IS THERE AN ECONOMIC BAR FOR MARRIAGE?

Socioeconomic status differentials and

implications for marriage promotion policies

Jennifer A. Holland

jholland@ssc.wisc.edu

University of Wisconsin—Madison

Abstract

Recent empirical research suggests that couples consider economic stability and future outlook to be prerequisites for marriage. This study uses data from the National Longitudinal Survey of Youth 1979 to more extensively investigate the existence and level of a hypothesized economic bar to marriage. I consider potential differences by socioeconomic status in levels of combined couple earnings associated with increases in marriage among cohabiting couples. Combined couple earnings are most important for those with a high school degree or less. At $26,000, marriage odds increase significantly and continue to increase for couples with less than a high school degree. For high school graduates, the increase is found after $34,000 of combined earnings. Because the earnings bar for marriage is far above the poverty threshold for a family of three ($13,861 in 2000) and above the phase-out for many government transfer programs, it is unlikely that income supplements or tax credits would push disadvantaged couples above the bar.

Introduction

A growing body of empirical research suggests an "economic bar" for couples transitioning to marriage: a necessary threshold of income, employment quality, educational attainment, and asset accumulation required before a couple can marry (Carlson, McLanahan and England 2004; Edin and Kefalas 2005; Mamun 2005; Oppenheimer 2003; Osborne 2005; Smock and Manning 1997; Smock, Manning and Porter 2005). Absent from the literature, however, is a consistent definition of an economic bar for marriage, a model of the mechanisms through which an economic bar for marriage affects behavior, and a direct test for the existence of the theorized a bar. This study addresses these limitations, building a model of the economic bar for marriage and empirically testing for the existence of the bar. Using data from the National Longitudinal Survey of Youth, 1979 Cohort, the study answers three questions: Is there an economic bar for marriage for the population at large? Can we quantify this bar? And finally, is the economic bar higher for more disadvantaged couples, or can the same pattern be observed across socioeconomic status?

Broadly defined, the economic bar consists of three types of time-varying measures: employment characteristics, educational attainment and asset accumulation. Here I focus on once component of employment characteristics: combined couple's earnings. Rather than assessing educational attainment as a component of the bar, in this analysis I use highest grade completed to proxy for socioeconomic status. I consider the interaction between education status and earnings, evaluating separate models for respondents with less than a high school degree, a high school degree, some college and a college degree or greater. This will allow me to assess differential effects of an earnings

bar for marriage for less and more advantaged couples. I take into account variables that may be correlated with the main independent variables on economic status and the outcome of interest, the transition to first marriage, such as the presence of children and duration of the union. Additionally, I include variables that capture the heterogeneity of cohabitation, such as religion and race.

Previous research has shown that higher levels of earnings are associated with a greater likelihood of marriage. However, if the economic bar is an important factor in determining marriage timing, I expect that the relationship between earnings and the probability of transition will not be linear. Rather, each additional thousand dollars of earnings will be associated with a higher rate of transition to marriage for couples with earnings above the marriage bar than for those with earnings below the bar. Stated another way, couples that have reached the marriage bar have attained a level of resources considered sufficient in order to marry and are therefore more likely to transition to marriage than those who have not reached the bar.

The presence or absence of a marriage bar and the level of that bar may have implications for marriage promotion policy. Noting the link between high quality marriages and well-being, Welfare Reform in 1996 and the Healthy Marriage Initiative (HMI) in 2002 made explicit the government's role in encouraging marriage as a strategy for promoting child well-being and alleviating poverty. Both Welfare Reform and the HMI call for the reduction of marriage disincentives in means-tested aid programs. Further the HMI established an agenda of public advertising about the benefits of marriage, marriage education and relationship skills training programs, particularly targeted at low-income couples that may be unable to afford such programs. The HMI

budget is derived from the Temporary Assistance for Needy Families (TANF) program. Reauthorized early in 2006, $150 million of the TANF block grant is diverted to the Healthy Marriage Initiative.[1] Undoubtedly, policy makers should be optimistic about the benefits of relationship skills training for couples, particularly because the couples voluntarily select to participate in HMI programs. However, implicit in the funding structure of the HMI is a trade-off between marriage promotion and traditional income supplement program and job training programs (i.e. welfare). This tradeoff results in a paradox—marriage may indeed improve the economic well-being of children and families. However, couple's economic well-being may also promote marriage and by diverting money away from programs that promote economic well-being via monetary transfers, education and training programs, policy makers may be inadvertently undermining marriage. Understanding the nature of the marriage bar can shed light on the existence and magnitude the tradeoffs associated with the funding diversion.

If there is an economic bar for marriage, policies targeted at couples that have not reached the bar may encourage marriage. In particular, policies that are designed to improve access and availability to quality jobs, job training and education may indirectly increase marriage rates. Conversely, if there is no economic bar, programs that target income and economic well-being will have little effect in encouraging cohabiting couples to formalize their unions through marriage.

[1] United States Department of Health and Human Services. Administration for Children and Families. Press Release. 02/08/2006. http://www.dhhs.gov/news/press/2006pres/20060208.html (Accessed July 14, 2006)

Literature Review

Economic Theories of Marriage Timing

Marriage is a central institution of American family life. Across ethnic and racial groups, Americans hold pro-marriage values and the majority of Americans expect to marry (Bianchi and Casper 2000; Lichter, Batson and Brown 2004; Mauldon et al. 2002; Tucker 2000). Consistent with expectations, estimates suggest that the vast majority of Americans will indeed marry (Bianchi and Casper 2000; Goldstein and Kenney 2001; Raley 2000). Despite the prevalence and importance of marriage, in the past 50 years there has been increasing diversity in the American family life experience. Individuals can expect to spend a greater portion of their lives outside of marriage, due in part to divorce, but also due to an increasing age at first marriage (Casper and Bianchi 2002).

Change in marriage timing deserves particular attention when considering the economic determinants of marriage. Between 1850 and 1940, the median age of first marriage of white men was more similar to that observed today, fluctuating between 24.5 and 26. White women earlier, with fifty-percent of marriages occurring before the ages of 22 (Fitch and Ruggles 2000). During the period 1870 to 1940 the age of first marriage for blacks was also stable, but lower than that of whites: between 22.5 to 24 for black men and approximately 20 for black women. The marriage boom era, the mid 1940s through the mid 1960s, was characterized by a low age at first marriage. Following World War II, the median age fell precipitously, reaching a low of 23 for white men and 20 for women in 1960. The marriage boom had little affect on the median age of first marriage for blacks. In fact, the age of first marriage for black women began to rise in 1950s. Since 1970, the age of first marriage has risen for blacks and whites, males and

females. In 1990, white men and black women had the highest median ages of first marriage: approximately 29 for white men and 28 for black women. The median age for black men in 1990 was 25.5 and 23.5 for white women.

How can we explain the high age of first marriage observed today and the fluctuations of the past? A first explanation emphasizes the role of structural changes in the U.S. economy. Fitch and Ruggles (2000: 82) note that age at first marriage is "highly sensitive to economic conditions." For example, between 1870 and 1890 the median age of first marriage for white men increased from 25 to 26; this increase coincided with the declining availability of land. Further, the marriage boom and the decline in the age of first marriage for whites of the mid 20th century coincided with post-war economic expansion. The rising median age of marriage in the 1970s occurred simultaneously with economic recession.

At the individual-level, macro-structural changes have an affect on marriage timing because successful partnering may depend on, among other things, an individual's economic characteristics. Spouse search theory (Oppenheimer 1988), akin to job search theory in economics, suggests that individuals enter the marriage market with certain characteristics (wealth, education, physical attractiveness, etc.) and certain preferences for a partner (for example, a partner who is well-educated, successful in the labor market, is non-abusive). Individuals with characteristics that make them highly competitive will partner first, while noncompetitive individuals will delay marriage, remain unmarried or select partners who do not meet their desired standard. Numerous studies find evidence that the spouse search model can explain the recent trends in delayed marriage. The late age of first marriage is attributed to declining economic opportunities for men,

particularly for minorities and for those in lower and working occupational classes (Fitch and Ruggles 2000; Lichter et al. 1992; Oppenheimer 1994; Oppenheimer, Kalmijn and Lim 1997; Wilson and Neckerman 1987). Further, the increasing need for credentials in order to secure a family wage has resulted in a larger than ever proportion of the population pursing degrees beyond high school diplomas. Family formation is most often postponed while completing education (Casper and Bianchi 2002).

A second explanation suggests that the recent increase in the age at first marriage is the result of changes in the meaning of marriage. Historically marriage was "the foundation of adult personal life; now it is sometimes the capstone. It is something to be achieved through one's own efforts rather than something to which one routinely accedes" (Cherlin 2004, 855). Family activities, such as coresidence, sex, childbearing and childrearing, once associated solely with marriage, today occur before, during and after marriage (Axinn and Thornton 2000). However, marriage continues to be considered an "institutionalized opportunity for pooling and sharing of resources" (Sørensen and McLanahan 1987). Indeed, low- and low middle-income mothers interviewed by Edin and Kefalas and Smock et al echo the sentiment of marriage as a capstone and emphasize marriage as a union that should be free of economic stress (Edin and Kefalas 2005: 203).

Economic Status and Marriage

It is notable that economic circumstances contribute theoretically to both structural and ideational explanations for delayed marriage; educational attainment, employment

characteristics, earnings, income and assets may all have a role in determining whether and when individuals couple and marry.

Increasingly economic security is an expectation of the marital union (Barich and Bielby 1996). While some research suggests that economic factors are more important for blacks than whites, recent qualitative work suggests an emphasis on economic status across race/ethnic boundaries among individuals in the lower- and lower middle-classes (Bulcroft and Bulcroft 1993; Edin and Kefalas 2005; Smock, Manning and Porter 2005). Marriage is often associated with a middle class ideal: "marriage ought to be for those who've already 'made it' economically" (Edin and Kefalas 2005: 111). This ideal is fundamentally linked with economic stability. Couples must display financial responsibility, be able to make ends meet and not live from paycheck to paycheck (Gibson-Davis, Edin and Mclanahan 2005). The wedding ceremony and reception, even if modest, demonstrate in and of themselves the couple's ability to save and work toward financial goals (Edin and Kefalas 2005). Attaining middle class status is associated with the completion of education and steady employment. Couples should be able to afford middle-class "symbols of success" such as a home or a car (Edin and Kefalas 2005). Even debt may be positively associated with marriage, as it may be a sign of long-term financial planning and making monthly payments may indicate a certain level of financial responsibility. The stability associated with the middle class ideal may insulate the couple from financial shocks and ward off potential relationship turmoil, as financial matters are one of the top issues about which couples argue (Zagorsky 2003).

Economic theory characterizes marriage as a partnership in which both partners stand to benefit by sharing income and expenses while dividing household labor (Becker

1981; Oppenheimer 1988). Previous research into the role of economic characteristics in the transition to marriage suggests that men's economic status matters: men's educational attainment, employment and earnings are positively associated with marriage (Lloyd and South 1996; Manning and Smock 1995; Oppenheimer, Kalmijn and Lim 1997; Sweeney 2002). However, in the 1980s and 1990s, stagnant wages and a shrinking labor market in the traditionally male dominated manufacturing sector have made men less economically attractive partners on average (Wilson 1987). Meanwhile, women's educational attainment, employment characteristics and wages have improved and have begun to resemble those of men. While the evidence for a relationship between women's economic characteristics and marriage is mixed overall, there is some evidence that improved employment characteristics of women may also be positively associated with marriage and that women with higher levels of education are the more likely to marry (Clarkberg 1999; Lichter, Batson and Brown 2004; Lichter et al. 1992; Raley 1996; Sweeney 2002; Thornton, Axinn and Teachman 1995). These findings are consistent with work by Oppenheimer (1988) and Sweeney (2002), which suggests that as the gap in men's and women's labor market outcomes narrows, their preferences in mates will become more similar—men, as well as women, will seek partners who bear traits associated with success in market work.

Edin and Kefalas (2005) and Smock et al (2005) lend support to Oppenheimer's converging preference theory. This research suggests that it is not just men's economic circumstances that matter; women consider their own economic stability and self-sufficiency to be a prerequisite for marriage. One explanation, consistent with the converging preference theory, is that women want to improve their marriage market

competitiveness. Also consistent with Oppenheimer, there may be an increasing perception that marriage is a partnership of equals, requiring both partners to bring economic resources to the relationship. Another explanation relates to the recognition of gender inequality associated with the marriage bargain and women's desire for independence within marriage (England 2000). Economic self-sufficiency may ensure that a woman has power within her relationship and a voice in family decisions. Alternatively, the importance of women's market success may be a pragmatic response to the fragility of the modern-day institution of marriage. Should a marriage fail to conform to expectations, a financially independent woman can "leave [her husband] without being 'left with nothing'" (Edin and Kefalas 2005: 204).

Measuring Couple-Level Economic Characteristics

The empirical evidence that both men's and women's economic circumstances matter for marriage demands a couple-level conceptualization of the economic determinants of marriage, requiring data for both members of the couple. Because few surveys include information on individuals not present in the respondent's household, this analysis is limited to never-married, cohabiting respondents. Although cohabitation is not an institutionalized union in the United States, many surveys recognize cohabiting unions within the household and often record the characteristics and income of the cohabiting partner. Beyond allowing for greater information on the socioeconomic circumstances of both the respondent and their partner, focusing on the transition from cohabitation to first marriage offers several advantages over an analysis of all transitions to first marriage. First, it minimizes the role of local marriage markets, except to the extent that the

'quality' of a particular match varies by marriage market characteristics. Second, cohabiting couples are an important group from a policy perspective. Cohabiting couples are potentially an ideal population to target for HMI services because, in choosing to co-reside, they have demonstrated a high level of relationship commitment. Third, most cohabiting couples express certainty about the institution of marriage and do plan to marry at some point: those who see cohabitation as a stage in the marriage process, 49% of cohabiting couples in the United States, and those who see cohabitation as a trial marriage, 15% of cohabiting couples (Casper and Bianchi 2002). Finally, it is important to note that cohabitation is now the modal path to marriage. While only 8% of first marriages were preceded by cohabitation in the late 1960s, 49% of first marriages were preceded by cohabitation in 1985-86 and by the mid-1990s that percentage had increased to 56% (Bumpass 1990; Bumpass and Lu 2000). Understanding the transition from cohabitation to first marriage will provide insight into the marriage determinants of a large, policy relevant portion of the population.

Considering the transition from cohabitation to first marriage rather than the transition to first marriage broadly presents one important caveat. There is unobserved selection into cohabitation and this selection may be related to the economic bar. There may be an economic bar for cohabitation that the couples included in this analysis have already reached in order to transition to a coresidential, non-marital relationship. Thus, pre-marital cohabiters may have a lower bar for marriage than similar couples that do not cohabit before marriage. Alternatively, if the economic bar is a determinant of residential status, not marital status, we will not observe a bar with these data. It is necessary not to

draw broader conclusions about the bar for marriage of couples that do not cohabit from these results.

Conceptualizing an Economic Bar for Marriage

I conceptualize the economic bar for marriage as a threshold: the bar is something that couples reach for, not something that prohibits them from marrying. This theoretical model is derived from discussions of the bar in recent qualitative literature. The bar is composed of educational, employment and assets components associated with financial stability. Women interviewed by Edin and Kefalas (2005) and Smock, Manning, and Porter (2005) discuss the importance of both partners being economically established before they enter into marriage: a good job, a higher position and school completion are essential for marriage. Further, couples must maintain a "respectable lifestyle," which constitutes the financial ability to pay a mortgage, a car or two and savings enough "to put on a 'decent' wedding" (Edin and Kefalas 2005: 111). Striving for the goals of economic success and stability, asset accumulation and marriage go hand in hand for low-income women.

While the qualitative literature provides rich insight into the potential components of the bar, the literature lacks a discussion of how we might expect the bar to operate. At the individual-level, the bar is a threshold: couples will remain unmarried until they reach the bar, at which time they will marry. With this understanding of individual behaviors, we move to the aggregate level—what will the likelihood function for marriage look like when we aggregate individual data and how will we identify a bar for marriage? For this analysis I will consider only one component of the bar: combined couple earnings. A

first possibility, if each individual couple has a different level of combined couple earnings necessary before they will marry, we would expect a linear relationship between the hazard of marriage and economic status. In such a case, there is no earnings bar for marriage, only a positive association between earnings and marriage. Alternatively, if couples or groups of couples have similar conceptualizations of the economic status necessary for marriage, the relationship between marriage and combined earnings will not be linear. Rather, we would expect to see changes in the slope of the likelihood function, relative to combined couple earnings. The earnings level associated with a positive change in slope in the marriage likelihood function constitutes an economic bar for marriage. Once couples reach this economic threshold, each additional dollar of earnings is associated with a larger increase in the probability of marriage. Broadly, identifying the levels of economic status associated with changes in the shape of the likelihood function will allow me to determine the existence and character of the economic bar for marriage.

DATA & METHODS

Data

The data used in this research are from the National Longitudinal Survey of Youth, 1979 cohort (NLSY79), from survey years 1979 through 2002. The NLSY79 is a nationally representative longitudinal survey of men and women born in the years 1957-64. In 1979, the sample consisted of a main sample of 6,111, an oversample of 5,295 minorities and poor whites, and 1,280 respondents in the armed forces, for a total of 12,686 respondents. Between 1979 and 1994, the survey was conducted annually, and biennially thereafter.

These data are ideal for exploring the relationship between earnings and marriage. The information gathered includes information on respondent and partner earnings and income, household composition, and employment, relationship and fertility histories. To supplement the relationship histories recorded by the main survey, I make use of recently released spouse/partner matching data. These data are available for all years through the 2000 interview and include identifiers for spouses and partners. This supplemental information allows for the identification of unique relationships and the calculation of relationship duration.

My sample consists of 2,949 individuals that are ever observed in a premarital cohabitation. Respondents are observed from first cohabitation to first marriage. Approximately one-half (46%) of the 2,949 individuals transition from cohabitation to first marriage between 1979 and 2002. Respondents are censored when they report that their cohabiting partner has left the household. Individual respondents may contribute multiple observations with multiple partners. Each respondent contributes one person-year for each survey year they are observed in a premarital cohabiting union. In total, there are 8,092 person-years available for analysis. The analysis sample is limited to opposite-sex cohabiting couples, with a respondent over the age of 18. Additionally, I limit the sample to those respondents with full information on partner earnings, respondent earnings and assets.[2] The final sample consists of 6,254 cohabiting person-year observations among 2,524 unique individuals. For the analysis of differences in the economic bar for marriage across socioeconomic status, the sample is further stratified by highest grade of education completed by the respondent: 1,593 less than high school

[2] See Appendix A for details on who was eliminated from the analysis.

person-years, 2,790 high school person-years, 1,192 some college person-years and 679 college person-years.

The sample restriction based on full partner earnings information is a non-trivial restriction: 20% (1,625 person-year observations) of the sample is lost due to missing partner earnings information. In Table 1, I present sample frequencies, means, and differences between the assets analysis group and the group missing partner earnings information. Those missing partner earnings information are less likely to marry and they report that their cohabiting relationships about 5 months shorter on average. While they are less likely to be employed or enrolled in school, they are slightly more likely to have an employed partner. Those with missing partner's earnings are more likely to be female, more likely to be black and are more likely to receive Aid to Families with Dependent Children (AFDC) or Temporary Assistance for Needy Families (TANF) but less likely to live in multigenerational households.

Variables

Taking advantage of the longitudinal nature of the NLSY79, this analysis uses the respondent and partner's characteristics in one period to predict union status in the following period. The dependent variable is union status in the subsequent interview. In order to construct this variable, I use information on the type of relationship and partner identifier variables from the spouse/partner matching data. A couple is identified as continuing to cohabit if their relationship status in period t and period t+1 is cohabiting and there is no change in the partner identifier between the two periods. A couple is identified as married if their relationship status changes from cohabiting in period t to

married in period t+1 and there is no change in the partner identifier. Finally, a couple is identified as separated if they report that they are single in period t+1 or if they identify a new partner in period t+1. It is important to note that if this new relationship is a cohabiting relationship, the individual will not be censored; rather this new union will enter the analysis. In order to maximize the number of cohabiting person-years available for analysis and to accurately calculate relationship durations, I use a spell smoothing technique to impute missing relationship status. If a respondent reports a cohabiting partner in period t-1 and the same cohabiting partner in period t+1, but cohabitation information is missing in period t, I assigned the cohabiting partner of period t-1 and t+1 to period t. I impute cohabiting partner information for 48 person-years (45 respondents). These imputations do not affect the results the analysis results (results not shown).

My independent variables include individual and background characteristics of the respondent, individual characteristics of the partner, and characteristics of the couple's relationship. I include a continuous measure of the respondent's age and age-squared. Race and ethnicity of the respondent are specified as a series of dummy variables: non-Hispanic black, non-Hispanic-white (the reference category), Hispanic and other race. Partner's race and ethnicity are not recorded in the survey. Highest grade completed by the respondent and by the partner are captured by a series of dummy variables: less than high school, high school (the reference category), some college and college or more. Additionally, I include dummy variables indicating if the respondent is currently enrolled in school, the respondent's employment status and respondent's sex. Because the presence of children has been found to lower the probability of marriage,[3] I

[3] White women: with Nonmarital birth, 82% will marry; without 89% will marry. Black women: 59 vs. 79%; Hispanic women: 62 vs. 93% (Graefe and Lichter, 2002).

include dummy variables to indicate the presence of any biological, adoptive or step children, or children under the age of 5 of the respondent in the household. Unfortunately, I am unable to identify the particular relationship of the children to the respondent or cohabiting partner. Dummy variables are included for whether the respondent received AFDC/TANF benefits in the calendar year, whether the respondent received any welfare benefits in the calendar year,[4] if the respondent resides in an urban area, a set of variables indicating region of residence, and religious affiliation at age 14. As to the latter variable on religious affiliation, I would prefer a measure of religiosity rather than this family background measure. However, the survey only includes religious attendance in survey year 1979. I am concerned that, because of the wide age range of respondents in 1979 (age 14 – 21), such a measure may reflect family religiosity for younger respondents and personal religiosity for older respondents. Therefore, I use religious affiliation at age 14.

In addition to partner's highest grade of education, controls are included for partner's age, age-squared, and employment status. Relationship characteristics included in the model include an indicator for first cohabitation since the beginning of the survey in 1979, a dummy variable coded one if the couple lives with either the respondent or partner's parents or grandparents, and an indicator for relationship duration. Because cohabitation duration is not reported in the survey, a crude duration measure is calculated using the supplemental spouse/partner identifier data, recording the number of periods the respondent and partner are observed co-residing. Relationship duration is specified as a

[4] Any welfare benefits include: "AFDC/TANF, Food Stamps or SSI/other public assistance/welfare" (NLSY79 Codebook).

series of dummy variables: less than one year (the reference category), one year, two years and three or more years.

In this analysis I will focus on one component of the economic bar: combined couple earnings. The measure of combined couple's earnings is created by summing the respondent's reports of their own total earnings and reports of three components of their partner's earnings: income from wages and salary, income from farm or own-business, and military income. If a marriage bar exists, the relationship between earnings and probably of transitioning to marriage should not linear. To test for the presence of a bar, create a series of combined couple earnings spline variables. First, I divide the combined couple earnings into 20 percentile categories, each containing approximately 5% of the full sample. I then calculate the relationship between the spline variables and the probability of marrying using logistic regression (Figure 1a/b; tabular regression results not shown). From this analysis I identify approximate values of earnings that corresponded with changes in the slope of the probability of transitioning to marriage. From this exercise I specify the following set of combined couple earnings spline variables: earnings less than $8,000, earnings between $8,000 and $28,000, earnings between $28,000 and $60,000, and earnings between $60,000 and $84,840. Combined couple earnings are top coded at the 95th percentile ($84,840) and all dollar amounts are adjusted for inflation and shown in 2000 dollars.[5]

In order to assess if the economic bar is higher for more disadvantaged couples, I consider differences in the bar for marriage for different levels of socioeconomic status, as proxied by respondent's educational attainment and specified by highest grade

[5] Earnings are adjusted for inflation using the Consumer Price Index data, available at http://www.bls.gov/cpi.

completed: less than high school, high school, some college and college or more. Following the process detailed above, I top code earnings at the 95th percentile and construct separate combined couple earnings splines for each educational group. Values of the each of the spline sets are presented in Appendix B.

Methods

Because a number of the independent variables vary with time, particularly the key variables on couple's earnings, I estimate discrete-time hazard models to evaluate economic effects on the transition from cohabitation to first marriage. For these models I use logistic regression. This method uses maximum-likelihood estimation to predict the likelihood of being in a certain category relative to the reference category. The dependent variable indicates whether the couple enters a first marriage in period t+1. Model 1 is the most parsimonious spline-model, demonstrating the relationship between the couple's earnings and marriage. The second model adds respondent educational status. Model 3 adds respondent, background, partner, and relationship characteristics. This full spline model isolates the relationship between economic bar variables and marriage from the effects of other characteristics that may be correlated with economic characteristic and marriage. Then I stratify the sample by the four education groups and estimate the full spline model (Model 3), which identifies differences in the economic bar across socioeconomic status. All results are weighted using NLSY79 sampling weights and standard errors are corrected for clustering.

RESULTS

Descriptive Statistics

Table 2 reports frequencies and means for the full analysis sample of premarital cohabiting couples and for each education subgroup. All variables are time variant and are reported in the year of interview with the exception of sex, race and ethnicity, and religion at age 14.

Median combined couple previous year's earnings for the full sample is approximately $33,000. On average, respondents and their partners are 27 years old and a larger proportion of respondents are male (54%) than female. The gender distribution in the sample may be related to the fact that women tend to form unions earlier than men and are therefore are more likely to be censored at every given age. Approximately one-fifth of respondents in the sample have not graduated from high school, 45% have a high school diploma, one-fifth have some college experience and 15% have a college degree or higher. Few are enrolled in school (8%) at the time of the survey. The sample is majority white (70%), one-fifth of the sample is black and just under one-tenth of the sample is Hispanic. The majority of the sample lives in a metropolitan area (80%) and the sample is evenly distributed throughout the country. Slightly less than one-third of the sample report biological, adoptive or step-children, and one-quarter report a child under the age of five. Respondents are largely employed at the time of the survey (79%) and few have received AFDC/TANF (5%) or other types of welfare (12%) in the previous year. Nearly half of the sample report being Protestant at the age of 14 and an additional 35% of the sample report Catholic.

By respondent's report, a similar proportion of partners have a high school degree or less, but are slightly more likely to have completed college, on average: just under one-fifth of the partners have less than a high school degree, 45% have a high school degree, 16% have some college experience and one-fifth have a college degree or higher. Given the predominance of male respondents in the sample, these data represent higher education of females than males among the cohabiting couples as a whole. Less than 2% of the respondents fail to report their partner's educational attainment. Four-fifths of the respondents report that their partners are employed at the time of the survey and 3% fail to report partner's employment status. The typical cohabitation lasts for 18 months. Few couples live with the respondent or partner's parents or grandparents (4%). The vast majority of respondents are in their first cohabitation since 1979 (81%).

When stratifying the sample by respondent's educational attainment, generally sample characteristics are as expected. There is a positive relationship between earnings and educational attainment, with college graduates reporting median combined couple earnings of $55,000 in the previous year, while the median combined couple earnings reported by respondents with less than a high school degree is under $20,000. Respondents and their partners are roughly the same age across education strata. There are notable differences in the sex distribution of the subsamples: over half of the college graduate subsample is female (57%) while only 33% of the less than high school degree subsample is female. The subsample with less than a high school diploma is the most diverse, while the college graduate subsample is 84% white. There are similar racial/ethnic distributions for the high school graduates and those with some college experience. There is a positive relationship between urban residence and educational

attainment. There are small differences in the regional distribution across groups: larger proportions of respondents with less than a high school degree live in the south, high school graduates are the most likely to live in the North Central, those with some college experience more often live in the west, and a larger proportion of college graduates live in the northeast and west. As expected, employment is positively associated with educational attainment and AFDC/TANF and welfare recipiency is negatively associated with education. Religious affiliation at age 14 is similar across subgroups, with a slightly higher proportion of those with a less than high school degree reporting Protestant faith.

When stratifying by education, we find that most high school and college graduate couples are homogamous with respect to education. The vast majority of respondents with less than a high school degree have partners with a high school degree or less (87%). Two thirds of respondents with some college experience have a partner with a high school degree or some college experience, while only a quarter have a partner with a college degree. Partner's employment is positively related to respondent's educational status. Duration of cohabitation is negatively related to respondent's education level: cohabitations where the respondent has less than a high school diploma last for approximately 7 months longer than cohabitations where the respondent has a college degree or higher. Few couples where the respondent has a high school degree or more live with parents or grandparents, while 9% of couples where the respondent has less than a high school degree report living in multigenerational households. Across education groups, the majority of respondents are in their first cohabitations since 1979.

Regression Results

Table 3 presents the regression results for the full assets sample. The base model (1) includes only the couple combined earnings splines. Earnings have no statistically significant effect below $8,000. However, from $8,000 to $60,000 each additional thousand dollars of couple earnings results in 2% increase in the odds of marrying. This effect is marginally significant between $8,000 and $28,000 and significant at the 99.9% confidence level between $28,000 and $60,000. The effect is diminished below $28,000 the addition of education (Model 2) and other characteristics (Model 3) but remains statistically significant at the 99.9% confidence level between $28,000 and $60,000.

In model 2 we find the expected results for respondent's educational attainment: higher levels of education (some college or a college degree) are associated with higher odds of marrying, while having less than a high school degree is associated with lower odds of marrying, relative to those with a high school degree. When adding other controls (Model 3), the effect of education is reduced for all education groups but continues to be significant at the 95% confidence level for respondents with less than a high school degree and a college degree and at the 90% level for high school graduates.

For the most part, additional correlates of marriage have the expected signs. The coefficient for respondent's age is negative but not statistically significant. The negative coefficient for partner's age is significant. The difference in significance levels may be related to the fact that, by virtue of the cohort survey design, there is less variance in respondent's age than partner's age. Being enrolled in school is associated with a 28% decrease in the odds of marriage. Black and Hispanic respondents have 32% lower odds of marriage. Living in the Midwest is associated with 47% higher odds of marriage

compared to living in the Northeast. The coefficient for having children is negative, but not significantly different from zero. While there is a large, positive and significant relationship between partner employment and marriage, the association between respondent's own employment and marriage is not statistically significant. If there is employment homogamy within couples, the effect of partner's employment could be overwhelming the effect for respondent's employment. A regression excluding partner's employment status (not shown) suggests this is not the case: respondent's employment continues to be insignificant. Neither welfare nor AFDC/TANF in the previous year is significantly related to marriage. While insignificant, the coefficients for partner's education have the expected signs. Longer cohabitations are associated with declining odds of marriage: while a cohabitation of one year is not statistically different from cohabitations of less than one year, cohabiting for two years is associated with a 29% decline in the odds of marriage and cohabiting for three or more years is associated with a 40% decline. Being in a first cohabitation is associated with an increase in the odds of marrying, while the effect of living with parents or grandparents is not significant. Religion at age 14 has no effect on the likelihood of marrying.

Table 4 presents the regression results for the assets sample stratified by educational attainment of the respondents. For respondents with less than a high school degree, combined couple earnings are not significantly related to marriage below $15,000. Between $15,000 and $26,000, each additional thousand dollars of combined couple earnings associated with a 9% decline in the odds of marriage. After $26,000, each additional thousand dollars is associated with an 8% increase in the odds of marriage. For those with a high school degree, combined earnings have no statistically

significant effect on marriage until they reach $34,000, when each additional thousand dollars of earnings is associated with an 8% increase in the odds of marrying. The effect of earnings levels off at $41,000 of couple earnings. Earnings are not significantly related to marriage for the subgroup with some college experience. For college graduates, earnings below $20,000 are associated with high odds of marriage, where every additional thousand dollars of earnings is associated with a 27% increase in the odds of marriage. Earnings between $20,000 and $25,000 of combined earnings offset this dramatic increase. Above $25,000, the association is not significantly different from zero for the college graduate group.

Respondent's age only had a significant effect on the odds of marriage for respondents with less than a high school diploma (reducing the odds of marriage by 41%). The sex of the respondent has no significant effect on marriage for any education group. Black respondents are less likely to marry than white respondents in all education groups, although this effect is only marginally significant for college graduates. Hispanic respondents with some college experience or less are less likely to marry, although only the coefficient for high school graduates is more than marginally significant. Urban status has little effect across the education subgroups. Region of residence has an effect on the odds of marriage for all groups except college graduates. Respondents with less than a high school degree are more likely to marry in all regions of the country compared to the Northeast. For high school graduates and those with some college experience are more likely to marry in the North-Central region, relative to the Northeast. While the presence of children has the expected sign for those with a high school diploma or some college experience; this effect is only significant for high school graduates. It is notable

that, while insignificant, the coefficient for having children is positive for respondents without a high school diploma and for college graduates. The coefficient for partner's employment also continues to be positive and is significant for all education subgroups except for respondents with some college experience. Respondent's employment is not statistically significantly related to marriage. Partner's age yields the expected negative result for those with a high school degree or less. There is no effect of partner's age for those with college experience or higher, however. Educational homogamy for respondents with less than a high school degree is associated with marginally significant 37% decline in the odds of marriage. For college graduates, having a partner with some college experience is associated with higher odds of marriage. With regard to relationship characteristics, relationship duration has no effect on marriage for respondents with some college experience. For respondents with less than a high school degree, cohabiting for one year is associated with a 86% increase in marriage relative to a relationship duration of less than one year. On the other hand, high school graduates cohabiting for one year have 25% lower odds of marriage relative to a relationship duration of less than one year. For respondents with a college degree or higher, durations of up to two years are indistinguishable in their effect on marriage. Three or more years of duration is associated with an 70% decline in the odds of marriage relative to less than one year. Co-residence with parents or grandparents has no significant effect for all groups except for those with some college experience or more, for whom living multigenerational household greatly increases the odds of marriage. I would discount this result, however, because only 1.31% of respondents with some college and 0.82% of

college graduates reside in such a household. Coefficients for first cohabitation are all positive but statistically significant only for high school graduates.

SUMMARY

Graphical representations of the earnings results allow for a clearer assessment of an economic bar for marriage. Figure 2 displays the results for the base model (earning splines only, Model 1), the full spline model (Model 3) and the full continuous model (Model 5). When adding control variables to the model, we notice a pronounced increase in the log of the odds of marriage at the third spline ($28,000). The curve flattens after $60,000 of couple earnings, where the predicted probability of marriage reaches approximately 28% (Model 3). Goodness of fit tests (Appendix C) give weak evidence that the spline model is a better fit for the data than the continuous model: the likelihood ratio test selects the spline model over the continuous model, but AIC does not distinguish the two models.[6] These results give evidence for a possible bar for marriage at $28,000 of annual combined couple earnings. Because the full sample is heterogeneous with regard to socioeconomic status, stratifying the sample provides clearer evidence.

Graphical representation of the results for those without a high school diploma suggests that (Figure 3) below $26,000, each additional thousand dollars of combined couple earnings is negatively related to the odds of marrying but, as described above, the estimated slope is only significantly different from zero above $15,000 (spline 2). Above $26,000 there is a significant positive relationship between combined couple earnings and

[6] Although reported in Appendix C, I do not interpret BIC goodness of fit tests here. BIC puts substantially more weight on degrees of freedom when selecting models. Therefore, by definition BIC will nearly always select the continuous model over the spline model.

marriage: each additional thousand dollars of combined earnings is associated with an 8% increase in the odds of marriage. The change in sign at $26,000 for the less than high school group may be related to AFDC/TANF and welfare recipiency for this group. Government transfer programs often take into account the income of both spouses for married couples when determining eligibility and the level of benefits. This may act as a disincentive for marriage for cohabiting couples receiving government benefits. Further, under AFDC, married couples were not eligible for benefits. These results suggest that respondents with less than high school education have a marriage threshold of $26,000 of annual couple earnings. Further support for an earnings-related bar comes from the goodness of fit tests: both the likelihood ratio test and AIC select the spline model over the continuous model.

The graphical representation of the high school graduates shows reduced likelihood of marriage between zero and $34,000 of combined (Figure 4), but neither is significantly different from zero. Between $34,000 and $41,000 of combined couple earnings, there is an 8% increase odds of marring for each additional thousand dollars of earnings. After $41,000, couple earnings have no effect on the odds of marrying. These results suggest an earnings threshold at $34,000 for the high school sample. The goodness of fit tests are not as clear, however. The likelihood ratio test marginally selects the spline model (90% confidence level), while AIC cannot distinguish between the spline and continuous models.

For respondents with some college experience there is no statistically significant effect of earnings on marriage (Figure 5) and the goodness of fit tests cannot distinguish between the spline and continuous models. For respondents with a college degree or

higher, there is marginally significant positive relationship between earnings and marriage for combined couple earnings of less that $20,000 and a decreased relationship between earnings and marriage between $20,000 and $25,000 of combined earnings (Figure 6). While the goodness of fit tests favor the spline model, this model provides little evidence for a bar. Above $25,000, the spline model mirrors the continuous model.

CONCLUSION

This paper attempts to identify an economic bar for marriage in a nationally representative sample. From spline models of combined couple earnings there is weak evidence for a bar around $30,000 for the full sample. When disaggregating by education it becomes clear that this bar operates only for the more disadvantaged portion of the sample: those with a high school degree or less. That is, the earnings component of the bar for marriage is relative – slightly lower for respondents with less than a high school degree ($26,000 annual couple earnings) than for respondents with a high school diploma ($34,000 annual couple earnings). There is no similar earnings threshold for those with some college experience or those with a college degree or higher. Earnings operate linearly for those with college experience.

The results suggest that more money does not necessarily imply more marriage among disadvantaged couples. The level of the bar ($26000 and $34,0000) is far above the poverty threshold for a family of three ($13,861 in 2000)[7] and above the phase-out for many government transfer programs. The negative association between earnings and marriage below $26,000 for those without a high school diploma could be explained by the relationship between earnings and government supports for marriage. Historically,

[7] U.S. Census Bureau Poverty Statistics, 2000: http://www.census.gov/hhes/poverty/threshld/thresh00.html.

transfer programs such as AFDC excluded married couples from receiving benefits. Although this provision was eliminated with the passing of the Personal Responsibility and Work Opportunity Reconciliation Act of 1996, disincentives for marriage remain in many government transfer programs. In particular, eligibility for means-tested programs is typically determined by taking into account the income of both spouses. This is the case for TANF, which replaced the AFDC program. Additionally, in order to be eligible for the Earned Income Tax Credit, the government's largest transfer program, married couples are required to file jointly and, again, benefits are calculated based combined income. Shallower benefit phase-outs might lessen the economic disincentives for marriage among disadvantaged groups. Eligibility criteria that do not rely as heavily on combined partner income might increase the likelihood that disadvantaged couples would marry. In future analyses I intend to model the changes in tax and transfer programs associated with marriage for these disadvantaged couples.

These analyses provide compelling evidence for an earnings bar for marriage among disadvantaged couples. Future analyses must broaden the conceptualization of the bar to include earnings and employment trajectories. There may be a trajectory factor affecting the transition from cohabitation to first: economic success may be characterized by both the couple's current economic status and their status relative their economic status (employment, earnings, assets and education) when they began their relationship. Additionally, it may be that a couple's bar for marriage is determined by their own married parents' economic economic characteristics. An alternative conceptualization of the bar for marriage might take into account background characteristics such as parental marital status, parents' educational attainment, parents' employment status and

occupation. Stratifying the analysis based on the respondent's family's SES may be another fruitful avenue for evaluating an economic bar for marriage for more and less disadvantaged individuals.

Future analyses must consider differential effects by gender and race/ethnicity. Previous research finds mixed results in the effect of female employment and earnings on the transition to marriage (for an overview of this research see Smock, Manning and Porter 2005). However, the qualitative research discussed here suggests that women are concerned about the economic well-being of both themselves and their partners. In the case of race and ethnicity, marriage rates vary greatly by race and ethnicity and previous research suggests that men's earnings may have a larger effect on the transition to marriage for African Americans than for other racial and ethnic groups (Bulcroft and Bulcroft 1993; Tucker 2000). However, Edin and Kefalas (2005) suggest that the characteristics of the bar for marriage vary little across race and ethnicity. These seemingly inconsistent findings on gender and race/ethnicity suggest a need for further investigation.

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Table 1. Analysis v. Partner's Earnings Missing Samples, Frequencies and Means (%)

	Sample	Partner's Earnings Missing	Difference
Married (at t+1)	21.57	15.50	6.07 *
Respondent Characteristics			
Age (Years)	26.94	26.80	0.14
Female	46.50	53.98	-7.48 *
Enrolled in School	8.53	5.94	2.59 *
Highest Grade Completed			
Less than High School	18.59	20.20	-1.61
High School	44.81	48.61	-3.80
Some College	21.58	19.24	2.34
College or Greater	15.02	11.95	3.07
Race/Ethnicity			
Black	18.89	24.48	-5.59 *
White	70.75	65.62	5.13 *
Hispanic	7.44	7.33	0.12
Other	2.09	2.13	-0.04
Urban	79.44	80.96	-1.52
Urban Missing	4.67	3.72	0.95
Region			
Northeast	21.48	20.52	0.97
North Central	26.40	27.25	-0.86
South	24.40	25.78	-1.38
West	26.42	25.46	0.96
Any Children (Bio/Step/Adopt)	30.96	29.53	1.42
Any Children Less than 5	23.64	21.94	1.70
Other Income-Related Variables			
Employed (Incl. Armed Services)	79.29	73.04	6.26 *
Any AFDC/TANF in Past Calendar Year	5.40	9.37	-3.97 *
Any Welfare in Past Calendar Year	12.10	15.03	-2.93

Table 1. (*Continued*)

	Sample	Partner's Income Missing	Difference
Partner/Relationship Characteristics			
Age (Years)	28.50	29.00	-0.51
Highest Grade Completed			
Less than High School	17.74	15.24	2.50
High School	46.47	48.77	-2.30
Some College	17.46	16.31	1.15
College or Greater	18.33	19.68	-1.35
Missing	1.37	0.18	1.18
Employed	81.64	90.86	-9.23 *
Mean Relationship Duration (Years)	1.50	1.09	0.41 *
Parents/Grandparents (Respondent/Partner)	3.42	1.48	1.94 *
First Cohabitation	81.12	81.95	-0.83
Background Characteristics			
Religion at Age 14			
Catholic	35.00	32.45	2.54
Protestant	47.00	49.27	-2.27
Other	10.33	11.75	-1.43
None	7.26	5.46	1.79
Unweighted Number of Cases (Person-Years)	6,254	1625	--
Unweighted Number of Individual Respondents	2,524	461	--

Source: National Longitudinal Survey of Youth 1979.
All results weighted using the NLSY79 Sampling Weight.
All dollar amounts are shown in year 2000 dollars. Dollar amounts are adjusted for inflation using the Consumer Price Index data, available at http://www.bls.gov/cpi.
* p<.05

Table 2. Sample Frequencies and Means, Full Sample and by Education Status (%)

	All	Less Than High School	High School	Some College	College or Greater
Married (at t+1)	21.94	11.31	20.44	26.51	32.96
Couple Earnings Mean ($)	47,803	20,519	39,137	67,447	79,046
25-percentile ($)	17,488	7,087	17,277	24,501	34,820
50-percentile ($)	33,133	18,671	32,002	41,487	55,222
75-percentile ($)	53,587	29,652	47,797	65,687	80,380
95-percentile ($)	84,841	48,251	71,165	105,230	115,294
Respondent Characteristics					
Age (Years)	26.91	26.01	26.67	27.12	28.40
Female	45.66	32.69	44.15	52.09	56.90
Enrolled in School	8.38	1.26	2.08	22.06	16.41
Highest Grade Completed					
Less than High School	18.54	--	--	--	--
High School	44.88	--	--	--	--
Some College	21.45	--	--	--	--
College or Greater	15.13	--	--	--	--
Race/Ethnicity					
Black	18.73	26.62	19.24	16.29	10.99
White	70.85	57.20	71.40	72.43	83.69
Hispanic	7.61	13.56	7.13	7.20	2.29
Other	2.04	1.48	1.44	3.07	3.04
Urban	79.47	76.06	77.56	82.13	85.54
Urban Missing	4.54	4.54	3.53	5.19	6.63
Region					
Northeast	21.02	18.96	19.59	20.92	27.93
North Central	26.36	26.65	30.40	21.75	20.53
South	24.59	30.12	24.24	24.96	18.32
West	26.83	22.47	25.20	31.84	29.92
Any Children (Bio/Step/Adopt)	31.04	56.78	33.00	20.19	9.09
Any Children Less than 5	23.74	44.42	24.77	15.86	6.50
Other Income-Related Variables					
Employed (Incl. Armed Services)	79.49	65.47	78.33	85.10	92.18
Any AFDC/TANF in Past Calendar Year	5.47	12.58	5.72	2.39	0.38
Any Welfare in Past Calendar Year	12.10	24.41	13.34	5.91	2.15

Table 2. (*Continued)*

	All	Less Than High School	High School	Some College	College or Greater
Partner/Relationship Characteristics					
Age (Years)	27.40	25.70	27.38	28.05	28.61
Age Missing	3.78	6.21	3.56	2.63	3.08
Highest Grade Completed					
Less than High School	18.07	40.00	19.17	7.17	3.38
High School	45.18	47.42	59.01	35.35	15.33
Some College	16.97	5.55	14.11	30.18	20.69
College or Greater	19.79	7.03	7.71	27.30	60.59
Missing	1.37	1.78	1.08	0.81	2.52
Employed	79.48	62.89	78.94	88.70	88.35
Employed Missing	3.41	4.63	3.28	2.60	3.44
Mean Relationship Duration (Years)	1.50	1.87	1.48	1.37	1.28
Parents/Grandparents (Respondent/Partner)	3.70	8.69	3.74	1.31	0.82
First Cohabitation	81.46	80.87	78.84	84.65	85.41
Background Characteristics					
Religion at Age 14					
Catholic	35.38	28.70	37.77	36.13	35.40
Protestant	46.96	56.13	46.21	43.35	43.04
Other	10.01	7.21	8.55	9.81	18.02
None	7.24	6.52	7.24	10.46	3.54
Unweighted Number of Cases (Person-Years)	6,254	1,593	2,790	1,192	679
Unweighted Number of Individual Responder	2,524	539	1,116	536	333

Source: National Longitudinal Survey of Youth 1979.
All results weighted using the NLSY79 Sampling Weight.
All dollar amounts are shown in year 2000 dollars. Dollar amounts are adjusted for inflation using the Consumer Price Index data, available at http://www.bls.gov/cpi.

Table 3. Coefficients for Logistic Regression of Transition to First Marriage, Full Sample: Log-Odds (SE)

	Model 1	Model 2	Model 3	Model 4	Model 5
Intercept	-2.09 ***	-1.97 ***	0.40	-1.77 ***	0.17
	(0.20)	*(0.21)*	*(1.40)*	*(0.10)*	*(1.37)*
Couple's Earnings ($)					
Continuous Earnings Measure ($K)	-	-	-	0.01 ***	0.01 ***
				(0.00)	*(0.00)*
$0 to $8	0.04	0.03	-0.02	-	-
	(0.03)	*(0.03)*	*(0.04)*		
$8 to $28	0.02 +	0.01	0.00	-	-
	(0.01)	*(0.01)*	*(0.01)*		
$28 to $60	0.02 ***	0.02 ***	0.02 ***	-	-
	(0.01)	*(0.01)*	*(0.01)*		
$60 to $84.8	0.00	-0.01	0.00	-	-
	(0.01)	*(0.01)*	*(0.01)*		
Highest Grade Completed (High School)					
Less than High School	-	-0.51 ***	-0.33 *	-0.54 ***	-0.33 *
		(0.14)	*(0.14)*	*(0.14)*	*(0.14)*
Some College	-	0.23 *	0.19 +	0.21 +	0.19 +
		(0.12)	*(0.12)*	*(0.12)*	*(0.12)*
College or Greater	-	0.45 ***	0.33 *	0.42 **	0.33 *
		(0.13)	*(0.15)*	*(0.13)*	*(0.15)*
Respondent Characteristics					
Age	-	-	-0.14	-	-0.14
			(0.10)		*(0.10)*
Age^2	-	-	0.00	-	0.00
			(0.00)		*(0.00)*
Female	-	-	0.06	-	0.06
			(0.10)		*(0.10)*
Enrolled in School	-	-	-0.33 *	-	-0.34 *
			(0.16)		*(0.15)*
Enrollment Status Missing	-	-	-1.28 +	-	-1.26 +
			(0.73)		*(0.74)*
Race/Ethnicity (White)					
Black	-	-	-0.39 ***	-	-0.77 ***
			(0.14)		*(0.12)*
Hispanic	-	-	-0.39 **	-	-0.38 **
			(0.14)		*(0.14)*
Other	-	-	-0.17	-	-0.16
			(0.31)		*(0.31)*
Urban	-	-	0.13	-	0.14
			(0.13)		*(0.13)*
Urban Missing	-	-	0.43 *	-	0.43 *
			(0.22)		*(0.22)*
Region (Northeast)					
North Central	-	-	0.38 **	-	0.38 **
			(0.13)		*(0.13)*
South	-	-	0.12	-	0.11
			(0.13)		*(0.13)*
West	-	-	0.08	-	0.07
			(0.13)		*(0.13)*
Any Children (Bio/Step/Adopt)	-	-	-0.36	-	-0.37
			(0.24)		*(0.24)*
Any Children Less than 5	-	-	-0.04	-	-0.04
			(0.24)		*(0.24)*

Table 3. *(continued)*

	Model 1	Model 2	Model 3	Model 4	Model 5
Other Income-Related Variables					
Employed (Incl. Armed Services)	-	-	0.08	-	0.06
			(0.12)		*(0.12)*
Any AFDC/TANF in Past Calendar Year	-	-	0.33	-	0.35
			(0.31)		*(0.31)*
Any Welfare in Past Calendar Year	-	-	-0.20	-	-0.18
			(0.22)		*(0.21)*
Partner/Relationship Characteristics					
Age	-	-	-0.03 ***	-	-0.03 ***
			(0.01)		*(0.01)*
Highest Grade Completed (High School)					
Less than High School	-	-	-0.11	-	-0.12
			(0.14)		*(0.14)*
Some College	-	-	0.20	-	0.20 +
			(0.12)		*(0.12)*
College or Greater	-	-	0.07	-	0.06
			(0.14)		*(0.14)*
Partner HGC Missing	-	-	0.90 *	-	0.89 *
			(0.36)		*(0.36)*
Employed	-	-	0.65 ***	-	0.61 ***
			(0.15)		*(0.15)*
Relationship Duration (<1)					
1 Year	-	-	-0.08	-	-0.08
			(0.11)		*(0.11)*
2 Year	-	-	-0.34 *	-	-0.34 *
			(0.15)		*(0.14)*
3+ Years	-	-	-0.52 ***	-	-0.51 ***
			(0.15)		*(0.15)*
Parents/Grandparents (Respondent/Partner)	-	-	0.20 *	-	0.22
			(0.24)		*(0.24)*
First Cohabitation	-	-	0.32	-	0.31 *
			(0.13)		*(0.13)*
Background Characteristics					
Religion at Age 14 (Protestant)					
Catholic	-	-	-0.08	-	-0.08
			(0.11)		*(0.11)*
Other	-	-	-0.08	-	-0.08
			(0.15)		*(0.15)*
None	-	-	-0.17	-	-0.18
			(0.20)		*(0.20)*
Unweighted Number of Cases (Person-Years)	6,254	6,254	6,254	6,254	6,254

Source: National Longitudinal Survey of Youth 1979.
All results weighted using the NLSY79 Sampling Weight.
All dollar amounts are shown in year 2000 dollars. Dollar amounts are adjusted for inflation using the Consumer Price Index data, available at http://www.bls.gov/cpi.
*** p<.001; ** p<.01; * p<.05; + p<.10

Table 4. Coefficients for Logistic Regression of Transition to First Marriage, by Education Status: Log-Odds (SE)

	Less than High School	High School	Some College	College or Higher
	Model 3	Model 3	Model 3	Model 3
Intercept	4.66	-1.50	1.41	-13.54 **
	(3.21)	*(1.98)*	*(3.06)*	*(5.28)*
Couple's Earnings Splines[a]				
Spline 1	-0.01	-0.01	0.02	0.24 ***
	(0.03)	*(0.06)*	*(0.02)*	*(0.06)*
Spline 2	-0.10 *	0.00	0.01	-0.31 *
	(0.04)	*(0.01)*	*(0.02)*	*(0.12)*
Spline 3	0.08 ***	0.07 *	0.02	0.01
	(0.02)	*(0.03)*	*(0.02)*	*(0.01)*
Spline 4	-	0.00	-0.01	0.00
		(0.01)	*(0.01)*	*(0.02)*
Spline 5	-	-	-	0.05
				(0.04)
Respondent Characteristics				
Age	-0.53 *	0.01	-0.22	0.57
	(0.24)	*(0.14)*	*(0.22)*	*(0.35)*
Age^2	0.01 *	0.00	0.00	-0.01
	(0.00)	*(0.00)*	*(0.00)*	*(0.01)*
Female	0.20	0.18	0.13	-0.38
	(0.29)	*(0.15)*	*(0.20)*	*(0.24)*
Enrolled in School	0.21	0.03	-0.43 *	-0.46
	(0.72)	*(0.39)*	*(0.21)*	*(0.30)*
Enrollment Status Missing	-	-	-	-1.44
				(1.10)
Race/Ethnicity (White)				
Black	-0.89 **	-0.80 ***	-0.81 **	-0.63 +
	(0.29)	*(0.19)*	*(0.26)*	*(0.35)*
Hispanic	-0.70 +	-0.49 *	-0.52 +	-0.21
	(0.36)	*(0.22)*	*(0.28)*	*(0.47)*
Other	0.32	0.06	-1.47 +	1.32 **
	(0.55)	*(0.56)*	*(0.75)*	*(0.47)*
Urban	-0.33	0.20	0.40	-0.17
	(0.26)	*(0.18)*	*(0.32)*	*(0.44)*
Urban Missing	-0.12	1.00 **	0.30	-0.28
	(0.67)	*(0.33)*	*(0.48)*	*(0.56)*
Region (Northeast)				
North Central	0.76 +	0.54 **	0.51 *	0.01
	(0.40)	*(0.19)*	*(0.26)*	*(0.31)*
South	0.74 +	0.25	0.16	-0.48
	(0.38)	*(0.22)*	*(0.26)*	*(0.32)*
West	0.87 *	0.21	-0.11	-0.16
	(0.38)	*(0.21)*	*(0.25)*	*(0.30)*
Any Children (Bio/Step/Adopt)	0.39	-0.75 *	-0.20	0.12
	(0.42)	*(0.37)*	*(0.43)*	*(0.78)*
Any Children Less than 5	-0.39	0.16	0.05	-1.09
	(0.38)	*(0.37)*	*(0.46)*	*(0.87)*

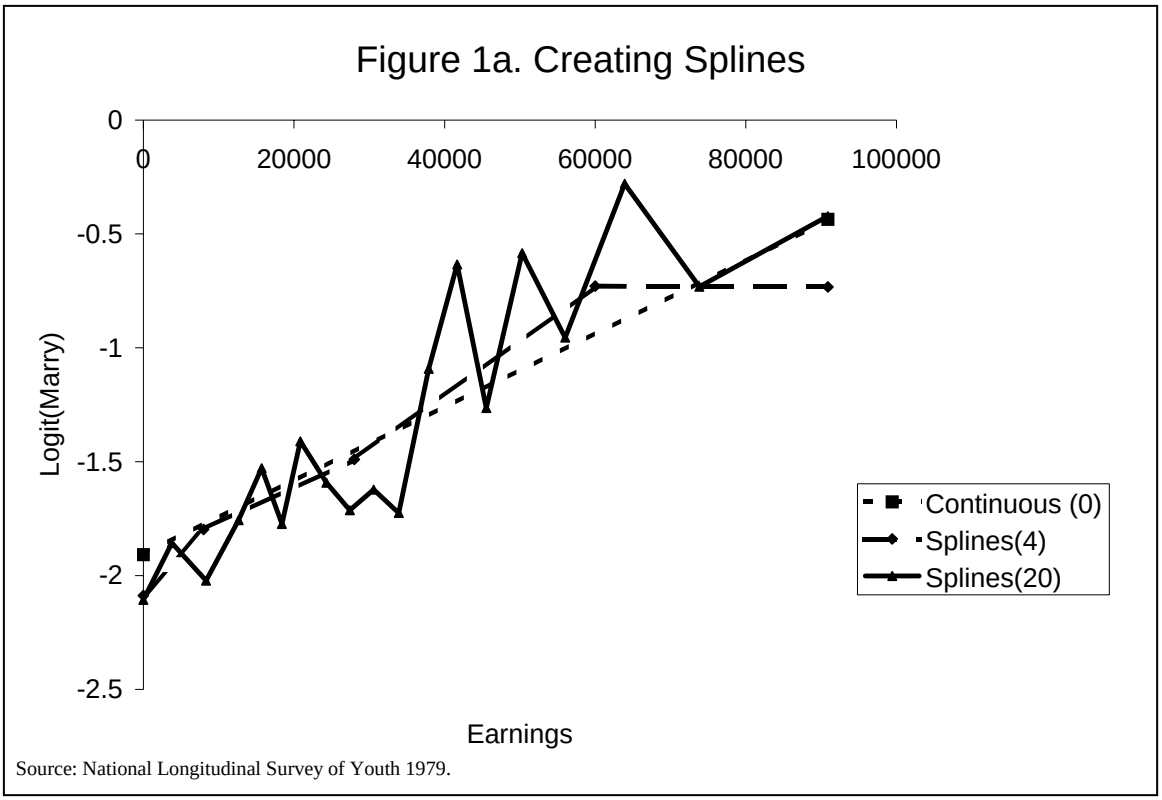
Table 4. *(continued)*

	Less than High School	High School	Some College	College or Higher
	Model 3	Model 3	Model 3	Model 3
Other Income-Related Variables				
Employed (Incl. Armed Services)	0.20	-0.03	0.17	0.33
	(0.25)	*(0.18)*	*(0.27)*	*(0.52)*
Any AFDC/TANF in Past Calendar Year	-0.59	0.82 +	0.14	-
	(0.46)	*(0.45)*	*(0.66)*	
Any Welfare in Past Calendar Year	0.10	-0.51	-0.01	-0.33
	(0.38)	*(0.31)*	*(0.53)*	*(1.12)*
Partner/Relationship Characteristics				
Age	-0.05 ***	-0.04 ***	-0.01	-0.03
	(0.01)	*(0.01)*	*(0.01)*	*(0.02)*
Highest Grade Completed (High School)				
Less than High School	-0.46 +	-0.03	-0.29	0.58
	(0.27)	*(0.19)*	*(0.36)*	*(0.47)*
Some College	-0.15	0.12	0.28	0.72 *
	(0.51)	*(0.19)*	*(0.21)*	*(0.36)*
College or Greater	-0.14	0.06	0.11	0.49
	(0.58)	*(0.27)*	*(0.27)*	*(0.35)*
Partner HGC Missing	0.10	0.21	1.85 *	1.70 +
	(0.93)	*(0.57)*	*(0.81)*	*(0.78)*
Employed	0.83 **	0.58 *	0.54	0.74 +
	(0.32)	*(0.23)*	*(0.35)*	*(0.44)*
Relationship Duration (<1)				
1 Year	0.62 *	-0.29 +	0.02	-0.05
	(0.27)	*(0.17)*	*(0.23)*	*(0.28)*
2 Year	-0.24	-0.32	-0.43	-0.08
	(0.41)	*(0.23)*	*(0.31)*	*(0.34)*
3+ Years	-0.25	-0.37	-0.13	-1.20 **
	(0.40)	*(0.22)*	*(0.29)*	*(0.40)*
Parents/Grandparents (Respondent/Partner)	0.10	-0.29	1.23 +	2.25 +
	(0.36)	*(0.38)*	*(0.68)*	*(1.27)*
First Cohabitation	0.61	0.49 **	0.06	0.16
	(0.43)	*(0.19)*	*(0.28)*	*(0.27)*
Background Characteristics				
Religion at Age 14 (Protestant)				
Catholic	0.40	-0.11	-0.10	0.03
	(0.32)	*(0.16)*	*(0.22)*	*(0.25)*
Other	-0.16	0.11	-0.19	-0.13
	(0.44)	*(0.25)*	*(0.31)*	*(0.33)*
None	0.20	-0.07	-0.67 +	0.74
	(0.41)	*(0.25)*	*(0.40)*	*(0.61)*
Unweighted Number of Cases (Person-Years	1,593	2,790	1,192	679

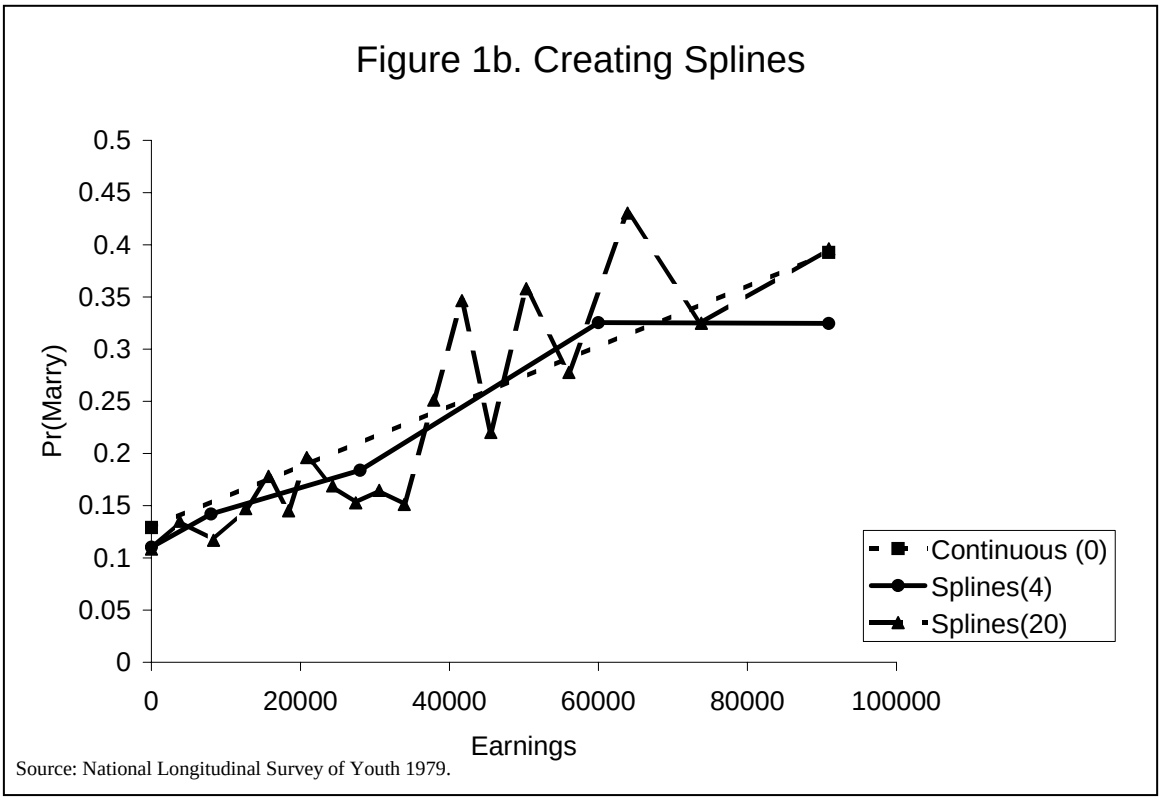
Source: National Longitudinal Survey of Youth 1979.
All results weighted using the NLSY79 Sampling Weight.
All dollar amounts are shown in year 2000 dollars. Dollar amounts are adjusted for inflation using the Consumer Price Index data, available at http://www.bls.gov/cpi.
*** p<.001; ** p<.01; * p<.05; + p<.10

[a] Income Spline Knots ($K)

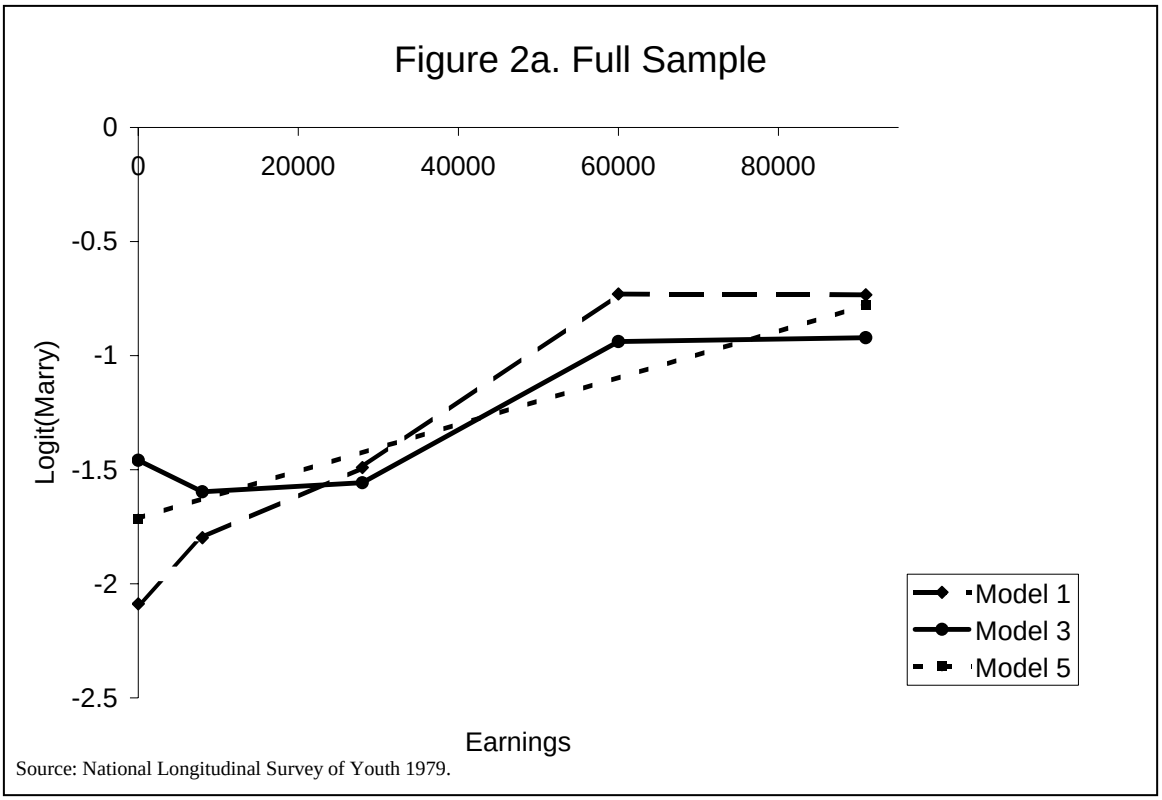
Spline 1	$0 to $15	$0 to $7	$0 to $25	$0 to $20
Spline 2	$15 to $26	$7 to $34	$25 to $40	$20 to $25
Spline 3	$26 to $48	$34 to $41	$40 to $62	$25 to $70
Spline 4	-	$41 to $71	$62 to $105	$70 to $100
Spline 5	-	-	-	$100 to $115



Source: National Longitudinal Survey of Youth 1979.



Source: National Longitudinal Survey of Youth 1979.



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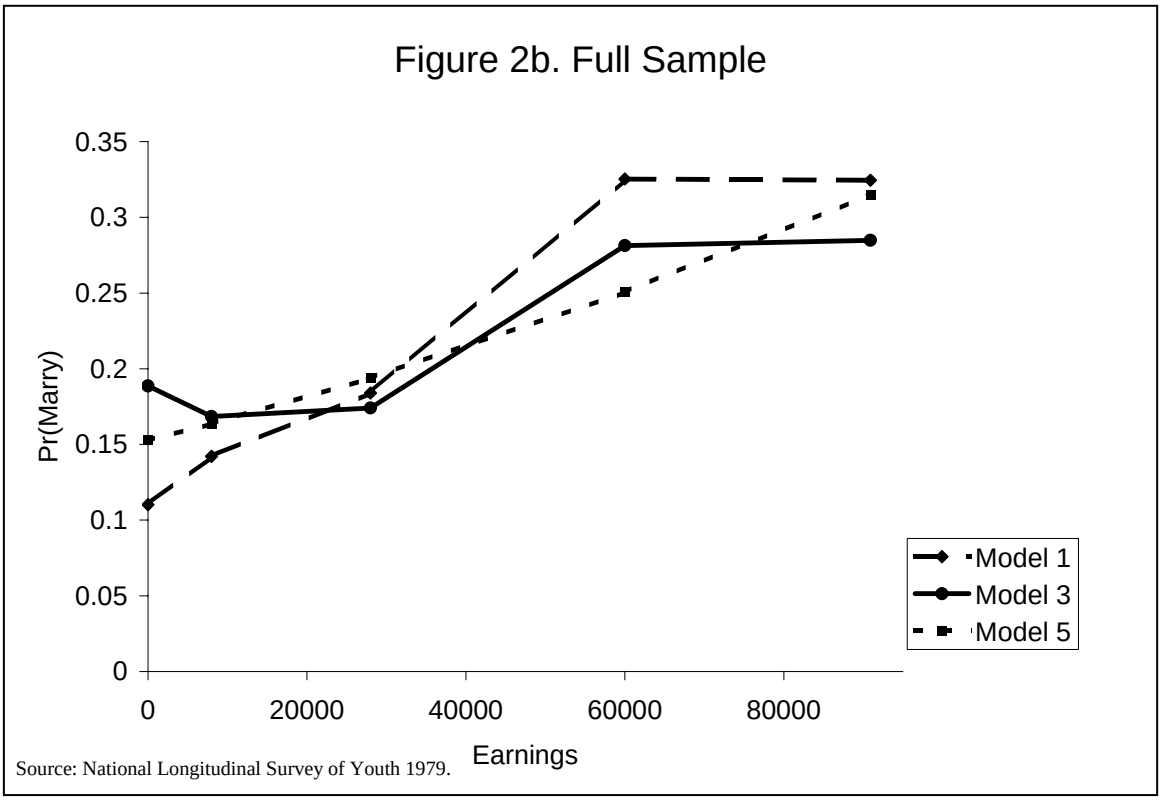
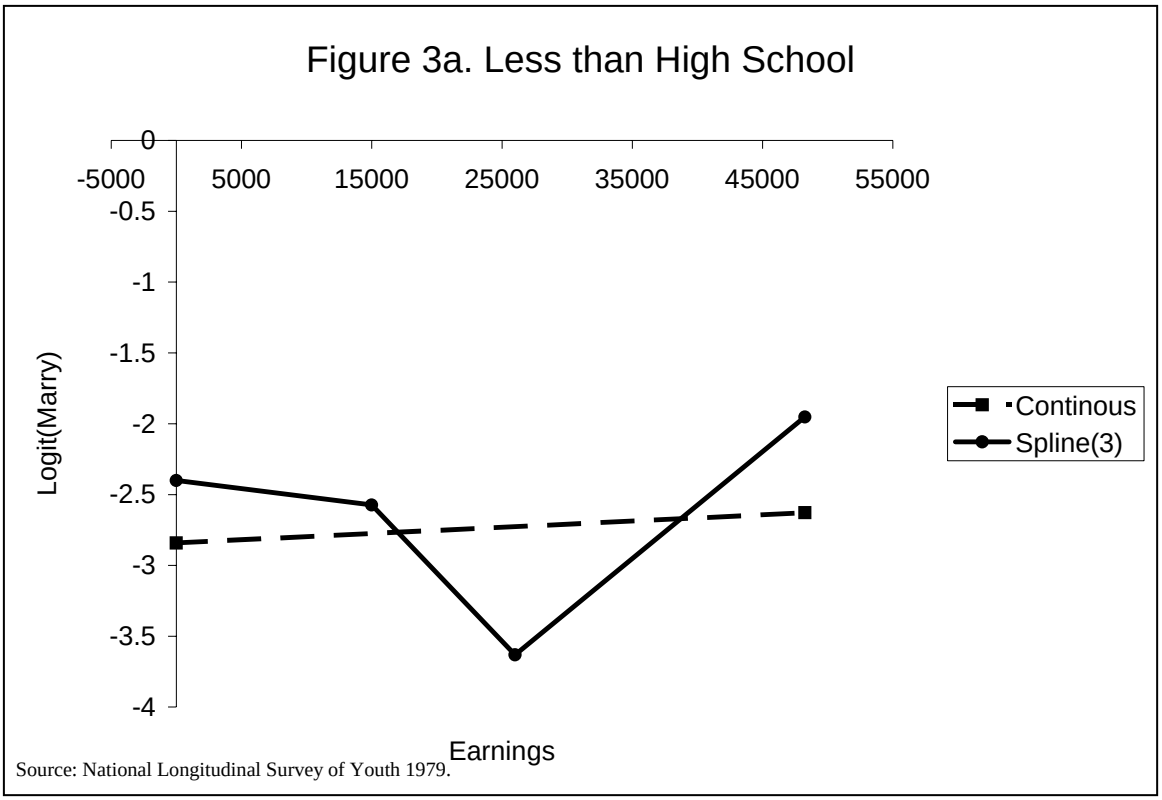
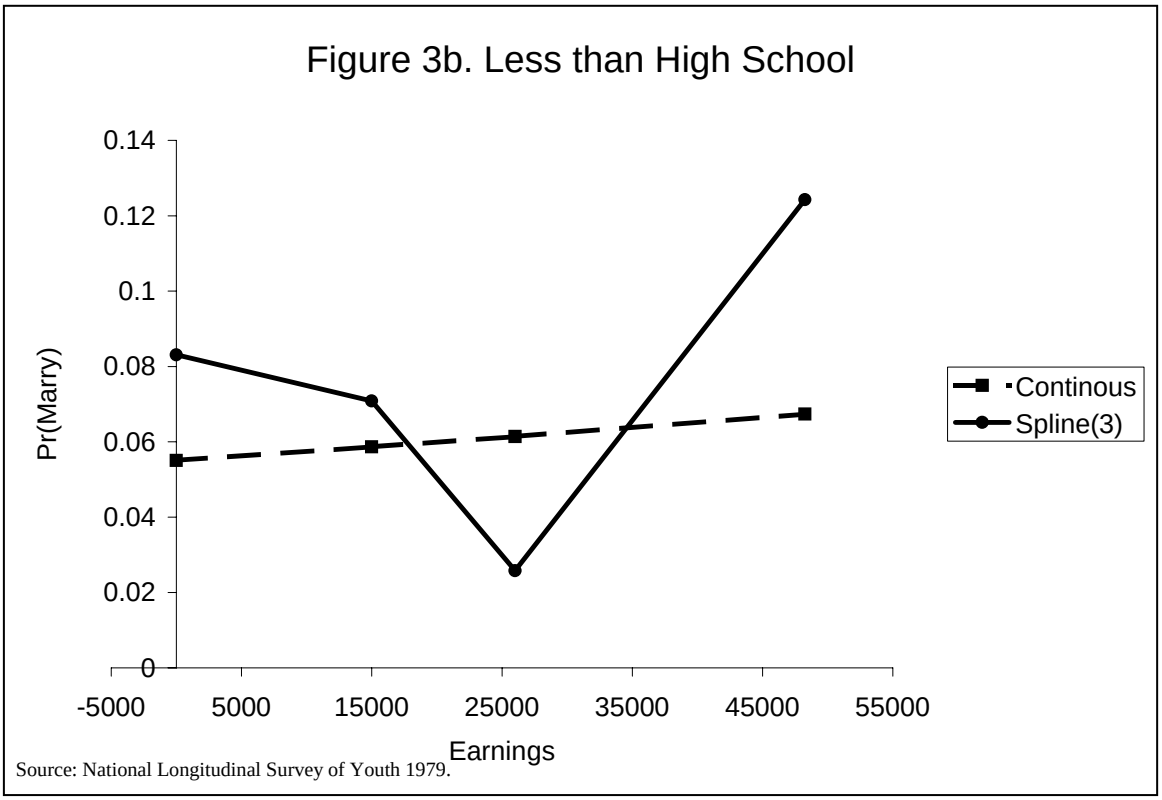


Source: National Longitudinal Survey of Youth 1979.

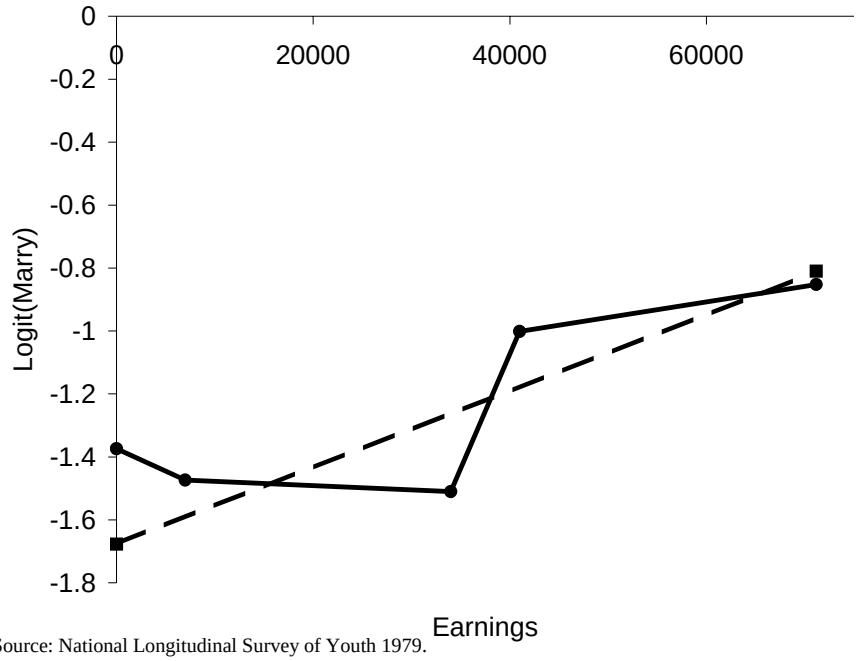


Source: National Longitudinal Survey of Youth 1979.



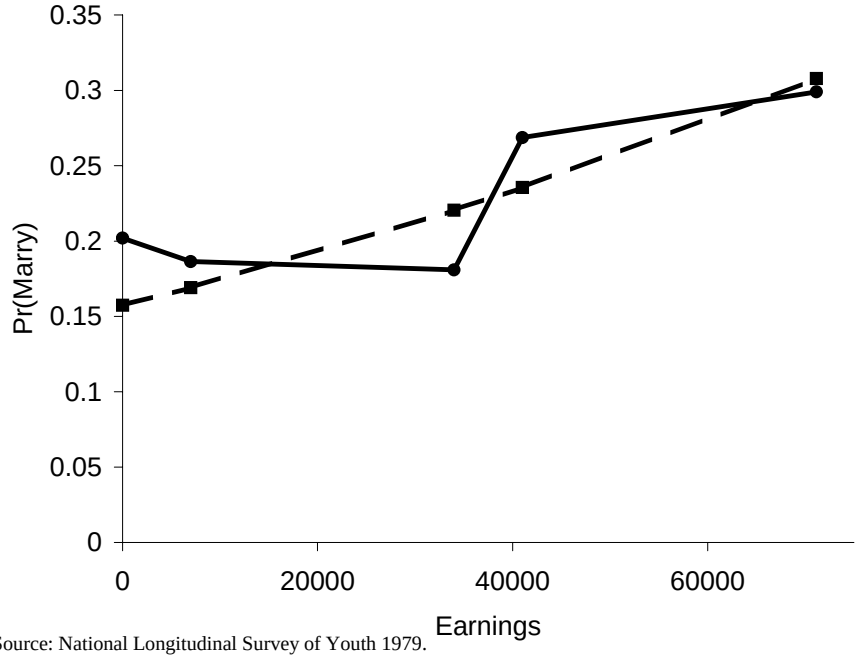
Source: National Longitudinal Survey of Youth 1979.

Figure 4a. High School



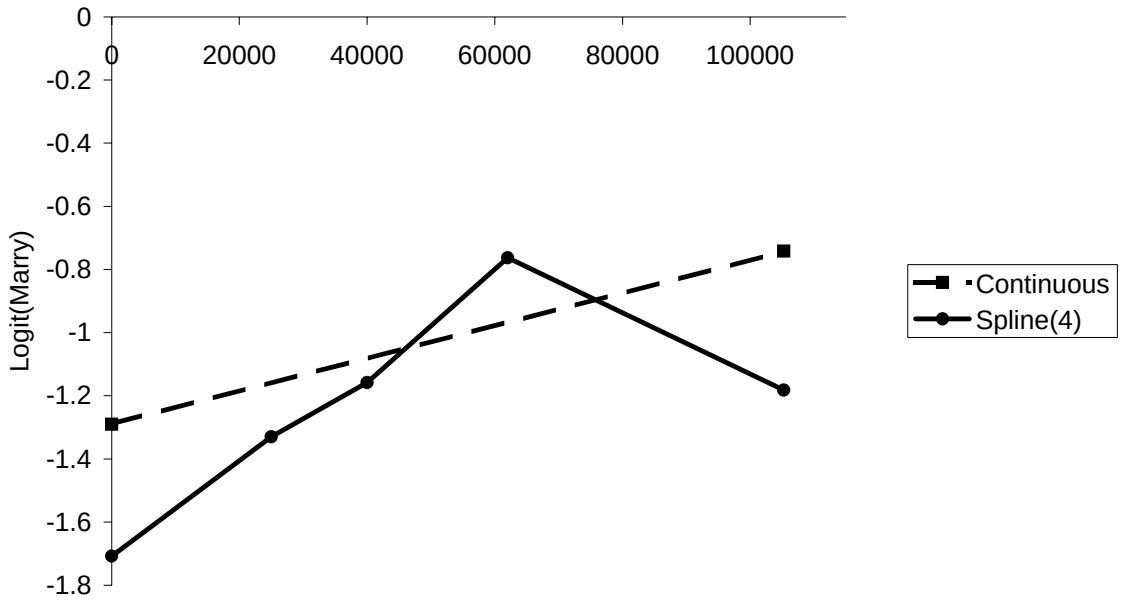
Source: National Longitudinal Survey of Youth 1979.

Figure 4b. High School



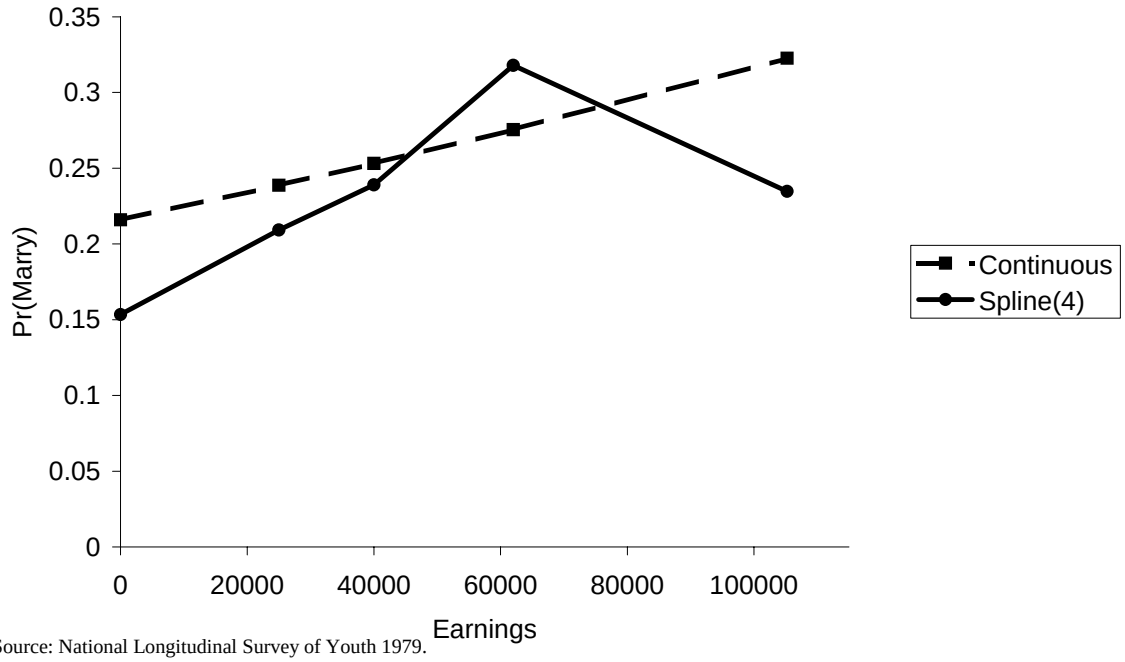
Source: National Longitudinal Survey of Youth 1979.

Figure 5a. Some College

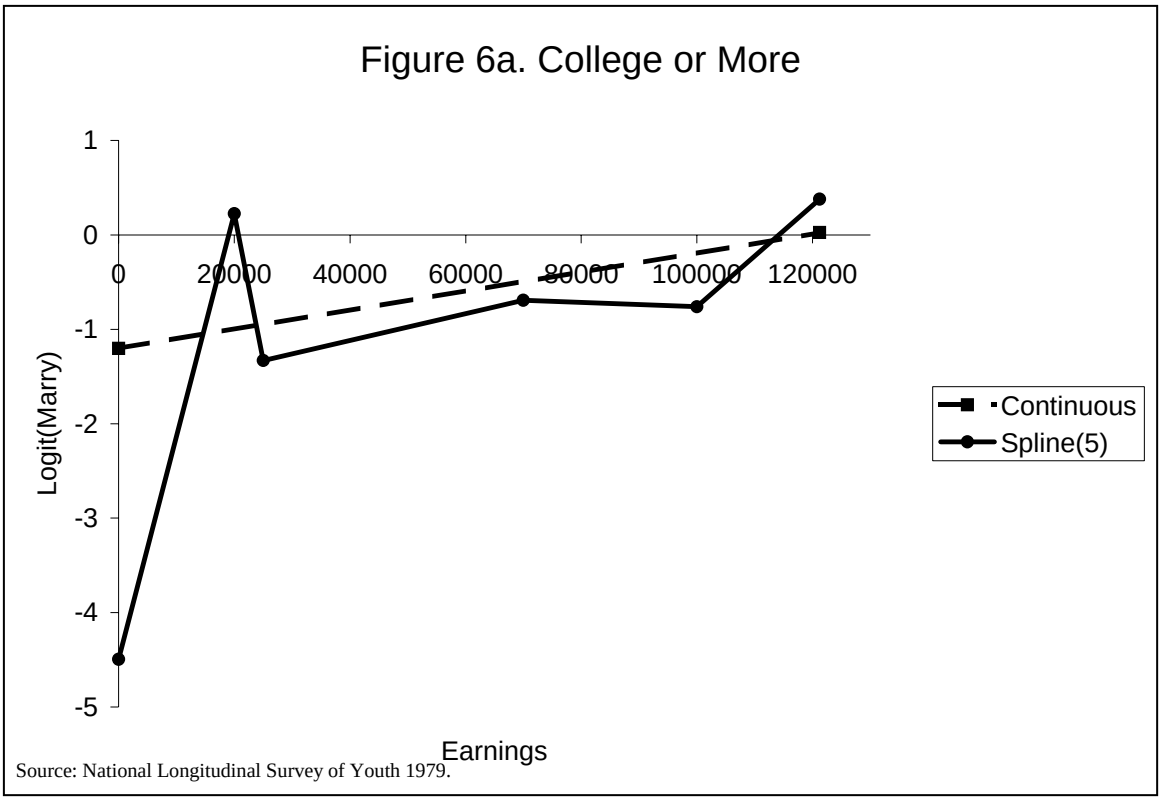


Source: National Longitudinal Survey of Youth 1979.

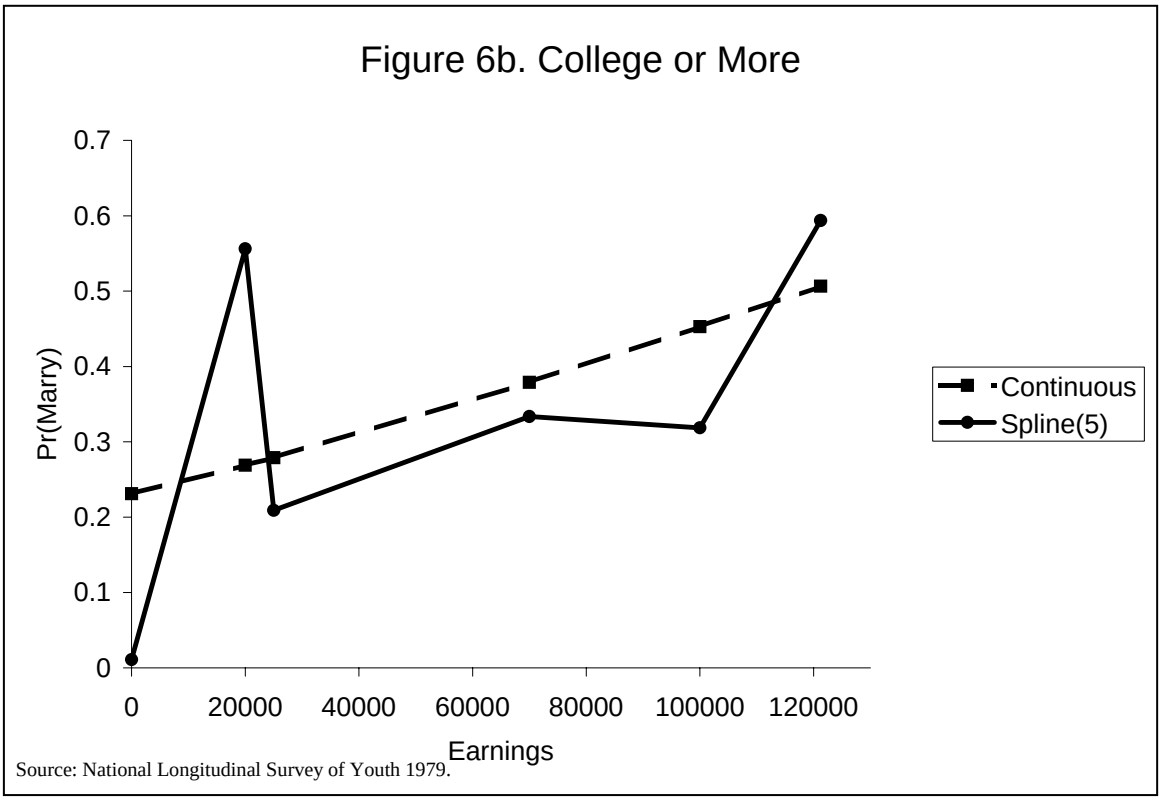
Figure 5b. Some College



Source: National Longitudinal Survey of Youth 1979.



Source: National Longitudinal Survey of Youth 1979.



Source: National Longitudinal Survey of Youth 1979.

Appendix A: Sample Creation

	Sample
Total Number of Individuals with Any Premarital Cohabitation Spells	2,949
Total number of Person-Years available for analysis	8,092
Same-Sex Cohabitations	-12
Respondent Under Age 18	-37
Missing Respondent Earnings Info	-164
Missing Partner Earnings Info	-1,625
Total Analysis Sample	6,254

Source: National Longitudinal Survey of Youth 1979.

Appendix B: Spline Values, Full Sample and Education Strata ($K)

	Full Sample	Less than High School	High School	Some College	College
N	6,254	1,593	2,790	1,192	679
Spline 1	$0 to $8	$0 to $15	$0 to $7	$0 to $25	$0 to $20
Spline 2	$8 to $28	$15 to $26	$7 to $34	$25 to $40	$20 to $25
Spline 3	$28 to $60	$26 to $48	$34 to $41	$40 to $62	$25 to $70
Spline 4	$60 to $84.8	-	$41 to $71	$62 to $105	$70 to $100
Spline 5	-	-	-	-	$100 to $115

Source: National Longitudinal Survey of Youth 1979.
All dollar amounts are shown in year 2000 dollars. Dollar amounts are adjusted for inflation using the Consumer Price Index data, available at http://www.bls.gov/cpi.

Appendix C: Goodness of Fit Statistics, Asset Sample

Model	Observations	Log Likelihood (null)	Log Likelihood (model)	Degrees of Freedom	AIC	BIC
Full Sample						
Continuous	6,254	-3290.855	-2963.977	36	5999.954	6242.629
Spline	6,254	-3290.855	-2960.026	39	5998.052	6260.95
Less than High School						
Continuous	1,593	-562.3667	-503.7811	32	1071.562	1243.51
Spline	1,593	-562.3667	-491.1125	34	1050.225	1232.92
High School						
Continuous	2,790	-1412.953	-1266.528	32	2597.055	2786.937
Spline	2,790	-1412.953	-1263.038	35	2596.076	2803.759
Some College						
Continuous	1,192	-689.3527	-636.0021	32	1336.004	1498.673
Spline	1,192	-689.3527	-633.0216	35	1336.043	1513.962
College or More						
Continuous	679	-430.4285	-377.6386	32	819.2772	963.937
Spline	679	-430.4285	-369.8516	36	811.7032	974.4456

Source: National Longitudinal Survey of Youth 1979.
Favored model highlighted in gray.
Likelihood Ratio Test: $p<0.05$