are associated with positive transitions into cohabitation relative to single and cohabitation relative to marriage ($p<0.10$). These results highlight that the economic attributes of young women from their educational attainment to their labor market and financial characteristics are associated with their first union choice, in particular, with movements directly into marriage. Debt plays an independent role on women's transitions during young adulthood. Results show debt increases cohabitation and deters marriage suggesting the financial underpinnings related of the two union types differ for this sample of young women. The findings also imply the type of union entered is sensitive to debt type.

DISCUSSION AND CONCLUSION

This study suggests that debt, an increasingly significant asset in many young adults' asset portfolios (Houle 2013), is an important factor in union formation decisions during this stage in the life course. Educational attainment and labor market characteristics still matter for relationship formation, but so do financial status, and specifically debt for this recent cohort of young adults. The findings show that debt is positively associated with transitioning out of being single and the lack of debt is not, suggesting single life in young adulthood may be difficult to afford. Married life, however, is unaffordable as well. Cohabitation presents an alternative to single life, but not necessarily a substitute for these adults.

Similar to previous research, I find women's economic attributes are increasingly important for marriage formation (Oppenheimer 1997; Sassler and Schoen 1999; Sweeney 2002). Results also suggest there exists an economic threshold for cohabitation, one which may differ for young men and women. Early union formation transition type and timing decisions for marriage remain associated with measures of educational attainment and positive indicators of current financial health and future economic stability. The findings for women also support the

qualitative research showing debt is a barrier to marriage but not for cohabitation (Sassler and Miller 2011; Smock et al. 2005). The results also suggest young men who lack observable characteristics of financial sophistication (e.g., bank accounts, non-zero credit card debt) may be considered suitable relationship partners, but relegated to the cohabitation market for their first coresidential union.

Gender differences suggest the economic burden debt presents for a marital union is treated differently within men's and women's relationship markets consistent with Oppenheimer's theory on marital timing (1988). Current trends in the marriage market reflect labor market fluctuations, which have seen the rewards to high-skilled men increase disproportionately in size relative to low-skill sector wages. Dwyer, McCloud and Hodson (2013) found the relationship between debt and enrollment to be gendered, with the odds of dropping out of college more sensitive to education loan debt for young adult men than they are for young women. These results indicate education loan debt not only deters college completion, but also is a contributing factor to continued social stratification and economic mobility within society. When success is measured as transitioning directly into marriage rather than first cohabiting, not only are highly educated men more successful in the job market, they are also more successful in the marriage market. The returns for women should not be discounted, as transitioning to marriage is also positively associated with greater educational attainment. Yet in this sample of young adults, women are more likely to pay a penalty for their education loan debt whereas men do not. The accrual of debt from pursuing greater educational attainment may have unintended consequences for women. Thus contributing to the delay in their marital timing and the divergent destinies of those with economic advantages (who can attend college without amassing much debt) and those who utilize credit card debt to cover life expenses.

The context of marriage in young adulthood has changed with the decline in union formation not as severe when cohabitation is taken into account. Cohabitation is the more attractive coresidential option earlier in the life course. But, are young adults opting out of marriage or selecting into cohabitation? These results indicate debt selects women into cohabitation. One possible explanation is women fear that as a result of the higher costs of entry in the marriage market their chances of a quality match might not be as great compared to those without debt. Women with debt may be considered unattractive or poor quality in the marriage market, but still have some resources (e.g., employment, education, access to credit) that can positively contribute to a nonmarital coresidential household. Men with no credit card debt are unable to navigate themselves into the cohabitation and marriage markets. This may potentially reflect lack of access to credit, a sign of financial immaturity. Alternatively, men with debt are more able to transition to coresidential unions than women, indicating that men continue to dictate the terms of union formation within this recent cohort of young adults (Sassler and Miller 2011). Given that men can still negotiate the terms of marriage (e.g., it's more normative for them to initiate proposals), they are willing to accept a working partner, but not one who is a potential financial burden on the household.

A women's economic position does appear to be a significant factor in marital formation while cohabitation appears to substitute as a less-expensive option until couples are financially ready for marriage. The accumulation of education loans can also have the unintended consequence of prolonging women's marital search. Young adults are not necessarily rushing into marital unions, as Oppenheimer (1997) asserted, but instead opting to form what are now culturally accepted unions that offer many of the same benefits as marriage until they are ready to transition into marriage. This is especially true if it enables people to acquire information, in

particular financial prospects, on a potential spouse (Dew and Price 2010).

This study has several limitations. I do not perform a cross-cohort trend analysis, therefore I do not assert that debt has become increasingly important factor in the marriage market, nor do I make any strong causal claims regarding my analyses. These findings do, however, provide evidence that debt plays a non-trivial role in the relationship decisions of young adults and that debt impacts first union choice in the market for union formation for young adults born between 1980 and 1984. Also, because the focus is on first unions, entrance into direct marriage or first cohabitation, this is not a study of non-marriage, but delayed marriage.

In addition, debt is a stock quantity, meaning it is point in time measure. It is difficult to ascertain from the survey how long it took the young adult to accumulate the debt and how long it will take them to pay it off. Additionally, aside from the unbanked proxy variable, I was not able to test for actual credit access, whether a youth was credit constrained, as it is not explicitly asked until later interviews. The results presented reflect actions related to credit utilization. This is important because I am not analyzing whether young adults with access and outstanding debt are inherently different than those with debt, but rather how outstanding debt and debt type potentially alters behavior for young adults navigating in the cohabitation and marriage relationship markets. By distinguishing those with non-zero debt and those with no debt, it is possible that at least two distinct socioeconomic and demographic groups are combined into the no debt category: the credit constrained and the wealthy. Descriptive statistics indicate that those captured with positive debt are less heterogeneous than not, largely falling into the lower and middle income class, and that this study has captured the behavior of a policy relevant and growing demographic, i.e., young adult coeds riddled with credit card and education loan debt.[7]

[7] Results from models that filled in the missing years for the credit card debt measure assessed at

There may also be a concern that differential access to education loans may influence enrollment; however, several studies have found access to financial aid for post-secondary schooling is not a constraint for enrollment decisions (Carneiro and Heckman 2002; Stinebrickner and Stinebrickner 2008, although recent research suggest household credit constraints may negatively impact children's college enrollment decisions, see Lovenheim (2011)).

Marriage as an institution has undergone significant changes during recent decades (Cherlin 2005). As recent as 2010, 44% of young adults aged 18-29 believed marriage was becoming obsolete (Taylor 2010). The relationship between economic resources, union formation, and marital timing remains an area of demographic interest. Ongoing compositional changes in the labor market, educational market, and financial landscape are salient and undoubtedly impact the American household and family. This paper examines one specific structural factor that emerged in the last three decades within the lives of American youth: increasing indebtedness and the relationship with their early union formation decisions. [1] The evidence suggests that debt may have an independent influence on the first coresidential union choice above and beyond the traditional educational and labor market characteristics of "good fortune" presumed necessary for marital formation (Sassler and Goldscheider 2004; Schneider 2011). These relationship transitions may be operating through the differences in debt structure of credit card and education loan debt and the financial requirements for what is needed to form first cohabitation versus first marriage.

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the age 20 and age 25 and aggregated up the education loan variable to the same level as the credit card debt are qualitatively similar to the yearly measures and are available from the author upon request.

The last wave of NLSY97 data used for this analysis was gathered in 2009, so it is too early to assess the long-term cohabitation and marriage market implications of the credit contractions, decreases in savings, high rates of unemployment and under-employment a majority of American households have had to endure as a result of the Great Recession. This is, however, the first recession this cohort of youth has experienced as adults. It will be interesting to follow them through the next decade and compare their continued relationship progression now that they have aged into a period of credit contractions from an expansionary one. Future studies should focus on the role of debt on family building behaviors, such as fertility decisions, relationship quality, and remaining married or partnered, as well, couples that may transition from cohabitation to marriage and the stability of those unions. In order to address these issues, however, we need new and better forms of data to capture these transitional periods in the lives of young adults.

Appendix A. Descriptive Statistics of independent variables used in the Analysis, by Sex

	Women					Men				
	Total	Remain Single	Cohabit	Marry		Total	Remain Single	Cohabit	Marry	
Family Background										
Lived in rural area at 12	0.247	0.243	0.249	0.332	b,c	0.237	0.233	0.267	0.285	a,b
Both parents married at 14	0.779	0.781	0.760	0.776		0.762	0.765	0.733	0.780	a
Maternal Education	13.280	13.294	13.199	13.177		13.130	13.184	12.623	12.949	a,b,c
Paternal Education	13.384	13.423	13.104	13.302	a	13.153	13.220	12.421	13.270	a,c
Negative Parental Net Worth in 1997	0.050	0.048	0.063	0.047	a	0.049	0.048	0.065	0.041	a,b,c
Demographic, Socioeconomic, and Financial Characteristics										
Black	0.191	0.200	0.143	0.095	a,b,c	0.159	0.162	0.157	0.090	b,c
Hispanic	0.107	0.106	0.104	0.133	b	0.128	0.127	0.128	0.168	b,c
Mixed Race	0.013	0.013	0.014	0.013		0.014	0.014	0.013	0.011	
Lives in rural area	0.203	0.203	0.187	0.246	b,c	0.212	0.215	0.201	0.172	b
Have a child	0.199	0.191	0.258	0.211	a,b	0.076	0.061	0.209	0.140	a,b
Less than a High School	0.090	0.087	0.126	0.059	a,b,c	0.165	0.159	0.237	0.103	a,b,c
High School Degree	0.667	0.677	0.604	0.601	a,b	0.678	0.685	0.619	0.626	a
Some College	0.048	0.047	0.048	0.083	b,c	0.039	0.039	0.040	0.044	
Bachelors Degree	0.193	0.187	0.219	0.256	a	0.116	0.114	0.099	0.227	a,b,c
Currently Enrolled in 2-year program	0.123	0.122	0.123	0.141		0.106	0.108	0.084	0.093	a
Currently Enrolled in 4-year program	0.451	0.471	0.319	0.370	a,b,c	0.310	0.326	0.153	0.280	a,b,c
Earnings (logged)	9.087	9.085	9.088	9.118	b	9.233	9.229	9.263	9.265	a,b
Full time employed	0.246	0.236	0.306	0.317	a,b	0.314	0.301	0.414	0.431	a,b
No checking/savings account	0.219	0.219	0.233	0.174	b,c	0.287	0.289	0.299	0.196	b,c
Total value of all assets	8.949	8.923	9.063	9.269	b,c	9.043	9.025	9.107	9.470	b
Number of Individuals	**3,025**	**0.621**	**0.249**	**0.130**		**3,744**	**0.523**	**0.308**	**0.169**	

Note: Source: NLSY97 Sample data; Weighted Sample Means; All Dollar Values in 2008; Underlined values denote significant difference between men and women

a-Mean difference between remain single and cohabit significant at $p < 0.05$

b-Mean difference between remain single and marry significant at $p < 0.05$

c-Mean difference between cohabit and marry significant at $p < 0.05$

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Table 1. Rates of Indebtedness and Average Amounts of Debt Held by First Union Type, by Sex

	Women					Men				
	Total	Remain Single	Cohabit	Marry		Total	Remain Single	Cohabit	Marry	
Holds Any Debt	0.451	0.448	0.483	0.423	a,c	0.365	0.363	0.386	0.379	
Holds Both Debts	0.065	0.068	0.053	0.029	a,b	0.030	0.032	0.017	0.020	a
Holds Neither Debt	0.549	0.552	0.517	0.577	a	0.635	0.637	0.614	0.621	
Credit Card Debt										
Holds Credit Card Debt	0.344	0.335	0.408	0.371	a	0.289	0.281	0.352	0.342	a, b
Mean Credit Card Debt	$799	$727	$1,327	$884	a	$726	$686	$1,045	$1,046	a
Non-zero Credit Card Debt	$2,582	$2,428	$3,509	$2,610	a	$3,057	$2,997	$3,444	$3,346	
Government/Private Education Loan Debt										
Holds Government/Private Education Loan Debt	0.172	0.182	0.127	0.081	a,b,c	0.107	0.113	0.051	0.057	a,b
Mean Government/Private Education Loan Debt	$2,200	$2,374	$1,281	$707	a,b	$1,366	$1,413	$1,000	$965	
Non-zero Government/Private Education Loan Debt	$6,549	$6,887	$3,286	$4,014	a	$5,932	$6,113	$2,379	$3,887	
N	**3,025**	**0.621**	**0.249**	**0.130**		**3,744**	**0.523**	**0.308**	**0.169**	

Note: Source: NLSY97 Sample data; Weighted Sample Means; All Dollar Values in 2008; Underlined values denote significant difference between men and women

a-Mean difference between remain single and cohabit significant at $p < 0.05$

b-Mean difference between remain single and marry significant at $p < 0.05$

c-Mean difference between cohabit and marry significant at $p < 0.05$

Table 2. Multinomial Logistic Regressions Estimating the Relationship between Debt and Transitioning into Cohabitation versus Marriage relative to Remaining Single for Young Adult Women

	Model A				Model B				Model C			
	Cohabitation versus Remaining Single		Marriage versus Remaining Single		Cohabitation versus Remaining Single		Marriage versus Remaining Single		Cohabitation versus Remaining Single		Marriage versus Remaining Single	
VARIABLES	*OR*	*SE*	*OR*	*SE*	*OR*	*SE*	*OR*	*SE*	*OR*	*SE*	*OR*	*SE*
Educational Attainment (ref: High School)												
Less than High School	1.020	0.109	0.495 **	0.113	1.032	0.111	0.492 **	0.113	1.007	0.109	0.476 **	0.109
Some College	0.833	0.125	1.537 *	0.315	0.833	0.126	1.540 *	0.315	0.839	0.128	1.564 *	0.321
Bachelors or more	0.917	0.085	1.253	0.208	0.948	0.089	1.231	0.207	0.934	0.088	1.196	0.199
Enrollment Status (ref: Unenrolled)												
Enrolled-2-year Program	0.752 **	0.075	0.722	0.123	0.739 **	0.074	0.727	0.124	0.754 **	0.076	0.747	0.127
Enrolled-4-year Program	0.544 ***	0.044	0.578 ***	0.079	0.517 ***	0.042	0.590 ***	0.082	0.564 ***	0.047	0.660 **	0.091
Labor Market Characteristics												
Full-time Employment	1.367 ***	0.095	1.254 *	0.144	1.356 ***	0.095	1.259 *	0.145	1.342 ***	0.094	1.238	0.142
Annual Earnings	0.958	0.064	0.867	0.109	0.953	0.063	0.869	0.109	0.947	0.062	0.864	0.110
Financial Status												
Total value of all assets	1.055 *	0.027	1.201 ***	0.049	1.058 *	0.027	1.199 ***	0.049	1.056 *	0.027	1.192 ***	0.048
No checking/savings account	1.022	0.081	0.824	0.127	1.124	0.093	0.782	0.125	1.199 *	0.105	0.822	0.135
Debt Measures												
Total Debt					1.035 ***	0.009	0.985	0.015				
No Debt					0.935	0.056	0.960	0.098				
Credit/bank Debt									1.057 ***	0.011	1.012	0.018
No Credit/bank Debt									0.891	0.056	0.916	0.096
Government/Private Education Loan Debt									0.988	0.011	0.928 **	0.021
No Government/Private Education Loan Debt									0.928	0.059	0.888	0.096
Number of Person-Years	14,671				14,671				14,671			
Number of Individuals	3,025				3,025				3,025			

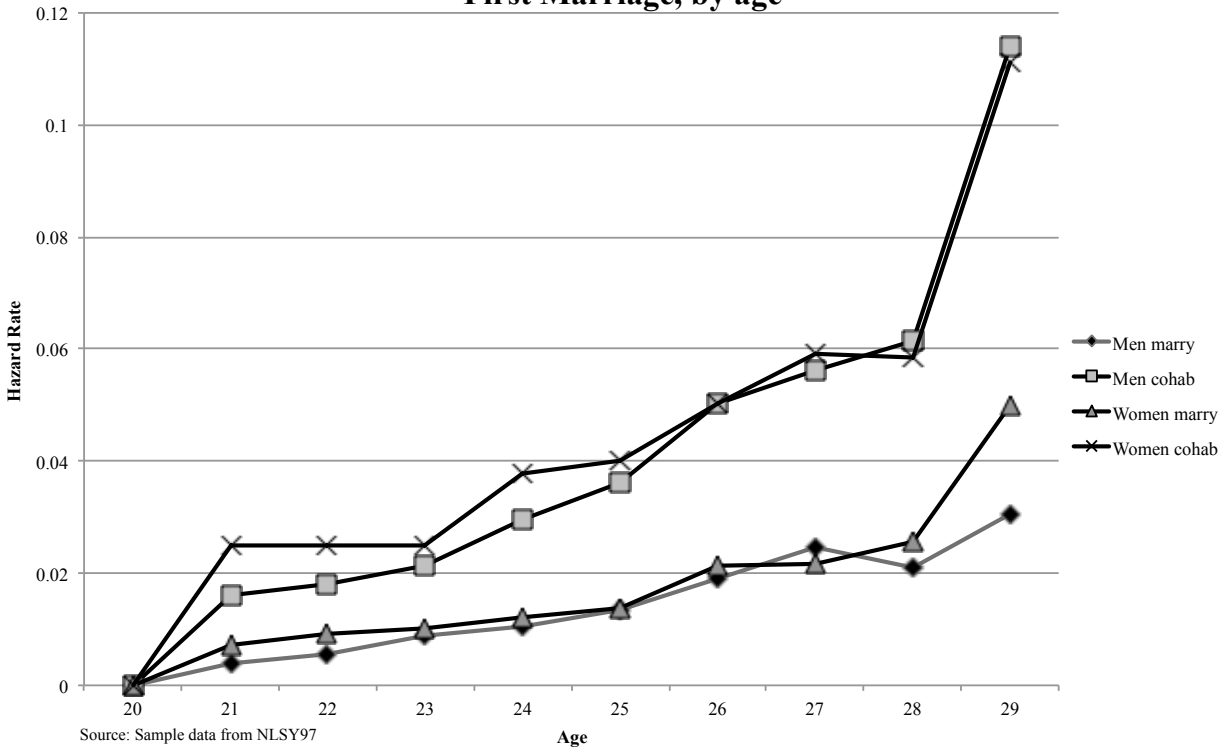
Note: Additional controls include race, ethnicity, maternal and paternal education, rural/urban at age 12, parent's marital status at 14, parent's net worth, current rural/urban area, have a child, age, age squared, and birth year dummies;*** p<0.001, ** p<0.01, * p<0.05; underlines denote statistically significant difference between cohabitation and marriage at p<0.05

Table 3. Multinomial Logistic Regressions Estimating the Relationship between Debt and Transitioning into Cohabitation versus Marriage relative to Remaining Single for Young Adult Men

	Model A						Model B						Model C					
	Cohabitation versus Remaining Single			Marriage versus Remaining Single			Cohabitation versus Remaining Single			Marriage versus Remaining Single			Cohabitation versus Remaining Single			Marriage versus Remaining Single		
VARIABLES	*OR*		*SE*	*OR*		*SE*	*OR*		*SE*	*OR*		*SE*	*OR*		*SE*	*OR*		*SE*
Educational Attainment (ref: High School)																		
Less than High School	0.830	*	0.065	0.541	***	0.089	0.835	*	0.065	0.547	***	0.090	0.827	*	0.065	0.540	***	0.089
Some College	0.811		0.120	1.007		0.234	0.815		0.120	1.014		0.236	0.825		0.122	1.041		0.241
Bachelors or more	0.821		0.084	1.291		0.194	0.816	*	0.084	1.263		0.192	0.809	*	0.083	1.260		0.191
Enrollment Status (ref: Unenrolled)																		
Enrolled-2-year Program	0.630	***	0.066	0.737		0.143	0.626	***	0.065	0.744		0.145	0.638	***	0.067	0.753		0.147
Enrolled-4-year Program	0.445	***	0.040	0.744	*	0.108	0.437	***	0.039	0.748	*	0.110	0.471	***	0.044	0.795		0.116
Labor Market Characteristics																		
Full-time Employment	1.263	***	0.075	1.196		0.133	1.267	***	0.075	1.206		0.134	1.264	***	0.075	1.210		0.134
Annual Earnings	1.187	*	0.098	0.865		0.119	1.184	*	0.096	0.865		0.117	1.179	*	0.095	0.863		0.115
Financial Status																		
Total value of all assets	1.046	*	0.021	1.206	***	0.058	1.046	*	0.021	1.203	***	0.058	1.045	*	0.021	1.202	***	0.058
No checking/savings account	1.172	*	0.084	0.828		0.115	1.184	*	0.091	0.783		0.115	1.217	*	0.097	0.806		0.123
Debt Measures																		
Total Debt							1.018		0.010	1.001		0.016						
No Debt							0.845	**	0.050	0.777	*	0.081						
Credit/bank Debt													1.029	**	0.011	1.016		0.019
No Credit/bank Debt													0.833	**	0.052	0.780	*	0.085
Government/Private Education Loan Debt													0.978		0.015	0.970		0.025
No Government/Private Education Loan Debt													0.960		0.061	0.851		0.093
Number of Person-Years	19,360						19,360						19,360					
Number of Individuals	3,744						3,744						3,744					

Note: Additional controls include race, ethnicity, maternal and paternal education, rural/urban at age 12, parent's marital status at 14, parent's net worth, current rural/urban area, have a child, age, age squared, birth year dummies;*** p<0.001, ** p<0.01, * p<0.05; underlines denote statistically significant difference between cohabitation and marriage at p<0.05

Figure 1. Hazard Rates of Transitioning to First Cohabitation and First Marriage, by age



Source: Sample data from NLSY97

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