

found that both financial assets and vehicle ownership increased the probability of a first marriage in a given year, especially for men.

Cohabitation, however, has become the modal relationship form for young adults (Amato et al. 2008; Sassler 2010), and scholars have increasingly focused their attention on the factors associated with first union transition: the entrance into either cohabitation or marriage. They have argued that the lack of enforceable trust that comes with a formal commitment keeps cohabitators from acquiring the social status and benefits of marriage (Cherlin 2004). This distinction influences the economic criteria that young adults assign to entering a cohabiting versus marital arrangement (Smock et al. 2005). Evidence suggests that the prerequisites for marriage and cohabitation differ. Cohabitators are disproportionately drawn from young adults with lower levels of educational attainment and poorer economic prospects; studies based on data from the 1970s, 1980s, and early 1990s found educational attainment to be either uncorrelated or negatively associated with transitions into cohabitation for women and men (Thornton et al. 1995). Despite school enrollment deterring both marriage and cohabitation (Sassler and Goldscheider 2004; Thornton et al. 1995), college graduates are less likely to cohabit (Kennedy and Bumpass 2008) and more likely to transition directly to marriage (McLanahan and Percheski 2008; Schwartz and Mare 2005). Furthermore, labor market earnings and earnings potential were found to be either not significant or positively associated with transitions into cohabitation for women and men (Clarkberg 1999; Xie et al. 2003). Low-skilled men and low-wage workers have experienced the largest declines in the likelihood of being married (Cherlin 2004). Qualitative studies have found that cohabitators view living together as more economical than maintaining two separate residences (Sassler 2004), and nearly one-third of cohabiting young adults mentioned that finances influenced their decision to cohabit (Sassler and Miller 2011; Taylor 2010). Such findings suggest that economic underpinnings are weaker for the formation of a cohabiting union compared with a marital union and will be associated not only with who enters cohabitation but also the timing.

Young adults across social classes express similar sentiments about what must be in place in order to be ready for marriage. These prerequisites include attaining stable work, economic security, some savings, and an effort to pay down outstanding debt (Cherlin 2009; Edin and Kefalas 2005; Manning et al. 2007; Smock et al. 2005). Single people with greater wealth have the resources that allow them to achieve marriageable status in a wealth-based and asset-valued marriage market (Schneider 2011). Debt accumulation has become a part of achieving financial independence and social mobility, but the acquisition of debt in young adulthood may have contributed to delays in marriage and increases in cohabitation for recent cohorts of young adults.

Men's economic attributes have long been considered primary in the marriage market, with women's economic factors having weak or insignificant effects on marital transitions. In recent years, however, women have surpassed men in academic achievement and college completion (Buchmann and DiPrete 2006), and women's earnings have become increasingly important as a predictor of marriage among recent cohorts (Sassler and Schoen 1999; Sweeney 2002). This suggests that men and women are beginning to resemble one another in the relationship between economic prospects and marriage. Whether debt will have similar effects for men and women remains an open question.

their parent's generation by \$5,689, and of their grandparents' generation by \$8,156. Scholars point to the slowdown in real wage growth, which has not kept pace with the rate of inflation, as a cause for rising debt (Draut and Silva 2004). The inability to repay debt also increases the likelihood of rolling over debt with compounding interest into future periods.

Postsecondary schooling would be unattainable for many without receiving some form of financial aid or grant assistance (Bound et al. 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 students coming from middle- to high-income households (e.g. tuition tax credits, 529 (college savings) plans). Loans have replaced much of the grant aid offered throughout the middle- to late-twentieth century (Fitzpatrick and Turner 2007). According to the National Center for Education Statistics (NCES 2009), 34 % of undergraduates held federal loans in 2007, compared with 27 % who received Pell grants (\$2,600). The average college graduate left school with approximately \$23,000 of college loan debt in 2008; in 1996, the average debt was \$17,000 (Hinze-Pifer and Fry 2010). The replacement of grant assistance with student loan financial aid means that more young adults accrue a significant amount of debt, which can take years to pay down (King and Bannon 2002). Financial aid is oftentimes not enough to cover total college expenses, and a majority of college students have had to rely on credit cards to pay for additional costs and fees, such as room and board, books, and health insurance, which is usually required for matriculation (Lyons 2008; Draut and Silva 2004). As of 2008, only 2 % of undergraduates had no credit history, one-half held at least four credit cards (Sallie Mae 2009), and one in four students reported using credit cards to finance their education (Draut and Silva 2004).

Access to and use of credit cards is not limited to those attending postsecondary school, yet most empirical studies on debt behavior in young adulthood focus on graduates of four-year institutions. Fewer than 6 in 10 students who started a four-year degree in 2001 completed college in six years, and just 27.5 % of two-year program students completed their associate's degree within three years (NCES 2012). Only 39.6 % of 18- to 24-year-olds were enrolled in degree-granting institutions in 2008 (NCES 2012), leaving a large proportion of the young adult population understudied.

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

Early theories of marital formation argued that it was men's economic position and labor market returns that determined their attractiveness in the marriage market, whereas those same attributes negatively predicted marriage for women (Becker 1981). Oppenheimer proposed that as women acquired skills similar to men's, standards for a spouse would become more complementary, advantages in household production would be less valued, and socioeconomic achievements would be more desirable in the marriage market. Educational attainment and stable employment, for example, have been consistently positive predictors of marriage for men (Cooney and Hogan 1991; Goldstein and Kenney 2001; Oppenheimer et al. 1997; Sassler and Goldscheider 2004) and, more recently, for women (Qian and Preston 1993; Sassler and Schoen 1999; Sweeney 2002). Recent studies focusing on wealth (Schneider 2011)

Education loans are considered an investment on an appreciating asset (education), which represents 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). Additionally, the structure of postsecondary enrollment (e.g., dormitory living, delayed employment, and extended training) may act as an indirect deterrent to union formation in early and young adulthood, prolonging the search process, leading to my third hypothesis:

Hypothesis 3: Education loan debt will be negatively associated with transitions into cohabitation and marriage relative to continued singlehood.

Evidence suggests both male and female economic resources are important for marital formation (Qian and Preston 1993; Sweeney 2002), and that a woman's economic resources matter for both the likelihood and the timing of transition (Oppenheimer 1997). Women with greater economic resources, advanced educational attainment, and labor market rewards could subsidize their spousal search, prolonging it in order to find a better match. Women have also outpaced men in college attendance and completion (Buchmann and Diprete 2006), leading to the following hypothesis regarding gender and union transitions:

Hypothesis 4: The observed relationships among debt, cohabitation, and marriage are expected to be greater and more significant for young women.

Method

Data

Data are from the NLSY97 (Bureau of Labor Statistics 2009), an annual study following a nationally representative sample of 12- to 16-year-olds living in the United States as of December 31, 1996. The NLSY97 includes extensive information about the youth labor market and educational experiences, as well as their familial and relationship backgrounds. The survey also ascertains information on wages, income, and educational debt at every survey year. After reaching their 20th and 25th birthdays, respondents were asked to complete an assets module containing questions about all financial and nonfinancial asset holdings, asset values, and outstanding debts. This study starts in the first survey wave after the respondent completed the age-20 assets module and continues through the 2009 survey year. The panel nature of the data allows one to follow the youth up to eight years after the age-20 assessment.

Two sample restrictions were imposed on the data. First, any youth who transitioned to a first cohabitation or first marriage prior to the age-20 asset module was excluded from the analysis, removing 1,095 women and 572 men.² Second, youth without a

² It is not possible to determine if their debt at age 20 is independent from their previous relationship experience.

paid to understanding whether the financial foundations required of cohabitation differ from those of marriage, how debt shapes union formation decisions, and whether these associations vary by sex.

Youth born in the early 1980s came of age during a period of expansive credit markets. Between 1992 and 2001, the percentage of young adults aged 25–34 who had credit card debt remained consistent, while the average debt holdings increased by 55 % (Draut and Silva 2004). It was also a period of increased college enrollment and dramatic changes in the financing of college, notably the decline in the purchasing power of federal grant aid and growth in the availability of student loan programs (Fitzpatrick and Turner 2007; Rothstein and Rouse 2011). As of 2003–2004, one-third of undergraduates borrowed federal loans up from a quarter of a decade before, and this was accompanied by a 26 % increase in the average loan amount (Wei and Berkner 2008). Understanding its role in the familial lives of young adults is important because of growing evidence that debt influences other pivotal life events in early and young adulthood, such as college completion (Dwyer et al. 2012), first career choice (Rothstein and Rouse 2011), and starting salary (Minicozzi 2005). Despite growing convergence in men's and women's roles, it remains unclear whether the effect of debt on union formation differs by gender. This omission is surprising, given that women pursue and obtain college degrees at higher rates than men (Buchmann and DiPrete 2006).

Building on recent work examining consumer debt and marriage in young adulthood (Chiteji 2007; Dew and Price 2011), this study tests whether individual debt has an independent and significant impact on transitions into marriage versus cohabitation, above and beyond traditional socioeconomic indicators. Two distinct types of credit obligations are analyzed. Credit card debt is the most common form of unsecured debt for young adults. Among those with education debt, however, student loans tend to account for the largest share of their debt portfolio. Data are from the 1997 National Longitudinal Study of Youth (NLSY97), a cohort of young adults born in the early 1980s. Discrete-time competing risk models test whether similar consumption, economic, and social factors predicting transitions into marriage also explain entrance into cohabiting unions and whether these relationships differ by sex.

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

Americans experienced 30 years of unprecedented availability and access to both unsecured and secured credit markets between the mid-1980s through the Great Recession (2007–2009) (Durkin 2000; Dynan and Kohn 2007; Lyons 2003). The rise in credit card debt levels was largely driven by financial deregulation changes in consumer credit (Watkins 2000) and technological changes that allowed companies' to diversify risks across households and offer more attractive products (Johnson 2005; Watkins 2000). These policy changes and financial innovations increased the debt of existing customers and those able to gain access, like young adults (Dynan 2009; Weller 2010). Between 1992 and 2001, the average credit card debt of 18- to 24-year-olds increased 104 %, rising from \$1,461 to \$2,985, compared with an increase of 38 % for all households (Draut and Silva 2004). Jiang and Dunn (2013) calculated that the average credit card debt of young adults born between 1980 and 1984 exceeded that of

the selection between cohabitation or marriage (Manning and Smock 2005). The three choices are separate and distinct but not substitutable events.

Variation in Union Formation by Type of Debt

There is reason to believe the type of debt held by young adults matters for their attractiveness in the relationship market. Although both credit card debt and education loans could be considered investment debts given that most young adults lack the income to acquire many of the goods they need, the structural dynamics of the two types of debt vary. Compared with average education loan debt, average rates of credit card indebtedness are low (Chiteji 2007). Outstanding credit card debt, however, often carries large penalties in the form of high interest rates (Baek and Hong 2004), and the accumulation of credit card debt is associated with negative financial practices (e.g., overspending) and poor fiscal management skills (Drentea 2000). High interest rates and short repayment periods also increase the incentives to pay down credit card debt faster. Conversely having education loan debt is more normative. The principal amounts tend to be larger and most borrowers can often choose their repayment periods, a factor contributing to a longer payoff time horizon (Avery and Turner 2012). Education loan characteristics can also vary significantly by type. Private loans tend to have higher interest rates than federal loans. With need-based subsidized loans, the federal government pays interest while enrolled, and borrowers repay their loans after college at a subsidized rate. Students can also apply for unsubsidized federal loans that allow them to borrow independent of financial need; they are, however, responsible for repaying the interest and principal amounts. At any rate, loan repayment is deferred until after college or a grace period upon withdrawal (Avery and Turner 2012). Federal and local policies can also influence individual behavior toward debt (Poterba 2001). As of this writing, interest payments on some qualified education loans are tax-deductible. And unlike credit card debt and other unsecured debts, education loans are extremely difficult to discharge through consumer bankruptcy, although there are multiple systems in place for borrowers to defer repayment (Avery and Turner 2012).

Even though outstanding credit card debt may be a signal of financial independence and access to financial resources, it can also be a marker of current and future instability. Significant credit card debt may indicate financial irresponsibility, making someone unattractive in the marriage market but not in the cohabitation market, where financial requirements are lower because of the decreased likelihood of income (or debt) pooling. Young adults holding nonzero credit card debt may fare better in the cohabitation market, where entry costs are considered lower than marriage (Sassler 2010). Young adults may choose to cohabit instead of marry 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 can also help defray moving costs and pay rent, increasing the attractiveness of cohabitation relative to continued singlehood, and leading to the following hypothesis:

Hypothesis 2: Credit card debt will be positively associated with transitions into cohabitation relative to singlehood and marriage.

Debt, Cohabitation, and Marriage in Young Adulthood

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Abstract Despite growing evidence that debt influences pivotal life events in early and young adulthood, the role of debt in the familial lives of young adults has received relatively little attention. Using data from the NLSY 1997 cohort ($N = 6,749$) and a discrete-time competing risks hazard model framework, I test whether the transition to first union is influenced by a young adult's credit card and education loan debt above and beyond traditional educational and labor market characteristics. I find that credit card debt is positively associated with cohabitation for men and women, and that women with education loan debt are more likely than women without such debt to delay marriage and transition into cohabitation. Single life may be difficult to afford, but marital life is unaffordable as well. Cohabitation presents an alternative to single life, but not necessarily a marital substitute for these young adults.

Keywords Cohabitation · Debt · Gender · Marriage · Young adulthood

Introduction

Young adults increasingly delay marriage. American men's median age at first marriage rose from 24.7 in 1980 to 28.2 in 2010. It increased even more among women, rising from age 22.0 to 26.1 (U.S. Census Bureau 2011), while the overall share of young adults married by age 30 declined (Cohn et al. 2011). Delays in labor market entrance and barriers to advancement, expensive housing, and increasing levels of debt are often attributed with contributing to marital delay (Furstenberg et al. 2004; Settersten and Ray 2010). At the same time, cohabitation rates have increased for young adults, with those in their late 20s having the highest cohabitation rates (Kennedy and Bumpass 2008). Numerous studies point to the importance of economic well-being and financial stability as predictors of marriage, particularly for men (Sassler and Goldscheider 2004; Sweeney 2002; Xie et al. 2003). Economic instability and a lack of economic resources matter less for cohabitation (Clarkberg 1999; Xie et al. 2003). Less attention has been

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How Does Debt Operate in the Relationship Market for Young Adults?

Cohabitation is an economically attractive living arrangement because couples benefit from cost sharing and economies of scale, without the social and financial expectations of marriage. The informal versus formal distinction between cohabitation and marriage may deter cohabitators from investing in relationship-specific capital. Research on intrahousehold resource allocation finds that married couples generally pool income and manage resources jointly, but cohabitators are more likely to maintain independent money-management systems (Brines and Joyner 1999; Treas 1993; Winkler 1997). For example, cohabitators are more likely to retain separate bank accounts, which negatively influences relationship quality and relationship commitment (Addo and Sassler 2010). At the same time, living together in an informal union can allow a couple to sort out or improve their financial situation (Dew and Price 2011) while allowing each partner to become familiar with the other's financial status.

These behavioral differences suggest how debt would impact the decision to enter into marriage versus cohabitation.¹ In a marital union, debt can be considered an individual financial burden brought into the union, which removes financial resources from the joint household. In a cohabiting union, debt remains the responsibility of the debtor, decreasing only one partner's resources, assuming that cohabitators maintain separate financial systems. If young adults prefer to be financially established prior to marriage (Cherlin 2004), cohabitation will be more likely if debt is high, and marriage will be more likely if debt is low or nonexistent. The directionality of the association remains unchanged even when assuming debt values are revealed: marriage will be more likely when an individual has found a partner willing to assume his/her current debt. The formation of a union occurs in the presence of nonzero debt if there has been a consensus to share assets for marriage or not share assets for cohabitation. This leads to the following hypotheses:

Hypothesis 1: Total debt holdings will be positively associated with cohabitation relative to staying single and marriage, and will be negatively associated with marriage relative to cohabitation and staying single.

Although this analysis does not use an exchange model explicitly, the relationship market chosen may reveal the preference of both the respondent and the partner. If a young adult chooses marriage, s/he reveals a preferred union as well as the ranking of relationship choices to be married over cohabitating and remaining single. In the 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 or marriage, as opposed to continued singlehood. Modeling the choices as separate binary outcomes might misrepresent the relationship given that 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

¹ Debt could directly impact union formation if credit access is constrained or if the debt amount signals their perceived readiness for cohabitation versus marriage to the debtor and to others. The latter is the mechanism tested in this study.