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How Do Marital Status, Work Effort, And Wage Rates Interact?

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Abstract

How marital status interacts with men's earnings is an important analytic and policy issue, especially in the context of US debates over programs to encourage healthy marriage. This paper generates new findings about the earnings-marriage relationship by estimating the linkages between flows into and out of marriage, work effort, and wage rates. The estimates are based on NLSY panel data, covering 23 years of marital and labor market outcomes, and control for unobserved heterogeneity. Taking advantage of the sample structure, we estimate marriage effects on hours worked (our proxy for work effort) and on wage rates for all men and for black and low skill men separately. We find that entering marriage raises hours worked quickly and substantially but that marriage's effect on wage rates takes place more slowly as men continue in marriage. Together, the stimulus to hours worked and wage rates generates an 18-19 percent increase in earnings, with about one-third to one-half of the marriage earnings premium due to higher work effort. At the same time, higher wage rates and hours worked encourage men to marry and to stay married. Thus, being married and high earnings reinforce each other over time.

1.0 Introduction

The decline in marriage and associated two-parent families in the United States continues to complicate efforts to reduce child poverty.[1] The percent of children growing up with both biological parents has declined substantially and is now among the lowest in the industrial world (Ellwood and Jencks 2004). The growth in single parenthood and step-parenthood has weakened the opportunities and outcomes of children, especially children born to less-educated parents (McLanahan 2004). The serious consequences for families and children from this aspect of "the second demographic transition" have prompted government policymakers to propose a range of approaches aimed at reducing unwed births, single-parenthood, and divorces and at strengthening marriages (Nock 2005).

A common explanation for high and rising rates of single parenthood in the US is the low and declining employment and earnings of less educated and minority men (Wilson 1987; New York Times 2004). Though the empirical evidence supporting this explanation is mixed (Wood 1995), the issue is far from settled (Neal 2004). Meanwhile, as some researchers try to explain the falling marriage rates by focusing on the low earnings of available men, studies of the marital wage premium for men indicate that causation may run from marriage to earnings. From this perspective, the problems of unmarried men may stem from the absence of marriage and its stabilizing influence on men's lives, its positive effect on men's motivation, and its ability to signal reliability to employers. Given the evidence indicating that marriage yields such benefits as better health, lower crime, and reduced domestic violence (Wilson and Oswald, 2005; Waite and Gallagher 2000; Lerman 2002; and Ribar 2003), positive effects of marriage on men's labor market outcomes are not surprising.

[1] The negative association with poverty and inequality is well documented. Single-parent families housed 60 percent of poor persons in families with children, but only 25 percent of all persons in families with children. Families headed by unmarried women accounted for over 70 percent of chronically poor individuals living in families with children. Recent estimates suggest that were marriage rates at levels of the early 1970s, the 1998 US child poverty rate would have been 3.5 percentage points lower (Thomas and Sawhill 2002), as would income inequality among children (Lerman 1996).

This paper looks at the impacts of marriage and labor market outcomes flowing in both directions. We recognize that determining whether and to what extent marriage is a cause or simply an effect of higher men's earnings is a complex problem. Marriage might alter how much men and women work. Changes in work effort, in turn, influence each partner's accumulation of human capital and wage rates. For those who increase their human capital, higher wages over time makes work more attractive, though the income effect lessens the urgency of long hours. Added work experience and higher wages can increase the likelihood of entering marriage or remarriage and reduce the likelihood of divorce. Marriage may also raise or lower wage rates, by influencing a worker's time horizon, investment, motivation, and acceptance of unpleasant but well-paying jobs. These marriage-induced effects on wages may indirectly lead to an increased work commitment by men.

The literature on these relationships is extensive. Research confirms an earnings advantage for married men dating back at least to the 19th century (Goldin 1990). Using cross country data from the 1980s, Schoeni (1995) finds a wage advantage of married over single men in all 14 countries studied. The marriage earnings premium estimated from 1940-1980 decennial Census data has been consistently significant at percentages ranging from +11 percent in 1959 to +23 percent in 1969 (Loh 1996).[2] Most studies of the positive labor market effects of marriage focus on the marriage wage premium.[3] A key complication addressed in several studies is the possibility that married men are a select group that would earn high wage rates whether or not they married and avoided divorce. Very few studies have examined how marriage affects hours worked. One exception is Parsons

[2] These marriage impacts on earnings control for education, years of potential experience, potential experience squared, race, immigrant status, veteran status, region, occupation, and industry.

[3] Though in principle the earnings gains from marriage could come from added hours or higher wages, most of the literature examines how marriage affects the wage rates of men (Korenman and Newmark 1991; Daniel 1995; Cornwell and Rupert 1997; Gray 1997; Loh 1996; Chun and Lee 2001; Ginther and Zavodny 2001; and Stratton 2002) and not their labor supply.

(1977), who found that marriage appears to increase hours worked even among men with poor health.

Several recent studies have analyzed the impact of men's wage rates and earnings on marital status (Oppenheimer 2003; Burgess, Propper and Aassve, 2003). Inspired by the Wilson hypothesis that the decline in marriage among blacks was linked to the reduction in the numbers of marriageable men, researchers have sought to estimate the potential role of employment and earnings in determining marriage rates (e.g., Wood 1995).

This paper moves beyond earlier studies in order to estimate the links between marital flows, work effort, and wage rates. By marital flows, we mean entry into marriage, into divorce, and into remarriage. The paper's innovations include: 1) estimating the effects of marital flows on hours worked, thereby providing distinctive findings showing how the marriage earnings premium is divided into hours worked and wage rate components; 2) taking account of feedback effects, including how marriage-induced increases in hours raise subsequent wage rates; 3) including in the analyses a complete history of all the marital transitions, hours worked, and wage experiences of men from age 17 through their early 40s, a much longer period than other studies use; 4) examining separately the effects of marital flows on the job market outcomes of blacks and of those with low test scores, two groups with low expected returns to marriage; and 5) incorporating linkages between the unobserved individual characteristics affecting hours worked and wage rates into the estimates of the determinants of marital flows.

The findings reveal substantial and statistically significant effects of marital status on work effort and wage rates, even after taking account of unobserved heterogeneity. The marriage-induced gains in hours worked are highest upon entering marriage, while marriage-induced increases in wage rates emerge as men remain married. Together, the hours and wage increases contribute to a 18 percent gain for a continuing marriage relative to staying single and a 19 percent gain relative to

staying divorced. At the same time, higher wages and hours worked increase the odds of entering marriage and remarriage and reduce the odds of divorce.

The paper continues as follows. The next section examines selected studies of marriage and men's wages that incorporate controls for selection. Section 3 describes the data and presents our methodology and estimation strategy. In section 4, we examine basic statistics on men's marital flows, wages, and hours worked. Section 5 analyzes the multivariate results on wage rates, hours worked, and the dynamics of marital status. In section 6, we highlight the key findings and their implications.

2.0 Selected Studies of Marriage and Labor Market Outcomes of Men

Of the large body of research studies on the relationship between marriage and men's earnings, this section reviews only selected studies, nearly all of which control for the selection problem. All focus on causal impacts in one direction, either from marital status to wage rates or from labor market outcomes to marital status.

Authors estimating the effect of marriage on wages have tried to capture unobserved heterogeneity with panel data and specifications involving individual-specific fixed effects and/or random effects. In one application examining the log of wage rates of young white men from 1976 to 1980, Korenman and Newmark (1991) estimate an 11 percent marriage premium among white men without fixed effects and about 6 percent with fixed effects. Divorce reduced wage rates relative to marriage, but only by about 2 percent. The authors note that these are average effects of men who are young and thus in relatively short marriages (or short divorces). Allowing the marriage premiums to rise with the duration of marriage, Korenman and Newmark find wages rise with marital tenure at about 2 percent per year in the first two years and 1 percent thereafter. Their

results yield a marriage premium reaching about 15 percent for those with the average years of marriage; this selection-adjusted premium is about 90 percent of the unadjusted premium.[4]

Expanding the data for one additional year, to follow a cohort of 19-29 year-old white men in 1970 to 29 to 39 in 1980, Cornwell and Rupert (1997) find marriage premiums of 8.3 percent when estimated from random effects and 5.6 percent when estimated from fixed effects. Using the same models as Korenman and Newmark, Gray (1997) compares the NLS cohort of 24-31 year-olds in 1976 with the NLSY79 cohort of 24-31 year-olds in 1989. He follows white males over three specific years in each cohort, pooling observations from the two cohorts. Gray's results suggest that marriage gains fell sharply over time. In the NLSY79 cohort, the coefficient on the marriage dummy is only 1.4 percent and is not statistically significant.

A recent study (Antonovics and Town 2004) sought to estimate a causal effect of marriage on wage rates by using data on 136 pairs of monozygotic twins from Minnesota to deal with the problem of unobserved heterogeneity. Assuming that both members of a twin pair have the same unobserved individual specific earnings endowment and family-specific earnings endowment, the authors find a 26 percent marriage wage premium within twin pairs, a level somewhat higher than the estimate derived from cross section regressions that take no account of the men's status as twins. This evidence persuasively shows the absence of a selection effect, but the results may not generalize to a broader population.

Some studies have examined the reasons for a marital wage premium. Reed and Harford (1989) find evidence that some of the marriage wage premium is the result of compensating differentials—the fact that married men are more willing than unmarried men to take jobs that are

[4] Further evidence for a marital wage premium comes from their analysis of records from an individual employer. Even within a narrow range of occupations, marriage increases wage rates, largely by raising the likelihood of promotion. Daniel's 1995 analysis of a more recent cohort of young men found similar overall effects, with slightly higher shares associated with selection.

more difficult, more dangerous or more unpleasant in return for a higher wage. Kenny (1983) argues that the marriage premium is partly a return on the higher human capital investment that married men make by working longer hours and gaining more work experience. Hersch and Stratton (2000) examine and reject the hypothesis that household specialization accounts for a good deal of the male wage premium. Using a fixed effect estimation approach with data from the National Survey of Families and Households, they find that including a measure of the hours of housework undertaken by men does nothing to reduce the marital wage premium. Gray (1997) finds that returns to specialization (having wives work fewer hours) are present and increased from the late 1970s to the early 1990s.

Chun and Lee (2001) account for selection by applying a switching model to cross-sectional data. The marriage equation is identified based on an index of the marriage market, predicted hours of a wife's work, and the mother's country of birth—factors that should influence marriage but not directly affect wages. The authors use a sample of all 18-40 year-old working males drawn from the March 1999 CPS. The estimated marriage premiums are about 12 percent, both from an OLS equation on log wage rates and from the switching equation. These results cast doubt on the importance of the selection effect on the marriage premium. Chun and Lee find that the effects on wage rates are much higher in marriages in which wives did not work (about 27 percent) than in cases in which they did work (a 15 percent effect at 20 hours of work by wives). This result is consistent with the theory that husband-wife specialization is a big reason for the marriage impact on wages. However, such an interpretation may not be valid, given the results from Hersch and Stratton (2000) that men's marriage premium is unaffected by the hours they work at home. The determinants of marriage were expected in some ways but not in others. Tight marriage markets reduced marriage probabilities while higher predicted hours of wives raised them. Surprisingly, higher levels of education lowered the likelihood of marriage.

Overall, the estimates of the marriage premium on wage rates for men vary across studies, perhaps because of the differences in samples and specifications. Although the estimates range from a high of 27 percent for 18-40 year-old men with nonworking wives and 26 percent among twins from Minnesota to a low of 1.4 percent among white men ages 24-31 in 1989, several are in the range of 6-15 percent. None of the studies take account of the direct and indirect effects on hours worked and thus they are likely to understate the full impact of marital status on earnings (and thus the capacity to support a family). The three studies based on panel data use only a few years of information. All but one study includes only white young men.

Turning to the impacts of male earnings on marital status, we see a variety of studies. Some create empirical tests of the Wilson hypothesis (Wilson 1987), which explains the decline in marriage rates among black men as largely the result of their ability to obtain good, steady jobs. While researchers show evidence that better job options for men lead to higher marriage rates[5], worsening job opportunities over the 1970s and 1980s accounted for only a modest reduction in the decline in marriage (Wood 1995).

Studies often use duration analysis to determine how employment, unemployment, wage rates, or earnings affect flows into a marital or cohabitation status. For example, Oppenheimer (2003) uses event-history, multinomial logit equations to determine how time since leaving school, current earnings, and recent work experience influenced the risk of entering cohabitation or marriage (if single) and the risk of entering marriage or separating (if cohabiting). High earnings increased entry into marriage but not cohabitation, and less than full-time work reduced the likelihood of entering a marriage, but not a cohabiting union. Although the findings are interesting, the study did not control for possible selection bias.

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[5] See Manning and Smock (1995), Call and Teachman (1996), Presser (2000), Smock and Manning (1997), Teachman, Call, and Carver (1994), Becker, Landes, and Michael (1997), and Weiss and Willis (1997).

Burgess, Propper and Aassve (2003) examine entry into marriage (among those single) or divorce (among those married) as a function of current and long-term earnings (or wage rates) and other income potentially available in each marital status, including the average earnings of a potential spouse. Using a sample of white men and women in the NLSY79, they take account of selection by substituting each individual's fixed wage rate or earnings effect in the long run, holding constant for work experience, urban location, local unemployment rate and number of children. This technique limits but does not fully avoid the simultaneity problem, since the estimated fixed effects do not control for contemporaneous or long-term marital status. For men, the results show higher earnings (or wage rates) increase entry into marriage and slow or reduce marital dissolutions while the average wage of a potential mate has virtually no effect. Long-run measures of earnings and wage rates exert a higher impact than do current earnings or wage rates.

Charles and Stephens (2004) uncover evidence that a spouse's displacement from a job increases the transition rate into divorce. Other studies have shown a link between high male earnings inequality and low marriage rates (Gould and Paserman 2003; Loughran 2002). The argument they propose for this relationship is that, the higher is male wage dispersion, the greater are the gains from extending search in the marriage market.

Overall, past research has uncovered statistically significant relationships between marriage and job market outcomes, but the estimates vary widely. Since nearly all studies examine only one direction of the marriage-earnings relationship, it is difficult to see the relative magnitude of each impact because the evidence comes from different time periods, data sets, samples, and methodologies. Finally, the relative magnitudes of each makes it difficult to assess the relative magnitude the relationship draw on different data sets for one causal pattern. No Study that we are aware of has brought together estimates running in both directions using a panel data set providing lengthy marriage and job market histories. As noted above, there is little evidence on the magnitude

of marriage effects on hours worked or how such effects might influence accumulated work experience and indirectly affect wage rates. This study deals with these limitations of the literature as well as adding separate analyses for black men and men with low test scores. By including both analyses of marital flows on wage rates and hours worked and of wages and hours on marriage, we can examine whether unobserved heterogeneity effect in one relationship is similar to the unobserved heterogeneity effect in other relationships.

3.0 The Data and Methods

3.1 The Data

The National Longitudinal Survey of Youth (NLSY79) is an attractive data source for this study because it provides detailed information on respondents' family background, schooling and abilities, marital status, parenthood, work histories and the exact timing of marriages and divorces and other changes in household status. The NLSY79 is a national probability sample of 12,686 individuals (6,403 male) ages 14 to 21 as of January 1, 1979 who were re-interviewed annually until 1994 and semi-annually through 2004.[6]

In deriving our primary analysis sample of male respondents, we wanted to include full work and marriage histories. Given evidence of low returns to work-while-in-school (Hotz *et al.* 2002) and the fact that less than one percent of 17 year-olds are married, we chose to follow job and marital histories from age 17. As a result, youth become part of our sample only after reaching 17 in 1979, 1980, 1981, 1982, or 1983. Because information about jobs held prior to 1978 is not always complete, we restricted the multivariate analyses to individuals who were ages 14-19 in 1979, thereby excluding 1,772 cases. Next, because the NLSY itself dropped some groups from follow-up

[6] The survey consists of a cross section sample of 6,111 youth representing the non-institutionalized population born between January 1, 1957 and December 31, 1964, a supplemental sample of 5,295 non-institutionalized black, Hispanic, and low-income white youth, and an armed forces sample of 1,280 youth. The military sample was discontinued in 1986 and the economically disadvantaged non-black, non-Hispanic supplementary sample was dropped in 1991. Of the remaining sample of 9,964, nearly 80 percent (7,724) completed interviews in 2002. At this point, sample members were ages 37-44.

interviews, we excluded the low-income white oversample (521 cases) and the military oversample (237 cases). The absence of data on wage rates and hours worked during military service forced us to exclude an additional 509 males who served time in the military. Finally, we chose to include only those completing at least 10 interviews, a decision that reduced the sample by 366 cases. The result is a sample of 2,863 male respondents and 61,234 male person-years. For Table 2, in order to follow the same individuals as they aged to age 40, we used a subsample made up of those in the primary sample who were ages 17-19 in 1979.

To incorporate the role of neighborhood on life-cycle paths, we added data on county employment growth, income levels, unemployment rates, marriage, and divorce rates. The economic data come from the Bureau of Economic Analysis, Regional Economic Information System. The divorce rates were compiled from the City-County Data book. These variables were merged to the main data, using county codes.

Because our approach emphasizes annual flows, we require annual data on work, wages, and marital status. To obtain these data after 1994, when the NLSY79 began to conduct interviews every two years, we undertook the task of compiling this information from variables capturing dates of various activities. Deriving the estimates of wage rates and annual hours worked involved accessing the NLSY79 work history files. Wage data were available on all jobs between surveys. For those who did not report any work in a particular year, we imputed a wage based on prior year's wage rate. We used information on the dates of marriage and divorce to derive annual marital status flows.[7]

Our analyses include five dependent variables: wage rates, annual hours of work, and three marital status transitions. Although the data allow us to employ several definitions of family formation, we chose to rely on the formal definition for singles and marriages and a definition of

[7] A full description of this procedure appears in Appendix A.

divorce that includes separation. Among the reasons are that most cohabitation without children leads to separation and most marital separations lead to formal divorces.

In examining the dynamics of marital status, we use an exclusive, exhaustive classification system that defines each individual in each year (i.e., each person-year) as:

1) Remaining single, never married (31,724 person-years),

2) Entering marriage for the first time during this calendar year (2,118 person-years),

3) Remaining married in the current year after having been married in the prior year, including being in a second marriage (20,812 person-years),

4) Becoming divorced or separated during this year (1,103 person-years),

5) Remaining divorced or separated in the current year after having been divorced or separated in the prior year (4,886 person-years), or

6) Remarrying during this calendar year (591 person-years).

This classification defines the five dummy variables (with remaining single as the zero category) used as right hand side endogenous explanatory variables in equations predicting labor market outcomes. For equations with marital status transitions as dependent variables, we simplify the categories and focus on the transition rates from being single to first marriage, from marriage to divorce/separation, and from divorce/separation to remarriage.

The definition of the individual's wage rate is the natural log of the hourly rate of pay in the main job during the last year. The data come from actual, not derived wage rates. Work effort is defined as hours employed in the prior year. To avoid measurement error, we top-coded the annual hours of work at 3,120 per year (60 hours per week for 52 weeks) or hours above the 93rd percentile.

Descriptive statistics on our sample appear in Appendix Table B-1. Minorities are over-represented in this sample, with black men contributing about 28 percent of the person-years and Hispanic men contributing another 20 percent. About 7 percent of the person-years involve foreign-

born young men. Sample members often came from families with less-educated mothers (the mean education level of mothers is less than 11 years of schooling) and with mother-headed families (18 percent of person-years). In using this stratified sample, we use weights to make the figures in Tables 1 and 2 nationally representative. For the multivariate analysis, we report estimates based on unweighted data. However, estimates of these relationships with weighted data yielded similar results to those based on unweighted data.

Looking at the means for variables that change over time, we see few person-years of school attendance (17 percent). The mean age of the person-years is about 28. In the average person-year, sample members had accumulated 3.4 years in marriage, almost 9 years of accumulated work experience, three years of experience on his current job, and 12.5 years of schooling. The annual average number of hours worked per week is almost 35, or nearly full-time for 50 weeks.

3.2. Empirical Framework

The 23 years of NLSY panel data offer a rich set of explanatory variables that are useful in isolating the impacts of marriage on wage rates and hours worked and the labor market impacts on marital status. Still, taking account of many observed differences is not enough to generate unbiased estimates because of the possibility of unobserved heterogeneity across individuals. For example, some unobserved attributes, such as good looks, might help men both earn high wages and raise the probability of entering marriage at a young age. Researchers commonly control for unobserved heterogeneity using well-established fixed and random effects methods. This section describes how these methods are implemented in five sets of equations—one for determining hours worked, one for determining wage rates, and three that determine separate flows into marriage, into divorce, and into remarriage.

The first equation connects marriage to work effort, as measured by hours worked. Surprisingly, as noted above, very few studies deal with the role of marriage flows in determining

hours worked. Because hours worked may be more subject to a man's control than are wage rates, changes in attitudes and responsibilities induced by marrying or remarrying might well manifest themselves as effects on hours worked more than as effects on wage rates. Marriage might well alter men's motivations, by causing them to stay at their existing job, to become more ambitious and productive on the job, and to have fewer absences. Moreover, marriage-induced increases in hours worked might raise future wages as a result of such additions to work experience.

The hours worked equation is expressed as,

$$H_{it} = XH_{it}\,\alpha^{x} + ZH_{it-1}\,\alpha^{z} + MS_{it}\,\alpha^{MS} + W_{it-1}\,\alpha^{W} + A_{i}^{H} + \varepsilon_{it}\,, \qquad (1)$$

where i represents individual, and t represents years.

In this formulation, annual hours worked, H_{it} is a linear function of:

(1) Indicators of race and ethnicity, birth cohort, family background variables, AFQT, and local market conditions (XH). The H part of XH designates those covariates used in the hour's equation relatively to the wage equation (XW).

(2) A vector of variables that measure, at the beginning of each period, the accumulated amounts of schooling, children, and work experience, and tenure in his present job (ZH).

(3) The marital status flows (MS), as specified on page 11.

(4) The natural log of the individual's lagged wage rate (W_{t-1}).

(5) A set of unobserved individual characteristics (A^{H}).

(6) An unobserved time-varying residual, ε.

The unobserved individual characteristics, A^{H}, may represent each person's motivation, reliability, sense of efficacy, or other unobserved factors that affect the amount of hours worked. Our expectation is that ignoring these factors leads to an upward bias in estimates of marriage impacts on hours because they are correlated with the probability of entering marriage, divorce, and remarriage. This is because the unobserved characteristics that increase the likelihood of marriage

are likely to have positive effects on hours worked and wage rates. However, a negative selection effect is certainly conceivable as well, since those men who feel less secure about their labor market capabilities may want to share the risks of low earnings with a wife.[8]

A basic OLS regression can capture the effects of marital flows on hours worked, net of our extensive set of observed characteristics. However, the OLS method will yield biased results if no account is taken of unobserved characteristics, A^H, that are correlated with MS. The fixed effect strategy deals with this problem by controlling for the time-invariant, individual-specific, unobserved influences on hours worked. With A^H fixed effects in the regression, the remaining residual, ε, is uncorrelated with the independent variables, thereby averting bias that might be associated with unobserved characteristics across individuals.

The fixed effect approach controls for unobserved heterogeneity, but it prevents us from estimating the effects of other time-invariant characteristics of interest, such as race or AFQT scores. Treating A^H in (1) as random effect controls for unobserved characteristics is a way to avoid this problem. For comparative purposes, we present estimates derived from both fixed and random effects.

We use a similar approach in estimating how marriage flows affect the natural log of the wage rate (W), as in the following equation:

$$W_{it} = XW_{it}\beta^{x} + ZW_{it-1}\beta^{z} + MS_{it}\beta^{MS} + EH_{it-1}\beta^{H} + A_i^{W} + \nu_{it}, \qquad (2)$$

where XW and ZW are sets of independent variables in the wage equation, EH represents accumulated hours of work experience and its square, A^W, represents the unobserved characteristics affecting wage rates, and ν is a residual uncorrelated with the independent variables.

After estimating (1) and (2), we obtain the unobserved individual components, A^H and A^W,

[8] Wilson and Oswald (2005) develop this point theoretically and cite empirical findings of negative marriage selection effects.

from both the fixed and random effects specifications. Examining the correlation between A^H and A^W allows us to determine if a single dimension of unobserved heterogeneity is affecting both hours worked and wage rates. If the correlation is high, it becomes appropriate to estimate the equations jointly, using a procedure that takes account of the cross equation correlations in the error terms.

To analyze the likelihood of never-married men entering a first marriage, we use a latent variable MS1, that denotes an index of the propensity of individual i at time t to enter into marriage. If the latent variable MS1>0, then the person enters marriage. The latent index is

$$MS1_{it} = X1_{it}\delta^{x1} + Z1_{it-1}\delta^{z1} + W1_{it-1}\delta^{W1} + EH_{it-1}\delta^{H1} + A1_i + \mu 1_{it}, \qquad (3)$$

where the error term, $\mu 1_{it}$ is assumed to be normally distributed with mean zero. We define two other latent variables *MS2*, and *MS3,* to denote entry into divorce, and entry into remarriage and use a similar estimation strategy.

We estimate three types of probit equations to examine the labor market and other determinants of each of the marriage flow variables. One is a standard probit equation (with many control variables that we do not present in the table). A second is a probit equation with random effects (controlling for unobservables). The third type is a random effects probit equation that includes the fixed effects estimates of A^H and A^W as independent variables.[9] This last equation takes account of the possibility that the unobservable characteristics that affect work effort and wage rates have an additional influence on marital status beyond the individual components generated from the random effects probit. In a sense, the equation captures three dimensions of unobserved

[9] We do not employ fixed effects in the probit context because there is no sufficient statistic that allows conditional fixed effects and unconditional fixed effects are biased.

heterogeneity.[10]

4.0 Age Patterns of Marital Transitions and Labor Market Outcomes

A useful step in understanding the distinctive marital transition variables used in this study is to look at the age evolution of the six marital flows described above. Panel A in Table 1 presents the distribution of all males across the six marital states. Panel B presents the rates of entry into first marriage (among men single in the prior year), divorce (among men in a married or remarried state in the prior year), and remarriage (among men in a divorced state in the prior year). Although only about 10 percent or fewer young men in this cohort experienced changes in status within a given year, the cumulative shifts in status are large over men's 20s and early 30s. The share of never-married men dropped from nearly 97 percent at age 18 to 34 percent by age 30. While the proportion that married peaked at age 23, entries into marriage continued at a modest pace through the mid-30s and one in five men were still never-married as of age 38.

(Table 1 about here)

The proportions subject to various marriage transitions change substantially with age. The share of men in the first two columns is the proportion "at risk" of entering a first marriage and in the entering marriage equation. The proportion "at risk" of divorce is equal to the sum of the third and fourth columns, while the proportion "at risk" of remarriage equals the fourth and fifth columns. The share in the entering marriage equation was nearly 100 percent at age 18, but only 27 percent at age 34. Over the same ages, the divorce equation moved from covering virtually no 18 year-olds to over 58 percent of the cohort's 34 year-olds, while the remarriage equation gradually

[10] Note that we do not jointly estimate the five equations as a simultaneous system. Before choosing the above specifications, we estimated a simultaneous system of wage rate, hours, and marital flow equations using the Dynamic Selection Control Model (see Ahituv and Lerman 2005). We found that for this specific model, the individual-specific component terms, A^H and A^W, were distinct and uncorrelated. As a result, we employ approaches that can capture the separate dimensions of heterogeneity.

raised its coverage from 2-3 percent of 22-23 year-olds to 16-18 percent of 37-38 year-olds. Within each of the "at risk" groups, the proportions changing status gradually declined with age.

The proportion of men in a *first* marriage (column 7) reached a near peak for this age range at age 32 (49.4 percent). From age 32 through age 40, the number ending a first marriage offset the number entering a first marriage. Thus, second marriages became as common as first marriages. Though age-marital status profiles over the 17-40 age range varied widely by race, Hispanic, black, and white young men all reached their highest share in first marriages at age 32 (not in table). Moving from age 32 through 38, the share in first marriages stayed at about 30 percent of blacks and 54 percent of non-Hispanic whites, but fell slightly from 47 to 45 percent among Hispanic men.

Taken as a whole, the figures in Table 1 reveal the wide variation in age patterns of men's first marriage, divorce, and remarriage, while also showing that the highest rates of transitions take place over the 23 year period covered in this paper.

The tabulations in Table 2 provide age-wage and age-hours worked patterns by marital status for all men in the sample and then separately for black men. The percentages in each cell are the same as in Table 1 and thus the composition by age and marital status changes across cells. While the literature has largely focused on the marriage-wage rate linkage, we also examine the interactions between marriage and hours worked in detail. Overall, the figures show a close connection between marriage and wage rates as well as a highly positive relationship between marriage and annual hours worked. Married men attained higher levels on both labor market indicators over divorced/separated and never-married men of the same age.

It is interesting that the wage rate advantage of those in first marriages over never-married widened with age, from 10 percent at age 24, to 20 percent at age 32, to 35 percent at age 40. The married-single wage differential increased even faster among black men, rising from 10 to 55 percent as men aged from 24 to 40. This suggests the importance of distinguishing between the immediate

effects of entering marriage from the longer-term effects. Somewhat surprisingly, divorced or separated men had especially low wage rates, even lower than single men at ages 28-40. After all, divorced men had been married and experienced a marital wage premium before their divorce. Still, their wages apparently erode sufficiently to leave many worse off than the never-married. Among blacks, divorced men retained a wage advantage over black never-married men.

(Table 2 about here)

Married men worked several more hours per year than unmarried men at every age. By age 24, married men were already working 23 percent more hours per year than never-married men. Though the never-married raised their annual hours to almost full-time year-round, the 22 per cent advantage for married men remained through age 36 and reached 33 percent by age 40. Again, the married-single differential became higher among blacks (reaching 45-65 percent at ages 36-40), mainly because black single men worked a much lower number of hours than did all single men. Divorced and separated men worked less than married men, but 5-16 percent more than the never-married. Black men show a similar pattern, but the differentials in hours worked are far higher than for the sample as a whole.

These large differentials in hours worked are important not only for their effect on the current earnings of married relative to unmarried men, but also for their long-term impact on wage rates. Work experience is a component of human capital and its impact on wage rates is well-documented. Thus, to the extent that marriage encourages men to work longer hours, it will also generate wage rate gains in the future. We take this indirect effect of marriage on wages and earnings into account in deriving the marriage earnings premium.

The descriptive results indicate a significant and substantial positive association between men's labor market outcomes and marriage. The question is: to what extent do the associations

reflect a likely causal role for marriage, wages, or work commitment? To answer this question, we turn to the empirical results from models that control for observed and unobserved characteristics.

5.0 Estimated Impacts on Hours Worked, Wage Rates, and Marital Flows

5.1 How Marital Flows Affect Hours Worked

The estimates of marital effects on hours worked come from three econometric specifications. The OLS model offers basic multivariate results controlling for an extensive set of observed characteristics. The random effects model takes account of unobserved heterogeneity across individuals in a way that yields estimates of time invariant factors. The main focus is on the fixed effects model, which provides a straightforward way of controlling for selection. The full set of coefficients and significance levels for each of these models appears in Appendix Table B-2.

Table 3 extracts the results for the main variables of interest. The marital flow coefficients represent the impacts of each marital flow dummy variable relative to remaining never-married. The top panel of each table presents results of OLS, random effects and fixed effects regressions on the full sample. The bottom panel covers impacts based on fixed effects methods for three subgroups: black men, men with lowest 25 percent of test scores on the AFQT, and men under age 30.

(Table 3 about here)

The OLS specification, which controls for a large number of observable characteristics, yields large, positive, statistically significant coefficients for entering and staying married, and small positive, not statistically significant coefficients on continuing divorce. Entry into marriage is associated with 262 hours of additional work per year relative to remaining never-married. The added hours associated with continuing in marriage is 155, lower than with entering marriage but still nearly four weeks more per year than being never-married or in a continuing divorce.

Not surprisingly, taking account of unobserved heterogeneity lowers the estimated impacts of marital flows. Apparently, individuals have unobserved characteristics that both raise hours

worked directly and increase the likelihood of marriage. In the case of random effects, the estimated marital flow impacts are lower than under the OLS model, but higher than under the fixed effects model.

The fixed effect estimates in column 3 indicate the presence of positive selection effects, generally lowering the positive effects of marriage on hours worked. Still, the stimulus to hours worked associated with marriage remains substantial. Entry into marriage increases work hours by 160 per year over hours worked by otherwise similar never-married men. The gain for those continuing married over the never-married falls to 52 hours per year. Like the OLS results, the fixed effects regression follows the pattern in which entering marriage involves an immediate jump in hours worked, followed by a large reduction in the marriage effect for those continuing in marriage. As men divorce, the decline in hours is initially small relative to remaining married, but remaining divorced results in a more substantial reduction. The coefficient for continuing divorce falls from +10 (and statistically insignificant) to -51 (and highly significant). The fact that divorce lowers hours worked below the level when men are never-married is somewhat surprising. Perhaps, divorce leaves men with less ambition than even the never-married. Partly as a result, the increment to hours worked from a continuing marriage over a continuing divorce is a substantial 103 hours per year, or over 60 percent of the OLS differential. Moving from a continuing divorce to remarriage brings back nearly all of the hours worked advantage of marriage. Though the remarriage coefficient is not statistically significant, the expected gain in hours worked from remarriage (over continuing in a divorced state) is about 89 per year. Those who remarry and stay married become part of the continuing married group that has the 103 hours advantage over those in continuing divorce.

To see whether the observed effects of marriage on work effort extend to men with low marriage rates or low expected wage rates, we estimate fixed effects regressions for black men, men with low test scores, and men under 30. The analysis of black male work effort is of special

significance, given the secular decline in marriage and employment rates of black men and the common view that their weak employment prospects have led to and continue to lead to low black marriage rates. But if marriage actually raises hours worked of black men, then their work patterns when single do not capture their ability to contribute to family resources as a husband. How those with low AFQT scores respond provides a good indicator of the interaction between limited job options and marriage. Even if marriage induces men to try to work longer hours, men with low AFQT scores may be less able to translate their intentions into reality. On the other hand, if the added effort induced by marriage leads to actual increases in work hours, the implication is that the market is sufficiently flexible to accommodate differences in individual work effort. The responsiveness to marriage of men before age 30 may also be higher or lower than among men through their 40s. Marriages and divorces are likely to be of shorter duration among young men and thus not generate their full impacts. On the other hand, since young men are in a less mature stage of their careers, marriage may have more room to exert a large impact. Men in their 30s have more job stability and thus are more likely to work steadily and full-time regardless of their marital status.

The figures in the Panel B of Table 3 reveal that the impacts of marriage for black, low AFQT, and young men are as high or higher than the impacts for all men in the sample. In all three cases, entering marriage generates an initial work response substantially higher than for the entire sample, with the highest at 225 hours per year among black men. The added hours worked linked to continuing marriage over being never-married varies from 45 per year for blacks, 47 for men with low AFQT, and 72 for those under 30. The effects of staying married are much higher relative to being in a continuing divorce, reaching about 100-190 hours per year for the three groups. Note that the pattern of hours responses by type of marital flow is similar for all groups. The hours gains for entering marriage are highest for blacks, while continuing marriage exerts the highest impact on the

hours of young men. Overall, marriage does more to stimulate work hours among men with below average job prospects than among all men in the sample.

A common question in the economics of labor supply is how workers respond to a rise in wages. Though not focused on this question, the regressions provide mixed evidence on the hours worked response this year to wage rates in the prior year. For the entire sample, lagged wage rates positively and significantly affect hours worked in the OLS regressions but not in the fixed or random effects regressions. Also, the insignificant effects may result from offsetting effects by subgroup. As lagged wage rates increase by one percent, black men show no hours response, young men work 29 more hours per year, while men with low AFQT scores lower their labor supply by 49 hours per year.

5.2 How Marital Flows Affect Wage Rates

The impacts on wage rates drawn from OLS, random and fixed effects equations are all presented in Panel A of Table 4, allowing for a direct examination of the robustness of the estimates to alternative specifications. Unlike other estimates of marriage wage premiums, ours cover over 20 years of longitudinal data, offer separate estimates of marital flows, and control for accumulated hours worked through the prior year. The results reinforce past evidence of a substantial and statistically significant marriage wage premium. Controlling for a large number of observable differences between men, the OLS coefficients imply a 12 percent wage gain upon entry into marriage and an 18 percent gain in continuing marriage, relative to remaining never-married. Again, given the unobserved heterogeneity problem, we turn quickly to the random and fixed effects estimates. These wage impacts turn out to be similar to each other, with marriage effects ranging from 64 to 74 percent of the OLS effects, again indicating a positive selective effect.

(Table 4 about here)

Looking at the fixed effects results presented in Column 3, we see the highest wage gains accruing to those in continuing marriage. This status is linked to wage rate gains of 12 percent relative to the never-married and 9.0 percent relative to those in continuing divorces. The effect of entry into marriage is smaller, but it is still striking that wage rates rise 7.6 percent within a year in response to entering a first marriage. Entry into remarriage exerts virtually the same positive impact on wage rates as entry into marriage. Those remarried who stay married subsequently become part of the continuing married group that experiences the 9-12 percentage point premiums.

Entering or staying married raises wage rates in statistically significant and quantitatively similar ways for the low expected wage subgroups and for the entire sample. Consider the fixed effects results presented in Table 4, Panel B. Black men experience a slightly higher than average wage premium for entering marriage (8.7 to 7.6 percent), a higher than average wage premium for remarriage (11.8 to 7.1 percent), and a lower than average wage premium for continuing in marriage instead of continuing in divorce (7.1 to 9.0 percent). Men with low AFQT scores achieve lower than average wage gains from entering or staying married relative to remaining never-married; however, their wage premium linked to remarriage is higher than average. These results represent striking evidence that the marriage wage premium extends widely, reaching those with unfavorable earnings prospects.

Interestingly, the wage effects of marriage differ in timing from the hours worked effects reported in Table 3. While the wage effects increase in moving from entering a first marriage to continuing in marriage, the effects of marriage on hours worked decline after the initial year of marriage. One possible reason for these differential patterns is that wage gains come as returns on marriage-specific investments, while added hours worked result from motivational factors that peak immediately after a marriage and then settle down to a moderate level.

The human capital derived from accumulated work experience raise wage rates in all specifications. Each additional 1,000 hours of work experience raises wage rates by 2.4 percent. This work experience effect is relevant to the full marriage wage premium through a feedback mechanism. Since marriage increases work hours and work hours raise wages, some of the added wage associated with work experience is indirectly affected by marriage. One added year of continuing marriage (over a continuing divorce) raises hours worked by about 110 hours per year. With each 1,000 hours raising wage rates by 2.4 percent, the added 110 hours would imply a wage gain of 0.22 percent in each subsequent year. Thus, a single year's marriage-induced gain in hours worked would lead after 10 years to 2 percent higher wage rates.

The results from the "No Hours" regression reported in Table 4, Column 6 provide another way to incorporate the marriage-induced effect of work experience on subsequent wage rates and obtain the full marriage wage premium. By excluding the accumulated work experience variables, this regression captures both the contemporaneous marriage effect as well as any marriage-induced effect of hours on long-term wage rates. The results of the "No Hours" regression show the coefficient for continuing marriage jumping from 11.9 to 18.3 percent. The advantage of continuing marriage over continuing divorce also rises from 9.0 to 11.8 percent. These added gains generally reflect the differences in accumulated work experience associated with marriage. For this reason, the additions to the marriage wage premium are much larger relative to the never-married than to the currently divorced, who may have accumulated added work experience during their married years.

5.3 Implications for Effects on Men's Earnings

Using our estimates on wage rates and hours worked, we can illustrate the magnitude of the gains in earnings induced by an additional year of marriage. Consider a never-married man working for 1,800 hours per year at $20 per hour, about the median wage for full-time workers in 2003. Now suppose he is in a continuing marriage instead of being never-married. On the basis of the fixed

effects estimates, his wage rate would rise to $22.52 and his annual hours worked would increase by 52 per year. These direct gains in wage rates and hours worked translate into about $5,710 in added earnings, from $36,000 to $41,707 or a 15.9 percent increase. In addition, there are indirect gains from the feedback effect on wage rates through the marriage-induced added work experience. A given year's marriage-induced hours worked will translate into higher work experience and thus higher wage rates in subsequent years. Taking into account the cumulative effect of each year's wage rate gains caused by the feedback effect of added hours worked, one can calculate the present value of additions to earnings over the next 15 years and add this component to the marriage earnings premium. The dollar amount of this component turns out to be $628, thereby raising the earnings gain from an additional year in marriage from 15.9 percent to 17.6 percent. Of the $6,335 in total earnings gain, 72 percent are derived from higher wage rates (at initial hours), 16 percent to higher hours worked (at initial wage rates), and 10 percent to the feedback effect of hours on future wage rates, and 2 percent to the interaction between higher wage rates and higher hours worked.

One might expect marriage earnings advantage to reach a maximum when the comparison is between men in continuing marriages and never-married men. However, the marriage premium is actually higher when the comparing married men with divorced men. Given the same starting points for hours worked (1,800) and wage rates ($20 per hour), the wage and hours gains from remaining married yields a 15.7 percent earnings advantage over remaining divorced. Taking account of the indirect effect resulting from the additional marriage-induced work experience raises this premium to about 19.1 percent. In this case, 49 percent of this overall wage gain is due to higher current wage rates, 30 percent to higher current hours, 18 percent due to the feedback effect, and 3 percent is the interaction component.

Again assuming 1,800 in initial work hours and $20 in initial wage rates for black men, we find the earnings advantage from a continuing marriage over being never-married is 17.9 percent,

almost identical to the figure for all men in the sample. However, black men experience a much larger, 28 percent marriage premium when comparing continuing marriage to continuing divorce. Of the nearly $10,200 in marriage-induced added earnings, about half (47 percent) came from wage gains, 30 percent from increases in hours worked, and 19 percent from the feedback effect of hours worked on wage rates.

These estimates of earnings gains imply a larger role for marriage than most studies suggest. The major reason is that few studies incorporate the marriage-induced effects on hours worked and the feedback effect of these hours increases on future wage rates. Looking only at wage rates, we find that our 13 percent marital premium over singles is close to the premiums found by Korenman and Newmark (1991) and by Chun and Lee (2001), well below the wage gains found by Antonovics and Town (2004) among twins from Minnesota, and well above those reported by Gray (1997) and by Cornwall and Rupert (1997). The other studies rely either on data from an earlier cohort (Korneman and Newmark and Cornwall and Rupert), a single cross section (Chun and Lee) or a small population subgroup (Antonovics and Town). Only Gray uses the NLSY79 and his conclusion of a declining marital wage premium is based on only three years of data.[11] We take advantage of 23 years of NLSY79 data and find marital wage premiums about as large as in earlier cohorts. Further, we estimate separate marital wage effects from entering a first marriage, continuing in marriage, and remarriage. In doing so, we find a large marital wage premium over divorce and sizable wage premium when entering remarriage.

Among studies taking account of selection effects, this is the first to examine whether the unobserved heterogeneity affecting both marital flows and wage rates are similar to the unobserved characteristics affecting both marital flows and hours worked. One might expect motivation, reliability, and personality are among the unmeasured attributes influencing wage rates, hours

[11] When we limit the sample to these years, we also find an insignificant wage rate premium.

worked, and marriage. On the other hand, some unmeasured attributes may explain higher wages and marriage but not higher hours worked and marriage. To test whether selection in this case represents one or two dimensions of unobserved personal characteristics, we created variables representing the individual fixed and random effects derived from the hours worked and log wage equations and calculated the correlations between the individual effects in the hours and wage equations. Somewhat surprisingly, the correlation between the unobserved heterogeneity components of hours and wage equations was essentially zero, both for random or fixed effects. Thus, there are two dimensions of unobserved heterogeneity in the wage and hours worked equations.

5.4 How Wage Rates and Accumulated Hours Worked Affect Marital Status

The long-term decline in the U.S. age-specific marriage rates is an important focus of researchers and policymakers[12], a trend some attribute to declining male earnings. This section presents new evidence on how wages and hours worked affect the dynamics of marital status. Table 5 extracts estimates of the effects of wage rates and accumulated hours of work on entry into marriage, divorce, and remarriage from three separate probit equations: probit equations with many covariates, but without controls for unobserved heterogeneity (Model 1), probits with controls for unobserved heterogeneity using random effects (Model 2), and random effects probits that include two fixed effect components, one drawn from the hours worked equation and one from the wage equation (Model 3).[13]

All the models show that higher wage rates encourage entry into marriage, discourage entry into divorce, and raise the likelihood of remarriage. In nearly all cases, accumulated work experience

[12] See Ellwood and Jencks (2004). Also, note that the preamble to the 1996 welfare reform legislation places great emphasis on the declining marriage rates in the U.S. as a cause of increased poverty and dependency.

[13] Estimates of the full set of coefficients are available from the authors.

also exerts statistically significant impacts in the expected direction. The only exception is that work experience has no effect on divorce in Model 3.

(Table 5 about here)

To illustrate the magnitude of these effects in our preferred model (Model 3), we calculate how 10 percent changes in wage rates and work experience affect the percent change in the probability of the dependent variables. These impacts are evaluated both at the means of other independent variables and at other specified values. The predicted entry rate into marriage using all the coefficients from the random effects probit and the mean values of the independent variables is 5.2 percent. A 10 percent increase in the wage rate raises the entry rate to 5.5 percent, representing a 5.8 percent increase. A 10 percent increase in hours worked has a slightly larger impact, raising the probability of marriage by 6.1 percent.

These magnitudes are generally higher than comparable wages and hours effects on divorce and remarriage. A 10 percent increase in wage rates lowered the probability of divorce (among those initially married) by 4.0 percent and raised the probability the probability of remarriage (among those initially divorced or separated) by about 1.7 percent. A 10 percent rise in hours worked had no effect on entry into divorce and raised the entry probabilities into remarriage by 2.7 percent.

One striking result in the marriage entry equation is that controlling for unobserved heterogeneity strengthens the impacts of wage rates and hours worked. The common expectation is that, since unmeasured characteristics that raise wage rates (such as special skills or personality) will be positively correlated with entering marriage, estimates of wage impacts that do not control for unobserved heterogeneity should be biased upward. In fact, comparing Model 2 with Model 1, we find the opposite outcome. Introducing random effect probits actually increases the positive impacts of wage rates and work experience on entering marriage. It is possible that, for entry into marriage, unobserved heterogeneity effects might be negative. Perhaps, some with low unobserved skills are

actually more likely to enter marriage or remarriage and thus the estimated wage impact from the baseline probits is biased downward. For the entry into divorce and entry into remarriage equations, Model 2 does little to alter the simple probit result, despite the expectation that controls on unobservables should weaken the effects of wage rates and hours worked.

Turning to Model 3, we find positive and significant impacts from the two fixed effects drawn from the wage and hours equations on entry into marriage. The fixed effect from the hours worked equation is consistently pro-marriage in its effect on the divorce and remarriage equations as well. However, the fixed effect from the wage equation seems to encourage divorce (see its positive, significant effect in the divorce entry equation) and to exert no effect on remarriage. The mixed nature of these findings reveals that some of the expected positive aspects of selection are present but so too are some negative aspects of selection in the flows into marriage, divorce, and remarriage.

6.0 Conclusions and Implications

With marriage becoming a serious public policy issue, empirical evidence dealing with the impacts of marriage and with what causes people to marry and stay married is attracting increasing attention. This paper deals with labor market aspects of both questions—how does marriage affect men's earnings and how does men's earnings affect marriage? The large, positive association between marriage and earnings is well-known, but the relative importance of impacts on hours versus impacts on wage rates is not well-documented. In addition, the roles of selection and other forms of unmeasured heterogeneity, along with the magnitude of the impacts, are less clear and quite controversial.

This paper contributes in several ways to the literature on the way marriage, wage rates, and hours interact. The estimates cover a recent cohort of young men as they age from 17 to 40, following labor market and marital status changes over a 23 year period, a much longer period than other studies. The analysis provides separate estimates for two groups of men with lower than

average marriage rates: black men and men with low scores on a national test. One key component of the paper is the research on how marital flows affect hours worked, a topic not generally studied in the literature. Marriage-induced effects on hours worked are potentially important not only for their role in raising family income but also for generating higher wage rates in the future and adding to the marriage wage rate premium. The paper's distinctive analyses of how job market outcomes influence marriage capture separate effects of wage rates and hours worked on three probabilities: of entering into marriage, of divorce, and of remarriage. In addition, the empirical approach controls for three separate sources of unobserved heterogeneity in equations determining marital flows.

The results reveal statistically significant impacts running from marriage to working hours, from marriage to wage rates, from working hours to subsequent wages, and from both wage rates and working hours to marital status. The marriage-induced increases in hours are especially striking. Even after controlling for a wide array of observed characteristics and unobserved heterogeneity, the estimates show that a continuing marriage is associated with 103 hours of work per year relative to being in a continuing divorce. To capture the full effects on earnings, we combine the marriage effects on hours worked with the marriage effects on wage rates and then add the feedback effects on future wage rates resulting from the marriage-induced increase in work experience. The combined earnings advantage of being in a continuing marriage over being in a continuing divorce was 19 percent. The comparable gain from remaining married relative to staying single is nearly 18 percent. Even entering remarriage leads to a 13 percent advantage over those remaining divorced. Marriage effects of these magnitudes are large; they are equivalent to earnings gains associated with 2-3 years of schooling. Far from withering away, as some suggest, the marriage wage rate premium remains substantial.[14]

[14] As noted above, Gray (1997) finds little wage premium but uses only three years of data. We use 23 years of data. Blackburn and Korenman (1994) have also suggested that the marriage wage rate premium is declining. They base their estimates on trends in CPS cross sections through 1988, not on panel data.

One new and somewhat surprising finding is the way divorce reduces earnings. As other studies show, our fixed effects regressions estimate that divorce lowers wage rates relative to marriage but leaves them above what they would be in a never-married state. On the other hand, we find that the drop in hours worked from marriage to divorce is large enough to reduce hours worked in a divorced state below the hours levels in a never-married state. These fixed effect impacts on hours worked differ qualitatively from the OLS results, which show that men work as much in a divorced state as in a never-married state.

The timing pattern of the effects on wage rates and hours worked offers some insight into how the marriage premiums materialize. Upon entering a first marriage, men increase their work effort very substantially (160-200 hours per year) but achieve modest wage gains. As men continue in marriage, the marriage increment to hours worked declines, while their wage rate premium increases. Nock (2005) suggests several mechanisms by which these effects might take place. The institutional nature of marriage may alter how employers treat married relative to unmarried men and what others expect of men, once they marry. A positive signaling effect to employers may lead to an initial wage gain. The domesticating role of marriage in persuading men to give priority to household responsibilities might help explain the immediate jump in work hours. Because marriage may provide men with greater confidence in their relationship and more ability to specialize, the wage gains associated with marriage may rise over time.

The reverse effects, in which success in the labor market raises the likelihood of entering and remaining married and of remarrying, are also statistically significant. The magnitudes of these impacts vary. A 10 percent rise in wage rates increases the likelihood of entering marriage by about 6 percent, the chances of staying married by 4 percent, and remarriage by less than 2 percent. Added hours worked exert about the same effects, except for having no impact on divorce.

What are the implications of these large associations of marriage, wage rates, and hours worked? First, marital status should become more important in the analysis of labor market outcomes and trends. For example, the declining share of married men might well have contributed to the rising earnings inequality and to the stagnancy of wages of less-skilled men. More research is warranted on the mechanisms by which workers obtain higher wage rates, choose to work longer hours after marriage, and then revert to much lower hours after a divorce. Second, with marriage increasing earnings and earnings leading to more marriage and fewer divorces, both policies that lead to more marriage and less divorce and policies that raise earnings can set off a virtuous circle, in which marriage and earnings reinforce each other over time.

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Appendix A: Filling in Information for Post-1994 Non-Interview Years

This analysis uses the NLSY79 from 1979 to 2002. Hence, we have to adjust the data after 1994 (when the NLSY79 conducted only biannual interviews). Fortunately, the NLSY includes work-history array on a weekly basis that allowing recovering information on all job related variables, and good information on dates of marital statuses changes, and birth. We could not calculate comparable information for schooling and location variables. Below we explain how we construct the key variables of our analysis.

The NLSY79 work-history includes variables on work activities (including hours worked, job change, and wage) for each week of the 1,304 weeks, starting from January 1978 to December 2002. To obtain the correct number of hours worked or weeks worked in each calendar year, we simply looped through each of the 52 weeks and calculated a running sum.

Prior to 1994, hourly wage and job tenure are those reported for the current job. For those men that are not employed during the interview week, the primary job is the longest job in the year prior to the interview week. The wage is the last hourly wage earned on this job, and job tenure is zero. For the odd-post-1994 years, we use the following method. First, we designate a "quasi-interview" week, exactly 52 weeks prior to the actual interview week in the subsequent year. Second, we code the start and end weeks for each job. Third, we determine hourly wage and job tenure for the odd (post-1994 years) similarly to the method described above.

The NLSY reports the exact date of each change in marital status. Again, we linked the change in marital status to the dates of the most recent interview, and to the date of the "quasi-interview". Those events taking place within 52 weeks prior to the interview week were current year transitions. If the transitions occurred more than 52 weeks before the even-year interview, then we coded that change as having occurred in the odd-year.

For the following variables, we could not record changes in the odd-post-1994 years. County of residence (say, in 1999) was set equal to the county where the individual lived in the subsequent even-year (say, 2000). Once we specified the county of residence for the odd-post-1994 year (say, 1999), we used the relevant year's (say, 1999) information on county variables, such as county employment growth and unemployment rates. For highest grade completed in the odd-post-1994 years, we used the grade achieved as of the subsequent even-year. If the difference between two even post-1994 years (say, 1996 and 1998) is two, we set the odd year to the mean between the two years (total of only 90 cases). Note that at the ages reached by cohort members after 1994, only 450 observations-years are in school.

Table 1: Marital Transitions of Men from Age 17 to 40 for Cohort Born 1960-1964

Panel A: Annual Marital Status Flows As Percent of All Men, Ages 17 to 40

Age	(1) From Single to Single	(2) From Single to First Marriage	(3) From Marriage (or Remarriage) to Marriage	(4) From Marriage (or Remarriage) to Divorce	(5) From Divorce to Divorce	(6) From Divorce to Remarriage	(7) Share in First Marriages
17	99.4	0.6	0.0	0.0	0.0	0.0	0.6
18	97.5	2.1	0.4	0.1	0.0	0.0	2.5
19	93.7	4.3	1.9	0.1	0.0	0.0	6.2
20	87.9	5.7	5.6	0.7	0.1	0.0	11.3
21	83.0	5.1	10.0	1.3	0.7	0.1	15.0
22	76.8	6.2	13.7	1.5	1.5	0.4	19.8
23	68.8	8.2	18.5	1.6	2.3	0.6	26.2
24	61.9	7.1	25.3	1.9	3.2	0.6	31.4
25	54.7	7.3	31.0	2.1	4.2	0.8	36.9
26	48.6	6.1	36.8	2.4	5.2	1.0	40.9
27	44.0	4.6	41.1	2.6	6.4	1.4	43.3
28	40.2	3.9	44.3	2.8	7.4	1.4	44.6
29	36.6	4.1	46.9	2.3	8.7	1.4	46.5
30	33.9	2.7	49.8	2.4	9.6	1.6	47.1
31	31.6	2.2	52.1	2.2	10.9	1.1	47.9
32	29.0	2.5	53.7	1.8	11.7	1.3	49.4
33	27.0	1.6	55.6	2.3	12.3	1.3	49.6
34	25.3	1.8	56.6	1.8	12.7	1.8	50.0
35	23.9	1.6	58.4	1.7	13.4	1.1	50.4
36	22.8	1.2	59.0	2.2	13.6	1.3	50.3
37	21.6	1.3	59.2	2.2	14.0	1.8	49.8
38	19.9	1.4	60.4	2.2	14.7	1.4	50.2
39	19.1	0.3	61.4	1.6	15.8	1.8	50.2
40	17.7	0.4	63.3	1.6	15.1	1.9	50.7

Panel B: Annual Marital Status Flows As Percent of Men in the Risk Group

Age	Entry Into First Marriage from Never-Married	Entry Into Divorce from Marriage or Remarriage	Entry Into Remarriage from Divorce
20-22	6.9%	12.1%	42.7%
23-25	12.2%	7.5%	21.1%
26-28	10.9%	6.4%	19.8%
29-31	8.7%	4.6%	14.0%
32-34	7.2%	3.6%	11.8%
35-37	5.9%	3.4%	10.0%
38-40	3.6%	3.0%	11.1%

Source: Tabulations by authors from the NLSY79 sample of 2,863 males described in the text. The data are weighted to correct for the oversampling of black and Hispanic respondents.

Table 2: Work Outcomes by Age and Marital Status for 1960-1962 Cohort

Panel A: Hourly Wage (in 1985 $), Ratios to Single Men in Parentheses

	Full Sample				Black Men			
Age	Single	Married	Divorced	Remarried	Single	Married	Divorced	Remarried
20	$5.56	$6.66	$5.08	na	$4.66	$5.53	$3.60	na
	(1.00)	*(1.20)*	*(0.91)*		*(1.00)*	*(1.19)*	*(0.77)*	
24	6.86	7.52	7.08	7.66	5.61	6.17	7.39	2.51
	(1.00)	*(1.10)*	*(1.03)*	*(1.12)*	*(1.00)*	*(1.10)*	*(1.32)*	*(0.45)*
28	8.55	10.12	8.20	11.61	6.52	7.19	6.98	6.31
	(1.00)	*(1.18)*	*(0.96)*	*(1.36)*	*(1.00)*	*(1.10)*	*(1.07)*	*(0.97)*
32	8.74	10.48	7.10	9.88	6.55	8.58	5.57	7.62
	(1.00)	*(1.20)*	*(0.81)*	*(1.13)*	*(1.00)*	*(1.31)*	*(0.85)*	*(1.16)*
36	9.26	12.61	9.07	10.41	6.17	9.01	8.24	8.66
	(1.00)	*(1.36)*	*(0.98)*	*(1.12)*	*(1.00)*	*(1.46)*	*(1.34)*	*(1.40)*
40	11.05	14.95	9.48	10.85	6.28	9.77	8.41	9.30
	(1.00)	*(1.35)*	*(0.86)*	*(0.98)*	*(1.00)*	*(1.55)*	*(1.34)*	*(1.48)*

Panel B: Hours Worked in Prior Year, Ratios to Single Men in Parentheses

	Full Sample				Black Men			
Age	Single	Married	Divorced	Remarried	Single	Married	Divorced	Remarried
20	1,282	1,978	1,260	na	998	1,683	1,225	na
	(1.00)	*(1.54)*	*(0.98)*		*(1.00)*	*(1.69)*	*(1.23)*	
24	1,712	2,101	1,954	2,196	1,382	1,779	1,645	1,880
	(1.00)	*(1.23)*	*(1.14)*	*(1.28)*	*(1.00)*	*(1.29)*	*(1.19)*	*(1.36)*
28	1,892	2,238	1,994	2,271	1,467	2,072	1,700	2,321
	(1.00)	*(1.18)*	*(1.05)*	*(1.20)*	*(1.00)*	*(1.41)*	*(1.16)*	*(1.58)*
32	1,783	2,306	1,962	2,098	1,334	2,027	1,657	1,818
	(1.00)	*(1.29)*	*(1.10)*	*(1.18)*	*(1.00)*	*(1.52)*	*(1.24)*	*(1.36)*
36	1,887	2,303	2,047	2,160	1,468	2,134	1,669	1,942
	(1.00)	*(1.22)*	*(1.08)*	*(1.14)*	*(1.00)*	*(1.45)*	*(1.14)*	*(1.32)*
40	1,720	2,282	2,003	2,134	1,285	2,124	1,689	1,886
	(1.00)	*(1.33)*	*(1.16)*	*(1.24)*	*(1.00)*	*(1.65)*	*(1.31)*	*(1.47)*

Source: Tabulations by authors from the NLSY79 sample of 1,446 males born in 1960-62. The data are weighted to correct for the oversampling of black and Hispanic respondents..

Table 3: The Effects of Marital Flows on Annual Hours Worked

Panel A: Comparisons Across Econometric Specifications

	(1) OLS	(2) Random Effects	(3) Fixed Effects
Entry into first marriage	262.0	200.5	160.3
	(16.9)**	(13.7)**	(10.8)**
Continuing marriage	155.0	89.6	51.6
	(18.1)**	(9.1)**	(4.8)**
Entry into divorce	114.8	68.8	38.0
	(5.3)**	(3.3)**	(1.80)
Continuing divorce	10.1	-20.7	-51.3
	(0.90)	(1.50)	(3.4)**
Entry into remarriage	146.5	78.3	37.3
	(5.1)**	(2.8)**	(1.30)
Ln wage prior year	16.4	1.3	-6.1
	(2.9)**	(0.20)	(1.00)

Panel B: Comparisons Across Specific Subgroups (FE model)

	(4) Black	(5) Low AFQT	(6) Under 30
Entry into first marriage	224.8	201.2	132.0
	(6.9)**	(6.1)**	(8.2)**
Continuing marriage	45.7	47.2	72.4
	(2.1)*	(2.0)*	(5.1)**
Entry into divorce	-15.1	-1.7	32.5
	(0.40)	(0.00)	(1.20)
Continuing divorce	-105.4	-53.9	-113.8
	(3.7)**	(1.80)	(4.6)**
Entry into remarriage	-52.4	57.1	-5.7
	(0.90)	(1.00)	(0.10)
Ln wage prior year	1.1	-48.8	28.7
	(0.10)	(3.7)**	(3.5)**

Notes: The other variables included in the regressions, are reported in Appendix B-2. The absolute values of *t-statistics* are reported in parentheses. * significant at 5% level, and ** significant at 1% level

Table 4: The Effect of Marital Flows on Ln of Hourly Wage Rates

Panel A: Comparing Across Econometric Specifications

	(1) OLS	(2) Random Effects	(3) Fixed Effects
Entry into first marriage	0.118	0.085	0.076
	(10.8)**	(8.9)**	(7.9)**
Continuing marriage	0.175	0.129	0.119
	(32.3)**	(20.8)**	(18.1)**
Entry into divorce	0.106	0.074	0.066
	(7.0)**	(5.5)**	(4.9)**
Continuing divorce	0.057	0.035	0.029
	(7.0)**	(3.8)**	(2.9)**
Entry into remarriage	0.119	0.08	0.071
	(5.9)**	(4.5)**	(3.9)**
Work Experience (Hours)	0.024	0.023	0.024
	(31.1)**	(26.8)**	(25.6)**
Experience squared	-0.000	-0.000	-0.000
	(16.4)**	(14.1)**	(13.8)**

Panel B: Comparisons Across Specific Subgroups (FE model)

	(4) Black	(5) Low AFQT	(6) No Hours
Entry into first marriage	0.087	0.062	0.086
	(4.3)**	(3.1)**	(8.8)**
Continuing marriage	0.126	0.098	0.183
	(9.7)**	(7.2)**	(28.4)**
Entry into divorce	0.091	0.098	0.113
	(3.5)**	(3.9)**	(8.2)**
Continuing divorce	0.055	0.089	0.065
	(3.1)**	(5.1)**	(6.7)**
Entry into remarriage	0.118	0.152	0.124
	(3.1)**	(4.5)**	(6.8)**
Work Experience (Hours)	0.017	0.013	
	(9.7)**	(7.4)**	
Experience squared	-0.000	-0.000	
	(4.1)**	(4.2)**	

Notes: The other variables included in the regressions, are reported in Appendix B-3. The absolute values of *t-statistics* are reported in parentheses. * signal significant at 5% level, and ** significant at 1% level

Table 5: The Effects of Wage Rates and Work Experience on Entry into Marriage, Divorce, and Remarriage

	(1) Probit	(2) Probit with Random Effects	(3) Random Effects and Factors
Panel A: Entry into First Marriage			
Work Experience (Hours)	0.038	0.065	0.049
	(7.5)	(7.3)	(5.9)
Experience squared	-0.0004	-0.0005	-0.0004
	(3.8)	(3.1)	(2.8)
Ln wage prior year	0.242	0.308	0.267
	(11.3)	(9.6)	(8.0)
Fixed Error Component from Hours Equation			0.0006
			(7.8)
Fixed Error Component from Wage Equation			0.223
			(2.5)
Panel B: Entry into Divorce			
Work Experience (Hours)	-0.0147	-0.0141	-0.007
	(2.4)	(2.1)	(0.9)
Experience squared	0.0001	0.0000	0.0000
	(0.9)	(0.7)	(0.7)
Ln wage prior year	-0.141	-0.142	-0.185
	(4.3)	(3.9)	(4.2)
Fixed Error Component from Hours Equation			-0.0002
			(4.0)
Fixed Error Component from Wage Equation			0.127
			(1.6)
Panel C: Entry into Remarriage			
Work Experience (accumulated hours)	0.027	0.028	0.023
	(2.9)	(2.9)	(2.3)
Experience squared	-0.0002	-0.0002	-0.0002
	(1.5)	(1.5)	(1.5)
Ln wage prior year	0.101	0.103	0.094
	(2.2)	(2.7)	(1.6)
Fixed Error Component from Hours Equation			0.0002
			(2.4)
Fixed Error Component from Wage Equation			0.031
			(0.3)

Notes: Absolute value of t-statistics in parentheses; The regressions in Panel A includes 2,863 individuals and 33,842 observations; The regressions in Panel B includes 2,091 individuals and 21,915 observations; The regressions in Panel C includes 864 individuals and 5,477 observations.

The regressions includs the following covarietes: Age, Black, Hispanic, AFQT, Family Income, Mother's Education, Number of Siblings, Female-Headed Household, Foreign, Baptists Religion, Catholic Religion, Frequency of Church Att., Highest grade completed, Resident in Urban area, County Unemployment Rate, County Marriage Rate, County Divorce Rate, Accumulated Hours, Ln wage prior year

Appendix Table B-1: Variables Descriptions and Means

Variable Name	Description	Means
DEPENDENT AND ENDOGENOUS VARIABLES		
Marital Status	Marital status of R: single, new marriage, cont. marriage, new divorce, cont. divorce, new remarriage	2.14
Ln of Hourly Wage Rate	Ln of Hourly Wage Rate	1.85
Annual Hours Work	Annual Hours Work, cap at 3,120	1,731
SELECTED INDEPENDENT VARIABLES		
Ascribed Traits and Scholastic Aptitude (X)		
Age	Age at the beginning of the year	28.18
Black	Dummy variable indicating African American	0.28
Hispanic	Dummy variable indicating Hispanic	0.20
Foreign	Dummy variable indicating Foreign born	0.07
AFQT	Armed Forces Qualify Test score (Age and scale adjusted to 1,10 interval)	3.00
Family Background (X)		
Family Income	Total annual family income in 1979 ($1,000,000)	0.02
Mother's Education	Highest grade completed (in years) by R's mother	10.94
Number of Siblings	Number of living siblings in 1979	3.79
Female-Headed Household	Dummy, R lived in a female-headed household at age 14	0.18
Social Affiliation and Pre-work Experience (X)		
Illegal Activities	Had any illegal activity by age 17	0.14
Baptists Religion	Self response as practice Baptists religion	0.27
Catholic Religion	Self response as practice Catholic religion	0.35
Frequency of Church Att.	Frequency of religious attending in 1979 (6 points scale, with 6 as highest)	3.20
Highest grade completed	Highest grade comp. through the beginning of this year	12.48
In School	Attending school at the Interview date	0.17
GED	Received GED	0.09
Local Market Conditions (X)		
Resident in Urban area	R. is presently resident in Urban area	0.79
County Average Earnings	Average earnings per job, county of residence ($1,000)	14.17
County Empl. Growth	Percent employment growth in R's county of residence	0.02
County Unemployment Rate	Unemployment Rate in R's county of residence	6.88
County Marriage Rate	Marriage rates per 1,000, County of residence	10.13
County Divorce Rate	Divorces rates per Marriages, County of residence	0.51
Work Experience and Education Indicators (Z, W, H)		
Work Experience (Weeks)	Weeks (divided by 52) worked from age 17 to this year	8.39
Work Experience (Hours)	Total hours worked (in 1,000) from age 17 to this year	17.85
Number of Jobs	Total number of jobs ever reported	7.96
Tenure	Tenure with current employer (weeks divided by 52)	3.16
Ln wage prior year	Lag of Hourly Wage Rate from prior year	1.82
Marital and Family Statuses (MS)		
New Marriage	Those who married for the first time during this calendar year	0.03
Continuing Marriage	Those who continue to be married in the current year (including second marriages)	0.34
New Divorce or Separation	Those who divorced or separated during this year	0.02
Continuing Divorce or Separation	Those who continue to be divorced or separated during the current year	0.08
New Remarriage	Those who remarried during this calendar year	0.01
One or Two Child	Has one or two children at the beginning of this year	0.35
Three or more children	Has three or more children at the beginning of this year	0.12
Spouse Grade	Spouse Grade, just if spouse exists	12.75

Appendix Table B-2: Determinants of Annual Hours Worked: All Independent Variables

	(1) OLS	(2) Random Effects	(3) Fixed Effects	(4) FE, Black	(5) FE, Low AFQT	(6) FE, Under 30
Entry into first marriage	262.0	200.5	160.3	224.8	201.2	132.0
	(16.9)**	(13.7)**	(10.8)**	(6.9)**	(6.1)**	(8.2)**
Continuing marriage	155.0	89.6	51.6	45.7	47.2	72.4
	(18.1)**	(9.1)**	(4.8)**	(2.1)*	(2.0)*	(5.1)**
Entry into divorce	114.8	68.8	38.0	-15.1	-1.7	32.5
	(5.3)**	(3.3)**	(1.80)	(0.40)	(0.00)	(1.20)
Continuing divorce	10.1	-20.7	-51.3	-105.4	-53.9	-113.8
	(0.90)	(1.50)	(3.4)**	(3.7)**	(1.80)	(4.6)**
Entry into remarriage	146.5	78.3	37.3	-52.4	57.1	-5.7
	(5.1)**	(2.8)**	(1.30)	(0.90)	(1.00)	(0.10)
Ln wage prior year	16.4	1.3	-6.1	1.1	-48.8	28.7
	(2.9)**	(0.20)	(1.00)	(0.10)	(3.7)**	(3.5)**
Age	-128.4	-148.1	-150.6	-167.6	-142.2	-339.2
	(21.3)**	(24.1)**	(22.7)**	(14.0)**	(11.7)**	(19.2)**
Age Squared	0.8	1.2	1.4	1.5	1.1	4.9
	(7.8)**	(12.5)**	(13.3)**	(8.2)**	(5.8)**	(13.8)**
Black	-98.6	-160.4				
	(12.2)**	(10.3)**				
Hispanic	-25.0	-35.1				
	(2.9)**	(2.1)*				
Foreign Born	45.4	51.8				
	(3.9)**	(2.2)*				
AFQT	-3.2	-16.2				
	(1.80)	(5.0)**				
Family Income, 1979	1,041.90	678.5				
	(5.6)**	(1.80)				
Missing Family Income	60.7	56.2				
	(7.4)**	(3.4)**				
Illegal	-60.8	-80.9				
	(7.3)**	(4.9)**				
Work Experience (Weeks	237.8	230.9	212.6	224.5	214.4	398.3
	(87.2)**	(70.2)**	(54.7)**	(31.5)**	(29.1)**	(52.8)**
Experience squared	-6.2	-6.6	-6.3	-7.2	-6.8	-22.5
	(51.4)**	(53.0)**	(47.3)**	(27.0)**	(24.3)**	(48.7)**
Job Tenure	36.0	39.5	41.8	67.8	69.3	81.9
	(39.0)**	(38.9)**	(38.9)**	(28.0)**	(26.8)**	(34.1)**
Number of Jobs	9.8	16.7	24.7	36.6	39.4	35.3
	(14.7)**	(17.1)**	(19.5)**	(14.5)**	(15.2)**	(17.1)**
One or two children	-9.5	6.2	11.2	24.2	21.7	-4.0
	(1.20)	(0.70)	(1.10)	(1.30)	(1.10)	(0.30)
Three or more children	-29.7	-19.7	-24.1	49.5	-1.5	-41.3
	(2.8)**	(1.50)	(1.60)	(1.70)	(0.1)	(1.70)
Highest Grade	43.2	66.5	100.6	112.9	119.1	89.5
Completed	(27.4)**	(28.3)**	(30.9)**	(15.3)**	(12.7)**	(22.0)**
In School	-566.5	-561.9	-533.8	-461.4	-432.5	-465.4
	(60.2)**	(61.6)**	(56.5)**	(24.1)**	(19.5)**	(44.5)**
Residence in Urban Area	-14.6	16.5	43.2	105.6	51.9	42.1
	(2.0)*	(1.90)	(4.5)**	(5.0)**	(2.4)*	(2.7)**
County Employment	1.9	1.3	1.1	-1.4	0.5	2.1
Growth	(2.3)*	(1.70)	(1.40)	(0.90)	(0.30)	(2.5)*
County Unemployment	-7.3	-12.2	-15.2	-24.4	-26.5	-12.7
Rate	(8.4)**	(11.9)**	(13.4)**	(9.7)**	(11.6)**	(9.1)**
Constant	2,695.20	2,743.70	2,274.80	2,191.70	2,037.90	4,273.30
	(33.9)**	(33.2)**	(25.5)**	(13.1)**	(11.5)**	(21.5)**
Observations	61,234	61,234	61,234	17,366	16,241	34,750
Number of Individuals		2,863	2,863	816	769	2,863

Notes: Absolute value of *t-statistics* in parentheses. * significant at 5% level, and ** significant at 1% level

Appendix Table B-3: Determinants of Ln Hourly Wage: All Independent Variables

	(1) OLS	(2) Random Effects	(3) Fixed Effects	(4) FE, Black	(5) FE, Low AFQT	(6) No Work Exp.
Entry into first marriage	0.118	0.085	0.076	0.087	0.062	0.086
	(10.8)**	(8.9)**	(7.9)**	(4.3)**	(3.1)**	(8.8)**
Continuing marriage	0.175	0.129	0.119	0.126	0.098	0.183
	(32.3)**	(20.8)**	(18.1)**	(9.7)**	(7.2)**	(28.4)**
Entry into divorce	0.106	0.074	0.066	0.091	0.098	0.113
	(7.0)**	(5.5)**	(4.9)**	(3.5)**	(3.9)**	(8.2)**
Continuing divorce	0.057	0.035	0.029	0.055	0.089	0.065
	(7.0)**	(3.8)**	(2.9)**	(3.1)**	(5.1)**	(6.7)**
Entry into remarriage	0.119	0.08	0.071	0.118	0.152	0.124
	(5.9)**	(4.5)**	(3.9)**	(3.1)**	(4.5)**	(6.8)**
Work Experience (Hours)	0.024	0.023	0.024	0.017	0.013	
	(31.1)**	(26.8)**	(25.6)**	(9.7)**	(7.4)**	
Experience squared	-0.000	-0.000	-0.000	-0.000	-0.000	
	(16.4)**	(14.1)**	(13.8)**	(4.1)**	(4.2)**	
Age	-0.005	-0.002	-0.006	0.001	0.014	0.031
	(1.40)	(0.60)	(1.40)	(0.10)	(2.1)*	(11.4)**
Age Squared	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
	(2.3)*	(3.4)**	(2.5)*	(2.0)*	(3.3)**	(6.6)**
Black	-0.044	-0.062				
	(7.9)**	(4.3)**				
Hispanic	0.011	0.013				
	(1.90)	(0.80)				
AFQT	0.026	0.013				
	(21.0)**	(4.4)**				
Family Income, 1979	1.769	1.719				
	(13.1)**	(4.8)**				
Missing Family Income	0.054	0.054				
	(9.2)**	(3.5)**				
Mother's Education	0.001	-0.002				
	(1.60)	(1.00)				
Illegal	0.028	0.050				
	(4.8)**	(3.2)**				
Job Tenure	0.012	0.010	0.010	0.016	0.013	
	(19.4)**	(15.0)**	(14.1)**	(11.2)**	(8.5)**	
Number of Jobs	-0.005	-0.003	-0.003	0.000	0.002	
	(10.0)**	(4.5)**	(3.2)**	(0.00)	(1.00)	
Highest Grade Completed	0.057	0.081	0.097	0.105	0.033	0.085
	(51.3)**	(45.9)**	(45.4)**	(22.4)**	(5.2)**	(39.8)**
In School	-0.207	-0.196	-0.181	-0.133	-0.049	-0.190
	(31.4)**	(32.9)**	(29.6)**	(11.2)**	(3.6)**	(30.6)**
GED	-0.050	-0.119	-0.172	-0.156	-0.022	-0.228
	(7.0)**	(10.5)**	(12.7)**	(7.4)**	(0.90)	(16.7)**
Residence in Urban Area	0.018	0.003	-0.001	-0.008	-0.002	-0.005
	(3.4)**	(0.50)	(0.20)	(0.60)	(0.20)	(0.80)
County Average Earnings	0.029	0.022	0.019	0.007	0.010	0.020
	(46.1)**	(27.4)**	(22.3)**	(4.6)**	(5.6)**	(23.2)**
County Employment	0.003	0.001	0.000	0.001	0.000	0.001
Growth	(5.5)**	(1.20)	(0.80)	(1.50)	(0.50)	(1.10)
Constant	0.540	0.402	0.345	0.243	0.785	-0.146
	(10.2)**	(7.3)**	(6.6)**	(2.5)*	(7.4)**	(3.6)**
Observations	61,234	61,234	61,234	17,366	16,241	61,234
Number of Individuals		2,863	2,863	816	769	2,863

Notes: Absolute value of *t-statistics* in parentheses. * significant at 5% level, and ** significant at 1% level