

Marriage, Divorce and the Work and Earning Careers of Spouses

Lee Lillard and Linda Waite



Project #: UM99-06

“Marriage, Divorce, and the Work and Earning Careers of Spouses”

Lee Lillard
(Deceased)

Linda Waite
Center on Aging
University of Chicago

April 2000

Michigan Retirement Research Center
University of Michigan
P.O. Box 1248
Ann Arbor, MI 48104
www.mrrc.isr.umich.edu
(734) 615-0422

Acknowledgements

This work was supported by a grant from the Social Security Administration through the Michigan Retirement Research Center (Grant # 10-P-98358-5). The opinions and conclusions are solely those of the authors and should not be considered as representing the opinions or policy of the Social Security Administration or any agency of the Federal Government.

Regents of the University of Michigan

David A. Brandon, Ann Arbor; Laurence B. Deitch, Bingham Farms; Daniel D. Horning, Grand Haven; Olivia P. Maynard, Goodrich; Rebecca McGowan, Ann Arbor; Andrea Fischer Newman, Ann Arbor; S. Martin Taylor, Gross Pointe Farms; Katherine E. White, Ann Arbor; Mary Sue Coleman, ex officio

Marriage, Divorce, and the Work and Earning Careers of Spouses

Lee A. Lillard
Linda Waite

Abstract

Social Security benefits depend on the employment and earnings history of the covered worker, but, especially for women, they depend on one's marital history and the employment and earnings history of one's spouse. This paper examines the interrelationship between marriage, divorce, employment and earnings of men and women. Since getting married (or getting divorced) tends to affect women's employment choices differently than men's, we consider the sexes separately. We estimate: (1) the impact of earnings, work hours and wages while unmarried on the likelihood of (re)marriage, (2) the effect of these measures of career success while married on the likelihood of divorce; (3) the effect of being married on men's and women's propensity to participate in the labor force, and conditional on participation, the effect of being married on earnings, wages and annual hours of work; for all these labor market outcomes we also assess the impact of the length of the marriage. Together, these results show a pattern of gender specialization in marriage, with men moving toward and women moving away from more intensive and extensive employment and the financial gain it brings. Success in the labor market while single increases the likelihood of marriage for men and decreases it for women. More work and greater financial rewards from work tend to stabilize marriage for men and destabilize marriage for women. Our results also show substantial change in the relationship between marital and employment careers for those born after WWII, but only for women. The employment careers of younger women are much less responsive to marriage than were those of their mothers or older sisters.

Author's Acknowledgements

We would like to thank Helena Stolyarova for programming assistance and Howard Iams for suggestions on the analysis.

1. Introduction

Social Security benefits depend on one's own earnings history. But they also depend, especially for women, on one's marital history and on the earnings of one's spouse. Under Social Security program rules, older adults may receive Social Security benefits as retired workers, as spouses of retired workers, or as divorced spouses or widow(er)s of retired workers. In fact, many recipients are dually entitled, receiving benefits *both* as retired workers and as spouses or former spouses of retired workers. Although both men and women are eligible to receive benefits as the spouse or former spouse of a retired worker, in practice, 98% of spouse beneficiaries are women.

Regardless of the level of benefits received, retired men and women benefit financially if they are married and living with their spouse, since this gives the household access to *two* Social Security checks and to the sizeable economies of scale that go with living together (Citro and Michael, 1995). Among those age 65 and older, only about 4% of those in married-couple families have incomes below the poverty level, compared to 14% of men and 20% of women living alone (Dalaker and Proctor, 2000. Table 2). As Burkhauser (1994) points out, Social Security provides a higher level of income replacement for couples than for the unmarried, overprotecting married couples and underprotecting survivors, most of whom are women.

But in addition, the earnings histories of both men and women depend on their marital history. Married men tend to work more and to earn more than unmarried men (Korenman and Neumark, 1991), whereas married women often trade off between work and family in ways that lead to a decline in employment, hours of work and earnings compared to when they were unmarried (Waite, Haggstrom and Kanouse, 1985). Many of these changes appear not at marriage but with the birth of the first child, when some women increase their time at home to provide care for the baby (Klerman and Leibowitz, 1999). Even when mothers work continuously, the demands of childrearing detract from their earning capacity. Comparing U.S. women with similar work histories, Waldfogel (1997) finds that one child reduces a woman's earnings by almost 4% and two children or more reduce hourly earnings by almost 12%.

At the same time, better career prospects and career achievements foster marriage and marital stability for men. Higher-earning men are more likely to get married and marry at younger ages than men with lower earnings (Bergstrom and Schoeni, 1996). And high-earning

men are less likely to divorce than those with lower earnings, with unemployment especially damaging to marital stability (Grossbard-Shechtman, 1993).

Marriage and motherhood seem to decrease the chances that women follow a career trajectory. Women with successful work careers less often marry or remain married than other women (Blair-Loy, 1999; Han and Moen, 1999). And the substantial majority of women with children, even those with college degrees, do not achieve career success. Among women who graduated from college in the late 1960s through the late 1970s, Goldin (1997) estimates that between 18% and 24% achieved both a career and a family.

This paper focuses on the complex interrelationships in the marriage, work and earnings careers of men and women. Since decisions to marry, to divorce, to work for pay and for how many hours are often made jointly, with choices on one dimension dependent on choices on another, we consider all these outcomes simultaneously and examine both career and marriage outcomes separately for men and women.

2. The Social Security Program

Individuals receive may benefits under the retired-worker program if they have accrued 40 or more quarters of covered earnings over their work lives. Benefits are computed by indexing annual earnings over a person's work life and then calculating average indexed monthly earnings (AIME) and primary insurance amount (PIA), the benefits payable to the covered worker at the normal retirement age, which is currently 65. Monthly benefits are reduced for retirement before this age.

Individuals may also be eligible for benefits as the spouse of a covered worker. As pointed out earlier, virtually all of those receiving benefits as the spouse of a covered work are women, so in the following discussion, we refer to women who receive spouse benefits. A woman only needs to be married to a covered worker at his retirement to be eligible for spouse benefits, which are effectively equal to one-half of the husband's PIA, unless it is reduced for early retirement. If the husband dies before the wife, which is generally the case, then the widow receives the husband's full PIA, unless it was reduced for his early retirement, in which case she receives the reduced amount. Burkhauser (1994) argues that this distribution of substantially larger benefits to married couples than to surviving spouses fails to take into account the economies of scale enjoyed by couples and the relatively modest drop in expenses of older

couples when the household goes from two people to one, disadvantaging surviving spouses compared to members of couples.

Divorce may affect the Social Security benefits to which a woman is entitled, depending on how long the marriage lasted. Benefits to divorced women, called “auxiliary benefits”, are calculated for each eligible marriage among all previous marriages. Any marriage to a fully-covered covered worker is an “eligible marriage” if it lasted at least ten years. The amount of the benefits to which a woman is entitled depends on the earnings history of her ex-husband or deceased ex-husband. The amount also depends on whether he is still alive; divorced women whose ex-husband has retired receive benefits equal to one-half of his PIA until he dies, at which time their benefit increases to the full amount of his PIA. If he began receiving benefits prior to the normal retirement age, the benefits of his ex-wife are reduced. Divorced women whose only previous marriage lasted less than 10 years are not eligible for auxiliary benefits, nor are those married to a worker who was not covered by Social Security.

Many divorced women, especially those whose only marriage(s) was short, are eligible for benefits as covered workers themselves. But the gap in earnings between men and women workers, combined with the more disrupted work histories of women (Moen and Han, 1999), means that the PIA of the typical male worker is substantially higher than the PIA of the typical female worker. This is changing, however, as more women accrue earnings histories that make them eligible for sizeable benefits on their own account.

Note, however, that both wives and ex-wives of retired covered workers are eligible for a benefit equal to about one-half of his PIA, as long as the ex-wife’s marriage lasted 10 years or more. But the wife lives with the husband, and so receives the benefits of the full PIA to which *he* is entitled. The household income of these families tends to be substantially higher than that of a divorced women receiving auxiliary benefits. Note also that upon the death of the husband, the benefits due to the ex-wife and the benefits due to the widow are equal.

We estimate: (1) the impact of earnings, work hours and wages while unmarried on the likelihood of (re)marriage, (2) the effect of these measures of career success while married on the likelihood of divorce; (3) the effect of being married on men's and women's propensity to participate in the labor force, and conditional on participation, the effect of being married on earnings, wages and annual hours of work; for all these labor market outcomes we also estimate the effect of marital duration. Together, these results show a pattern of gender specialization in marriage, with men moving toward and women moving away from more intensive and extensive employment and the financial gain it brings. Success in the labor market while single increases the likelihood of marriage for men and decreases it for women. More work and greater financial rewards from work tend to stabilize marriage for men and destabilize marriage for women. Our results also show substantial change in the relationship between marital and employment careers for those born after WWII, but only for women. The employment careers of younger women are much less responsive to marriage than were those of their mothers or older sisters.

3. Data and Methods

Data for this analysis come from the Panel Study of Income Dynamics (PSID). The PSID began in 1968 with 5,500 households. Approximately half were drawn from a nationally representative sample and half drawn from the prior year's Survey of Economic Opportunity (SEO) sample, which oversampled low-income households. Demographic and socioeconomic data were collected for the household and each member of the household. Information was collected on all household members including children. The sample has been resurveyed each year since that time and contains detailed employment and earnings histories for all sample members. The 1985 wave (eighteenth wave) of the PSID included a special Heads' and Wives Interview, which obtained a detailed marital and fertility history (and work history) for the head of the household (single female head, single male head or husband of couple), for wives (if an intact couple), and for others in the family. The marital history includes dates of all marriages and divorces and the first separation in each marriage.

The PSID includes interviews with the head of all the original 1968 households annually until their death or until they could not be contacted. These interviews obtain detailed information on all household members. Members of the original sample are followed if they form their own household, either as children become adults or after the dissolution of the original household. As a result, between 1968 and 1992, the PSID includes a total sample of 45,005

individuals; complete marital histories are available for 24,762 sample members. We eliminate those who were never a household head or wife of household head (5,682), those older than age 65 at their first interview, those younger than age 25 at the last interview, those for whom we never observe labor income and those for whom we never observe hours of work. The resulting analysis sample includes 16,121 sample members, including 7,645 males and 8,476 females.

This paper examines together the marriage histories and the work histories of men and women as they enter and exit marriages over the twenty-five year period from 1968-92. We present results for pairs of components of the earnings history of men and women (participation and hours, wages or earnings) modeled simultaneously with marriage and divorce. We estimate these models separately for black and white men and women, using up to twenty-five years of work history data from the Panel Study of Income Dynamics (PSID) combined with complete marriage and divorce histories for PSID respondents. We model marriage and divorce as the waiting time to the occurrence of each. Consider the hazard of entry into the j -th marriage (denoted m) and of the dissolution of that marriage (denoted d) for person i at time t

$$\ln h_{ji}^m(t) = \alpha_1' X_m + \alpha_2 \ln Earn_{it}^{unmar} \quad \text{and} \quad \ln h_{ji}^d(t) = \alpha_3' X_m + \alpha_4 \ln Earn_{jit}^{mar}$$

Both events may occur multiple times over the period of observation for any particular individual. The model for the timing of each occurrence of the event, while at risk, is a continuous-time failure-time process represented by a hazard equation. This equation describes the probability that an occurrence of the event will take place at time t , conditional on its not yet having occurred, and incorporates various forms of time or duration dependence, individual and time-varying covariates, and individual heterogeneity. The hazards equations are defined for each point in time in which the person is at risk of the event. Each individual who is not currently married is assumed to be at risk of marrying and married individuals are at risk of divorce, and at risk of marrying again, following divorce.

The model considers sets of labor market behaviors jointly with marriage and marriage dissolution. These labor market behaviors include the propensity to participate in the labor force and, conditional on participation in the labor market, either log annual earnings, log annual hours of work or log average annual wages (annual earnings/annual hours). Each labor market outcome is a function of marital status, marriage duration and measures of the number and ages of children (in addition to other covariates).

$$\ln Earn_{it} = \beta_1' X_m + (\beta_2 + \eta_{im}) Mar_{it} + \beta_3 Mardur_{it} + \beta_4 Kids_{it} + \varepsilon_i + u_{it}$$

We exploit the detailed information on the timing of events in the PSID to use the temporal ordering of events for identification. We can estimate the degree of variation in person-specific components of the separate processes, and the correlation among those components, by exploiting the fact that many individuals in the PSID experienced multiple episodes of a particular process (more than one marriage, multiple periods of labor force participation, multiple observations of earnings). Table 1 presents the distributions of the number of marriages and unmarried spells in our sample.

We present results from sets of estimates including marriage, dissolution, labor market participation while married and unmarried, and one of the following three additional outcomes: annual earnings; annual hours of work; or annual average hourly wage. Since likelihood ratio tests showed significant differences in coefficients for whites and blacks, we present results separately for white and black men and white and black women. Note that although we use the term “white” for expositional convenience, in practice this group includes all individuals whose race is not black.

4. Participation, Earnings, Hours and Wages While Single Affect Chances of Marriage

Men who are successful in the labor market are attractive prospects on the marriage market. Table 2 shows the effect of earnings, hours and wages for single men, who may be divorced or widowed, on the likelihood that they marry for the first time or enter a remarriage. The first row shows the effects for white men and the second row shows the effects for black men. Keep in mind that these estimates come from models that include the propensity to participate in the labor force and earnings, hours or wages given participation.

Note that all three measures of labor market success are strongly and positively associated with the likelihood that single men marry. The higher the earnings of single men, the more hours they work, and the higher their wages the more likely they are to marry. This is true for both white and black single men. Note that the three measures have remarkably similar effects on marriage for white men, whereas for black men, hours of work seem to carry the most weight in marriage choices, with earnings and wages somewhat less important than hours and somewhat less important than they are for white men. We speculate that the much higher unemployment rates for black than white men, their higher rates of non-participation in the labor force and their greater job instability generally, makes work hours a better indicator than

earnings or wages to potential spouses of black men's future prospects as a family breadwinner. Black women place greater emphasis than white women on men's earnings prospects when evaluating them as husbands, perhaps because labor market attachment can be taken as given much less readily for black than for white men.

The second panel of Table 2 shows the effects of earnings, hours and wages on the hazard of marriage for women, with white women in the first row and black women in the second. Two features of these results deserve mention: first, labor market success while unmarried has much weaker effects on the chances of marriage for women than for men; second, labor market success affects chances of marriage very differently for white and black women, with negative effects for whites and either no effect or a positive effect for blacks.

For white women, higher earnings, more hours of employment, and higher wages while single all reduce the chances of marriage. This suggests that (1) success in the labor market makes it harder for women to make a marital match, (2) women with relatively high wages and earnings search less intensively for a match, or (3) successful women have higher standards for an acceptable match than women who work less and earn less. Consistent with these results, Goldscheider and Waite (1986) find that young women who plan to hold a job later in life rather than to work full-time in the home are less likely to marry in any given year.

For black women, however, earnings and hours of employment have no effect on the hazard of marriage, whereas higher wages increase the hazard of marriage. The impact of wages on marriage is twice as large for black men as for black women, but, unlike the case for whites, it is positive for both men and women. These results show positive assortative mating on labor market outcomes for blacks, and sorting on complementaries for whites (Becker, 1981).

5. Participation, Earnings, Hours and Wages While Single Affect Chances of Divorce

Table 3 shows the effects of earnings, hours and wages on the hazard of marriage dissolution, for men in the top panel and for women in the bottom panel. Labor market success makes men more attractive husbands, on average, both to single women considering marriage and to wives. So, markers of success in the labor market both increase chances of marriage for unmarried men and decrease chances of divorce for husbands. For both white and black men, higher earnings, higher hours of work, and higher wages all decrease the hazard that their marriage will dissolve. The effects are strong and quite similar in size for white and black men,

with the single exception that wages have a much larger negative impact on the divorce chances of black than white men.

For women we see the opposite pattern to that shown for men, with similar effects for white and black women. Higher earnings, higher hours of work and higher wages all increase the chances of divorce for women. Some scholars argue that financial independence, in the form of own earnings, allows women to leave an unhappy marriage. The same reasoning would suggest that higher earnings would allow *husbands* to leave an unhappy marriage, however own earnings are negatively related to chances of divorce for husbands and positively related to chances of divorce for wives. But husbands typically earn more than wives, in part because women tend to reduce their labor market activity when they marry and have children, as we saw earlier. So husbands tend to contribute more to the household income than wives do, and the economic well-being of wives generally falls much more at divorce than that of husbands (Peterson, 1996) and this financial dependence may cause some women to remain married to men that they would leave if it didn't cost them so much to do so.

Women's labor market success may also increase the chances that they divorce by decreasing the quality of the marriage. Stolzenberg (2001) finds that the husbands of wives who work more than 40 hours per week suffer health declines over the next several years, compared to husbands whose wives work fewer hours. He argues that wives working long hours do not have adequate time to monitor their husband's health and healthy behavior, to manage their husband's emotional well-being or to buffer his workplace stress (see also Umberson, 1992). Some scholars argue that women's career success causes marital dissatisfaction in their husbands, who feel eclipsed in their role as family breadwinner (Bird, 1997).

6. Effects of Marriage and Marital Duration on Participation, Earnings, Hours and Wages of Men

Table 4 shows the effects of being married and of marital duration on labor force participation, earnings, hours, and wages for white and black men. It also shows the interaction of marriage with birth cohort. The degree of heterogeneity in behavior risks and correlation among them are presented in subsequent tables and must be considered part of the overall picture. The first column of estimates shows the effects of these three variables associated with marriage on labor force participation. The next three columns show the effects on log earnings,

on log annual hours of work and on log average hourly wage respectively, each estimated jointly with the participation, marriage and divorce equations.

Table 4 shows that upon entry into marriage, on average men increase their labor attachment, including their propensity for participation, their earnings, their wages, and their hours of work. This general pattern holds for both white and black men, although the specifics differ. For white men, we see no effect of being married on propensity to participate but a modest, significant, increase in this propensity with marital duration. As the marriage continues, white men increase their earnings and hours of work modestly but significantly, even gaining more wage growth. Black men experience the same increase in labor force attachment upon marriage, but do not show gains in the propensity to participate with marriage duration. Both white and black men show significant increases in earnings upon marriage, and black (but not white) men see additional increases as the marriage progresses. White men's hours rise when they marry and continue to increase with marital duration; for black men, the effect of getting married is imprecisely estimated but the effect of marital duration on hours is positive and significant. And, for black but not for white men, wages rise at marriage. Marital duration shows no relationship with wages for men of either race.

These results are consistent with those based on single-equation models; marriage tends to move men toward more intensive and extensive involvement with the labor market, including participation, hours of work, wages and earnings. Both white and black men show this pattern. Note that the effect of marriage on labor market outcomes never differs for men born before and after 1945. Men in recent cohorts behave in the same ways that their fathers and older brothers behaved years earlier.

7. Effects of Marriage and Marital Duration on Participation, Earnings, Hours and Wages of Women

Table 5 parallels Table 4 but presents results for women. This table contains estimates of the effect of marriage and marital duration for white and black women. It also shows the interaction of marriage and having been born during the Baby Boom.

Table 5 also illustrates the mirror relationship between marriage and labor market outcomes for women, with more consistent and stronger responses to marriage among white than black women. White women become substantially less likely to participate in the labor market, and reduce their earnings and hours of work upon entry into marriage. These effects are quite

sizeable and appear only upon marriage; marital duration has no effect on propensity to participate, earnings or hours. However, women's wages (conditional on participation) do not fall significantly at marriage and rise with marital duration. This suggests that married women who remain in the labor force may reduce hours and, as a result, earnings, but continue to see increases in hourly wages.

Black women show no reduction in propensity to participate upon marriage, no change in earnings, and no change in wages. They do show a drop in hours of work given employment, but this is much smaller than the drop in hours of work upon marriage for white women. Black married women see an increase in their propensity to participate in the labor force with marital duration, similar to the increase in wages with marital duration shown by white women. So marriage has fewer and smaller negative effects on labor market outcomes for black than for white women.

Note, however, that the world has changed for women. For both black and white women the interaction of "Married" and "Baby Boom" is positive and significant for participation. To assess the meaning of this interaction, we must consider it in combination with the main effect of marriage. For white women, propensity to participate declines very substantially upon marriage. For women born since 1945, this drop is much smaller, but still substantial. For black women, propensity to participate does not fall significantly upon marriage, and among younger women it rises markedly. We see that the fall in hours, given employment, is about half as large among younger than older cohorts, but no difference appears in either earnings or wages. Younger black women seem to increase earnings and hours, as well as participation upon marriage, but see a decline in wages. These changes in the relationship between marriage and labor market outcomes is dramatic for women and stands in marked contrast both to the behavior of older women and to the unchanged impact of marriage on men's careers.

8. Effects of Parenthood on Participation, Earnings, Hours and Wages of Men

Table 6 shows the effect of parenthood on men's labor market outcomes for White men. Results are similar for Black men and are not presented here. We compare the impact of children while unmarried and while married. Note, however, that it is relatively rare for unmarried men to head households containing their own children, or other children. The number of own children present in the household has a positive effect on the propensity of an unmarried man to participate in the labor force, a positive effect on earnings and on hours, and no effect on

wages. For unmarried men, “other” children, those not born to this man, have a positive effect on his earnings, but effects on other labor market outcomes are imprecisely estimated, probably because of the relative infrequency with which unmarried men live with children not their own. For married men, we see a strong positive effect of having any own children with this spouse on all labor market outcomes; given parenthood, each additional child has no further effect. We see a small positive effect of “other children,” those not born to this couple, on husband’s hours and no effect on participation, earnings or wages.

9. Effects of Parenthood on Participation, Earnings, Hours and Wages of Women

For women, as we saw in the case of marriage, the results are almost the mirror image of those for men, as Table 7 shows. Having children reduces women’s propensity to participate in the labor market, her earnings and her hours. This is true whether she is married or unmarried, although the effect is somewhat larger for married women. Interestingly, children either decrease wages (for unmarried women) or have no effect on wages (for married women), given participation. This result contradicts findings from single-equation models (Waldfogel, 1999) which find that children reduce women’s wages.

For married women we estimate the effect of children of various ages on labor market outcomes and find substantial differences. As we might expect, very young children, those 0-6 years old, move women strongly away from labor market involvement, reducing participation, hours, earnings, and wages. For all labor market outcomes, the impact of children is largest for the youngest children and falls with increasing age, so that the negative effects of children on participation, hours, earnings, and wages become smaller as children get older. By the time that children are essentially adults—ages 19 and older, each child *increases* the mother’s propensity to participate, hours and earnings, and has no effect on wages, as Oppenheimer (1994) suggests. Note that children not born to this couple affect women’s labor market outcomes in ways quite similar to own children, the impact is somewhat smaller.

10. Couple Heterogeneity in Participation, Earnings, Hours and Wages

The positive effect of marriage on men combined with the negative effect for women suggests, on average, specialization in marriage in which, typically, men specialize in labor market activities and women specialize in non-labor market activities. Note, however, from the first row of each panel of Table 8, that conditional on the average response to marriage, in couples in which the husband changes his behavior more than average toward the labor market

upon marriage, his spouse is positively inclined to do the same. That is, upon marriage, as deviations from average behavior, the husband's and wife's labor market behaviors are positively correlated in participation, earnings, hours of work, and wages.

In addition, the second row in each panel of Table 8 shows that the correlations are similarly strong for the change in labor force behavior of a husband-wife pair upon entering marriage for both whites and blacks. That is, net of the average changes discussed earlier, those husband-wife pairs who both increase (decrease) their participation upon entry into marriage also both strongly increase (decrease) their earnings, hours of work and wage rate.

Previous studies have almost universally studied earnings conditional on participation in the labor market as a separate process from participation in the labor market. (See for example the SSA's MINT [Modeling Income in the Near Term] Report 1999.) The results in Table 8 speak to the issue of whether this is appropriate when forecasting future earnings.

11. Individual-Level Heterogeneity in Participation, Earnings, Hours and Wages

Table 9 shows individual propensities toward labor force participation, and earnings, hours and wages given participation, estimated from the joint hazard model described earlier. The heterogeneity component in the first column is the individual-level component for labor force participation. It measures the extent to which people with a greater propensity, for reasons which we do not measure, to participate in the labor market at one time also show a greater propensity at other times. This component is positive, statistically significant and sizable for both men and women, being smallest for white women. The next three components, in the first row of Table 9, are the individual-level components for earnings, hours and wages, given participation. These show a stronger relationship for women (both white and black) than for men, with white men showing the smallest heterogeneity component in earnings across periods. The second row of estimates in each panel of Table 9 reports the correlation between the individual (permanent) component in the propensity to participate in the labor market with the individual (permanent) components of log earnings, log hours and log wage rate respectively. These correlations are all large and positive for each of the race-gender groups and each of the outcomes. Those persons who are more likely to participate in the labor market are also likely to earn more, work more hours and earn a higher wage per hour.

12. Discussion

The robustness of the relationships both across measures of labor market success and across gender and race is striking. Taken together, the very strong relationships between the labor force participation and earnings of men and women, of their dependence on the particular marriage in which they occur, and the effect of earnings on marital choices, point to the interdependence of the marriage and earnings histories of both men and women as they reach retirement.

13. References

- Becker, Gary S. 1981. *A Treatise on the Family*. Chicago, IL: University of Chicago.
- Becker, Penny Edgell and Phyllis Moen. 1999. "Scaling Back: Dual-Earner Couples' Work-Family Strategies." *Journal of Marriage and the Family* 61:995-1007.
- Bergstrom, Ted, and Robert F. Schoeni. 1996. "Income Prospects and Age-at-Marriage." *Journal of Population Economics* 9:115-130.
- Bird, Chloe E. 1997. "Gender Differences in the Social and Economic Burdens of Parenting and Psychological Distress." *Journal of Marriage and the Family* 59(4):809-823.
- Blair-Loy, Mary. 1999. "Career Patterns of Executive Women in Finance: An Optimal Matching Analysis." *American Journal of Sociology* 104:1346-1397.
- Burkhauser, Richard V. 1994. "Protecting the Most Vulnerable: A Proposal to Improve Social Security Insurance for Older Women." *The Gerontologist* 34:148-149.
- Butrica, Barbara A., Howard M. Iams, and Steven H. Sandell. 1999. "Using Data for Couples to Project the Distributional Effects of Changes in Social Security Policy." *Social Security Bulletin* 62:20-27.
- Dalaker, Joseph and Bernadette D. Proctor. 2000. "Poverty in the United States: 1999." *Current Population Reports, Series P60-210*. Washington, DC: U.S. Government Printing Office.
- Goldin, Cynthia. 1997. "Career and Family: College Women Look to the Past." Pp. 20-64 In: Francine D. Blau and Ronald G. Ehrenberg (Eds.), *Gender and Family Issues in the Workplace*. New York: Russell Sage.
- Goldscheider, Frances K. and Linda J. Waite. 1986. "Sex Differences in Entry into Marriage." *American Journal of Sociology* 92:91-109.
- Grossbard-Shechtman, Shoshana. 1993. *On the Economics of Marriage: A Theory of Marriage, Labor, and Divorce*. Boulder, Colo.: Westview Press.
- Han, Shin-Kap, and Phyllis Moen. 1999. "Clocking Out: Men's and Women's Pathways through Work and Marriage in the United States." Forthcoming in Hans-Peter Blossfeld and Sonia Drobnic (Eds.), *Couples' Careers in a Dynamic Perspective*.
- Johnson, William R. and Jonathan Skinner. 1986. "Labor Supply and Marital Separation." *American Economic Review*, 76(3):455-469.
- Klerman, Jacob and Arleen Leibowitz. 1999. "Job Continuity Among New Mothers." *Demography* 36:145-155.

- Korenman, Sanders, and David Neumark. 1991. "Does Marriage Really Make Men More Productive?" *Journal of Human Resources* 26:282-307.
- National Research Council. 1995. *Measuring Poverty: A New Approach*. Constance F. Citro and Robert T. Michael, Editors. Washington, D.C.: National Academy Press.
- Nock, Steven L. 1998. *Marriage in Men's Lives*. New York: Oxford University Press.
- Oppenheimer, Valerie K. 1994. "Women's Rising Employment and the Future of the Family in Industrial Societies." *Population and Development Review* 20:293-342.
- Peterson, Richard R. 1996. "A Re-Evaluation of the Economic Consequences of Divorce." *American Sociological Review* 61:528-536.
- Stolzenberg, Ross M. 2001. "It's About Time and Gender: Wives' and Husbands' Work Hours, Income and Health." *American Journal of Sociology*, forthcoming.
- Umberson, Debra. 1992. "Gender, Marital Status and the Social Control of Health Behavior." *Social Science and Medicine* 34(8):907-917.
- Waite, Linda J., Gus W. Haggstrom, and David E. Kanouse. 1985. "Changes in the Employment Activities of New Parents." *American Sociological Review* 50:263-272.
- Waldfogel, Jane. 1997. "The Effect of Children on Women's Wages." *American Sociological Review* 62:209-217.

Table 1. Distribution of the Number of Marriages and Unmarried Spells with Labor Market Data

		Males		Females					
		Unmarried		Married		Unmarried		Married	
Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
3927	66.1	788	13.3	3701	55.1	1357	20.2		
1775	29.9	4799	80.8	2710	40.4	5030	75.0		
221	3.7	321	5.4	284	4.2	303	4.5		
15	0.3	29	0.5	15	0.2	19	0.3		
1	0.0	2	0.0	1	0.0	2	0.0		

Table 2. Effect of Earnings, Hours and Wages On the Hazard of Marriage for White Men, Black Men, White Women and Black Women

	Log earnings	Log Hours	Log Wage
Males			
White	0.3337 *** (0.0358)	0.3795 *** (0.0702)	0.3734 *** (0.0443)
Black	0.2647 *** (0.0471)	0.4001 *** (0.0889)	0.2898 *** (0.0806)
Females			
White	-0.0709 *** (0.0180)	-0.1071 *** (0.0262)	-0.1135 *** (0.0413)
Black	0.0405 (0.0255)	0.0440 (0.0358)	0.1402 ** (0.0635)

Table 3. Effect of Earnings, Hours and Wages On the Hazard of Marriage Dissolution for White Men, Black Men, White Women and Black Women

	Log earnings	Log Hours Males	Log Wage
White	-0.2093 *** (0.0684)	-0.3472 *** (0.1257)	-0.1713 * (0.0944)
Black	-0.2582 *** (0.0847)	-0.2025 (0.1661)	-0.5256 *** (0.1417)
Females			
White	0.1627 *** (0.0354)	0.2508 *** (0.0520)	0.1388 * (0.0823)
Black	0.0959 ** (0.0430)	0.1155 ** (0.0583)	0.2306 ** (0.1153)

Table 4. The Effect of Marriage and Marital Duration on Participation, Earnings, Hours and Wage, for White Men and Black Men,

	Participation	Log earnings	Log Hours	Log Wage
White Males				
Married	-0.1534 (0.1636)	0.0709 *** (0.0249)	0.0551 *** (0.0204)	0.0267 (0.0206)
Duration	0.0129* (0.0051)	0.0004 (0.0009)	0.0012 ** (0.0006)	-0.0012 (0.0008)
Married*Baby Boom	-0.1796 (0.2828)	-0.0056 (0.0347)	0.0026 (0.0259)	0.0001 (0.0297)
Black Males				
Married	0.8867 *** (0.2185)	0.1334 *** (0.0485)	0.0610 (0.0375)	0.0829 ** (0.0333)
Duration	-0.0102 *** (0.0078)	0.0044 ** (0.0019)	0.0033 ** (0.0014)	-0.0003 (0.0013)
Married*Baby Boom	-0.0379 (0.3166)	0.0646 (0.0656)	0.0386 (0.0256)	0.0133 (0.0423)

Table 5. The Effect of Marriage and Marital Duration on Participation, Earnings, Hours and Wage, for White Women and Black Women,

	Participation	Log earnings	Log Hours	Log Wage
White Females				
Married	-0.8414 *** (0.0950)	-0.2289 *** (0.0470)	-0.2351 *** (0.0466)	0.0283 (0.0248)
Duration	-0.0006 (0.0028)	-0.0010 (0.0015)	0.0015 (0.0015)	-0.0021 ** (0.0008)
Married*Baby Boom	0.2606 * (0.1382)	0.0969 (0.0651)	0.1224 (0.0587)	-0.0219 (0.0314)
Black Females				
Married	-0.0945 (0.0963)	-0.0761 (0.0557)	-0.0884 * (0.0482)	-0.0171 (0.0324)
Duration	0.0120 *** (0.0033)	0.0006 (0.0021)	0.0020 (0.0019)	-0.0015 (0.0013)
Married*Baby Boom	0.5526 *** (0.1268)	0.2215 *** (0.0688)	0.1496 ** (0.0606)	0.1012 *** (0.0385)

Table 6 The Effect of Children born to this and Other Unions on Participation, Earnings, Hours and Wage, for White Men

	Participation	Log Earnings	Log Hours	Log Wages
Unmarried				
Number of Head's Kids	0.1840****	0.0480***	0.0349***	0.0183
Number of Other Kids	0.2605	0.0679*	0.0328	0.0394
Married				
Any Children with Spouse	0.2766***	0.0536***	0.0301***	0.0216***
Number of Children	-0.0273	0.0003	-0.001	0.0018
Number of Other Children	0.1717	-0.0052	0.0177*	-0.0229

Table 7 The Effect of Children born to this and Other Unions on Participation, Earnings, Hours and Wages, for White Women

	Participation	Log Earnings	Log Hours	Log Wages
Unmarried				
	-	-	-	-
Number of Head's Kids	0.2561***	0.1392***	0.0939***	0.0460***
Number of Other Kids	-0.1059**	-0.2020	0.0102	-0.0253
Married				
	-	-	-	-
Any Children with Spouse	0.3637***	0.1967***	0.1834***	0.0104
	-	-	-	-
Number of Children Age 0-6	0.6826***	0.4421***	0.3391***	0.1056***
	-	-	-	-
Number of Children Age 7-12	0.2191***	0.2161***	0.1497***	0.0706***
Number of Children Age 13-18	-0.0223	-0.0573***	-0.0315***	-0.0298***
Number of Children Age 19+	0.1298***	0.0531***	0.0572***	-0.0063
Number of Other Children	-0.0601	-0.0216*	-0.0117	-0.0229***

Table 8. Partner Correlated Behavior in Participation, Earnings, Hours and Wage

	Participation	Log earnings	Log Hours White	Log Wage
Marriage Partner	0.8554 *** (0.0413)	0.3387 *** (0.0058)	0.1368 *** (0.0042)	0.2580 *** (0.0055)
Correl w/Partic		0.4025 *** (0.0500)	0.9745 *** (0.0474)	0.3023 *** (0.0437)
<hr/>				
			Black	
Marriage Partner	0.9186 *** (0.0422)	0.4177 *** (0.0113)	0.2275 *** (0.0084)	0.2218 *** (0.0084)
Correl w/Partic		0.4676 *** (0.0731)	0.5630 *** (0.0677)	0.1145 * (0.0672)

Table 9. Individual-Level Heterogeneity in Participation, Earnings, Hours and Wage

	Participation	Log earnings	Log Hours	Log Wage
White Males				
Heterogeneity	1.4548 *** (0.0390)	0.5653 *** (0.0063)	0.2670 *** (0.0027)	0.4061 *** (0.0060)
Correl w/Partic		0.6353 *** (0.0155)	0.6227 *** (0.0140)	0.3558 *** (0.0151)
Black Males				
Heterogeneity	1.5180 *** (0.0428)	0.7088 *** (0.0150)	0.3913 *** (0.0090)	0.4288 *** (0.0088)
Correl w/Partic		0.6486 *** (0.0157)	0.7407 *** (0.0137)	0.4937 *** (0.0192)
White Females				
Heterogeneity	1.0615 *** (0.0183)	0.9034 *** (0.0140)	0.5982 *** (0.0098)	0.4579 *** (0.0062)
Correl w/Partic		0.8380 *** (0.0083)	0.7365 *** (0.0103)	0.6107 *** (0.0133)
Black Females				
Heterogeneity	1.4163 *** (0.0283)	0.9551 *** (0.0214)	0.6302 *** (0.0140)	0.4300 *** (0.0089)
Correl w/Partic		0.7886 *** (0.0093)	0.7767 *** (0.0091)	0.6598 *** (0.0090)