

Researchers have long pointed to the potential connections between job market problems, marriage, and divorce. Wilson (1987) and others have tried to link the weakening of job market options for young men, especially young black men, to the decline in marriage rates. Recent increases in job instability (Neumark 2000; Berhardt et al. 1998; Light and McGarry 1998; and Farber 1995) might have led to negative consequences for workers and thus decreased their attractiveness as spouses. While the impact of unemployment on divorce has been studied for decades, important gaps remain. These gaps remain from both a substantive and methodological standpoint. Existing studies have typically focused on impacts running in a single direction—from a job market outcome to a marital status or vice versa. They often follow individuals through a specific transition, such as into marriage or out of marriage. In general, researchers have not yet extended their analyses to cover linkages between the long-term pathways in the job market and in marriage. As a result, existing approaches do not capture the time path of joint job-marriage decisions.

This study contributes to the existing literature by examining the connections between job instability, wages, and marital instability in a sequential framework. We analyze the entire sequence of annual job and marriage outcomes among young men by asking: 1) Do job stability and high wages promote marriage and marital stability? 2) How do marriage and marital stability affect job stability and wages? 3) How do shocks to education and initial labor market conditions affect the job market and marital status pathways of young men? To answer these questions, we develop a model in which young men make sequential choices about work and family and then estimate the model using a dynamic maximum likelihood (ML) approach that takes account of self-selection, simultaneity and heterogeneity into account.

The results shows that job instability contributes to reductions in wages and that high job turnover and low wages reduce the likelihood of getting and remaining married. In addition to

identifying the causal link running from labor market outcomes to marital status, we find robust evidence that marriage leads to higher job stability and higher wage rates. The multivariate results reveal a pattern of dynamic feedbacks that imply cumulative impacts that exceed the contemporaneous impacts usually estimated in the literature. Simulations based on these findings illustrate how shocks that raise marriage or education or that reduce divorce set off virtuous cycles in which increased marriage interacts with increased job stability and earnings. The findings also suggest that previous studies understate the wage gains linked to marriage by ignoring the feedback effects on job stability and marriage duration.

This study improves our understanding of job and marital pathways and the linkages between them. It provides estimates of the effect of job instability on wages in the context of a model that accounts for changes in marital status. It captures the simultaneous impacts of job market factors on marriage and of marital status impacts on jobs and wages. Furthermore, it estimates these relationships while adjusting for unobserved heterogeneity that may affect both labor market and marital outcomes. Finally, it demonstrates how new econometric tools can estimate sequential job and marriage outcomes. Using these tools, one can project the long-term effects of marriage on job market outcomes and thus calculate a long-term marriage wage premium.

The next section reviews some of the relevant literature related to several lines of research relevant to this paper. Section III describes the data set, displays facts that motivate our study, and explains the rationale for the indicators we use to measure marital status and job stability. Section IV lays out and explains in detail the optimization model ascribed to individuals and how it connects to our empirical strategy. The multivariate results, which include both OLS estimates and those that control for unobserved heterogeneity, are presented in Section V. The simulation results in Section VI show examples of the implications of the statistical findings on the size of the feedback effects. Section VII concludes by discussing implications of our method and findings.

II. Studies Linking Job Stability, Wage Rates, and Marital Status

Largely separate literatures have emerged on job stability and its determinants, marital stability and its determinants (Becker, Landes and Michael, 1977), and the interactions between labor market and marital status outcomes. In dealing with movement between jobs, economists frequently distinguish between unproductive turnover or churning and mobility that optimizes the worker-job match (Jovanovic, 1979; Mincer and Polachek, 1974). High turnover may represent an employer strategy to minimize labor costs by paying low wages and hiring or firing workers in response to short-term changes in demand. However, job mobility can be productive if job changes, including those involving unemployment, ultimately increase the efficiency of the employer-worker match. Both Topel and Ward (1992) and Klerman and Karoly (1994) find empirical evidence of the high concentration of job changes among youth. According to Topel and Ward, job mobility for young white men during the 1960s was so high that a typical worker would have held seven jobs during his first 10 years in the labor market, over two-thirds of his total career jobs. However, “rather than being *wasteful and inefficient*,” Topel and Ward conclude that, “...high turnover among young workers may be critical to the development of stable work careers”.

Other researchers do see turnover as wasteful. The informal U.S. system for integrating young people into careers may lead to unnecessarily high search costs and to a prolonged period in which young people are concentrated into jobs, which are characterized by high turnover, low wages, and little or no training (Hamilton, 1990). High rates of instability may, in turn, lower the marriage rates of young people. In a recent analysis, Neumark (2002) estimates the impact of early job stability on wages of young adult workers. Although Neumark provides an array of results, the key finding is that early job stability increases earnings, mostly by helping individuals maintain steady employment.

Many studies examine the effect of labor market outcomes on marital status. They typically

use single equation models (often duration analysis) to examine how employment, unemployment, or wage levels affect marital or cohabitation status, or how marital/family status influences employment, unemployment, or wages.² In a recent example of this literature, Oppenheimer (2003) examines the impacts of work experience, earnings, educational attainment, and other variables on two transitions of young men: 1) from non-cohabiting status to cohabitation or marriage; and 2) from never-married, cohabitation to marriage or separation. The results revealed varied roles for earnings, work experience, and education. Among non-cohabiters, very low earnings significantly reduced entries into marriage and high earnings and college diplomas significantly increased marriage rates. A recent study of the 1961 birth cohort of whites in Detroit by Xie, Raymo, Goyette, and Thornton (2003) examined whether an individual's earnings *potential* exerted different effects on entries into cohabitation versus entries into marriage. They used several earnings variables including current earnings, earnings over the subsequent five years, past earnings, and lifetime earnings. The authors found that higher earnings significantly increased the likelihood of entry into marriage but not into cohabitation. Past earnings showed the highest impact.

Charles and Stephens (2004) examine the effects of earnings disruptions on divorce. They use a probit analysis based on the Panel Survey of Income Dynamics to test whether layoffs, plant closings, and disability increase the likelihood of divorce in the year after the initial disruption takes place. In their analysis, layoffs or firings increase the risk of divorce, but plant closings and disability do not.

There is evidence that married men experienced a wage premium over unmarried men at least as far back as the nineteenth century (Goldin 1990). The recent wage premium literature focuses on whether the higher observed wage rates are the result of marriage itself or of unmeasured

² See, for example, Manning and Smock (1995), Call and Teachman (1996), Presser (2000), Smock and Manning (1997), Teachman, Call, and Carver (1994), and Weiss and Willis (1997).

characteristics that raise both wage rates and the likelihood of marriage. Using panel data, authors have estimated the effect of marriage using fixed effects models to control for unobserved heterogeneity. In one application of this technique examining the earnings of young white men from 1976 to 1980, Korenman and Newmark (1991) found that less than half of the 11 percent marriage premium is attributable to selection effects. Daniel's (1995) analysis of a more recent cohort of young men found similar overall effects, with slightly higher shares associated with selection. Following white men aged 19 to 29 in 1970 to 29 to 39 in 1980, Cornwell and Rupert (1997) estimated a marriage effect of about 5-7 percent on wages after controlling for observed characteristics and for fixed unobserved individual differences. Gray (1996) conducted a study examining two cohorts of 24-31 year-old white men using the same model. His results indicated that marriage gains fell sharply over time, largely due to the declining specialization of partners.

These studies of the impact of earnings on marital status rarely use a simultaneous framework that incorporates both directions of causation. Moreover, existing research does not account for the possibility that individual differences help explain stability both in marriage and jobs. After all, worker-employer and husband-wife relationships have common elements. Both involve working together in production. In each case, the two parties expect loyalty and responsibility from each other. When one party fails to live up to these expectations, the relationship often breaks down.

Chun and Lee (2001) exploit a simultaneous framework, using all 18-40 year-old working males from the March 1999 CPS. Their analysis employed a switching model in which the marriage equation is identified separately from the wage equation, using an index of the marriage market and the mother's country of birth—factors that should influence marriage but not wages. The estimates yielded a 12 percent average marriage effect on wages, but much larger effects (27 percent) among couples with wives who did not work in the job market.

