

Career Women and the Durability of Marriage*

Andrew F. Newman[†] Claudia Olivetti[‡]

October 2018

Abstract

We study the relationship between divorce rates and female labor force attachment in the US. Recent cross-sectional evidence from US states displays a robust negative correlation between divorce and the rate of married female labor force participation. We suggest that this pattern can be explained by increased bargaining flexibility within two-earner as against one-earner households. Both members of two-earner marriages can use cash rather than less efficient in-kind or promised transfers to re-adjust intra-household allocations when compensating for preference shocks or changes in outside opportunities, rendering their marriages more durable. Using retrospective and longitudinal data, we show that all else equal, there is a lower propensity to divorce among families in which the wife is a “career woman,” i.e. has a higher labor force attachment, though these families seem to display no lower incidence of marital difficulties.

Keywords: divorce, bargaining, nontransferable utility, marital instability, female labor force participation

JEL codes: J12, D13, J21

1 Introduction

Many people believe that families with a working wife are more prone to divorce than those with a stay-at-home wife. Indeed, as women streamed into the labor force during the 1960s and 1970s, divorce rates increased significantly, and helped to cement the notion that marital instability and dissolution are costs of a gender-balanced workforce.¹ A look at more current evidence, however, suggests that this view needs to be reconsidered. For example,

*Thanks to Daron Acemoglu, Claudia Goldin, Georg Kirchsteiger, Chiara Margaria, Zvika Neeman, Victor-Rios-Rull, Dana Rotz, Alessandra Voena, Randy Wright and audiences at the NBER Summer Institute, Boston University, ECARES, Southampton, and the Barcelona Summer Forum for useful discussion. Deborah Goldschmidt Marco Ghiani provided outstanding research assistance. We are grateful to our spouses for contributing to variation in the data.

[†]Boston University and CEPR

[‡]Boston College and NBER

¹An example in the popular press is Noer (2006). We discuss scholarship on the question below.

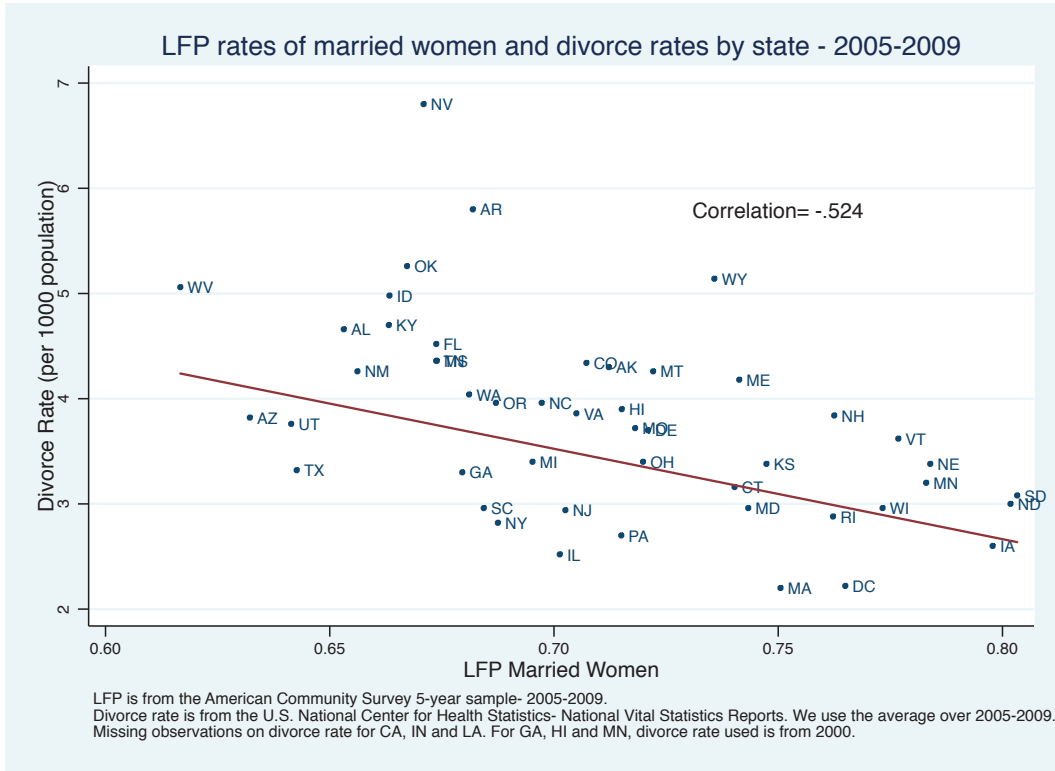


Figure 1: Divorce and married women’s labor supply, ACS 2005-2009

as displayed in Figure 1, there is actually a *negative* relationship between the divorce rate and the rate of married female labor force participation (MFLP) across U.S. states. This pattern is opposite to what would be expected if working wives were contributing on net to marital fragility. And, as shown in Table 1 and discussed in the Appendix, this negative correlation remains strongly significant even after controlling at the state level for demographic, economic, and institutional variables that been shown to bear on divorce; examples include levels of female education, age at first marriage, family size, income inequality, female participation in male-dominated occupations, or the presence of community property laws. Could it be then that the conventional wisdom is missing something? Might working women be *good* for marriage?

Economic theory provides a simple answer. It predicts that households with two permanent earners will behave differently from those with only one because of differences in the degree of *transferability* among household members. If a problem arises that lowers her partner’s satisfaction with the marriage, an earner can compensate with money, or what is the same thing, a balanced basket of market-procured and household-produced goods, while a non-earner must compensate only with household-produced goods. Thus, compared to a one-earner household with the same income, a two-earner household will be better able to make the frequent adjustments to consumption needed to keep both partners happy in the face of preference changes, problems with house or kids, or new outside opportunities. Under mild assumptions about the distribution of these “preference shocks,” the result is

a marriage for the two earner household that is less likely to dissolve; more generally, this marital durability is increasing in the equality of the partners' earnings.

In this paper, we illustrate the theoretical argument for this “transferability effect” and then provide evidence suggesting that it is operative in US households. We base our investigation on the Marital Instability over the Life Course (MILC), a longitudinal data set that follows a representative sample of married couples over a twenty-year span (from 1980 to 2000) and records information about labor force participation, earnings, and other economic and demographic characteristics, as well as a rich set of indicators of marital happiness.

The data let us confront the chief challenges to empirical detection and identification of the transferability effect. First, in some households, causality may be running from the state of the marriage to the labor supply decision, rather than the other way around. In particular, there may be households where the marriage is unstable, and the woman is therefore working either as a precaution (divorce is expected and she is investing in human capital or labor market contacts) or to compensate for losses in husband's income.² Such “remedial earners” would tend to generate a positive correlation between working and divorce, obscuring the negative relation predicted by the transferability effect. Indeed, in the conclusion we discuss how the presence of remedial earners may confound interpretation of the cross-sectional evidence on female labor force participation and divorce and the policy implications to be drawn.

We address this problem in two ways. First, we focus on “career women,” measured variously, but basically defined as those who are in the labor force a substantial fraction of the time both before and during marriage.³ Compared to remedial earners, career earners have lower costs of generating cash and current incomes that are more closely tied to their permanent incomes, both of which are attributes that facilitate the operation of the transferability mechanism. Second, we use panel data, particularly the distribution of earnings within households, to follow couples over time and help tease out the remedial from the career earners.⁴

The second difficulty comes from possible selection effects – a woman's propensity to have a career may be correlated with other attributes that lead her to have a higher quality and therefore more durable marriage. We have already mentioned age at marriage and education as examples, but there could be unobserved ones as well, such as character traits or match

²Much of the literature, especially outside economics, refers to marriages that are unmarked by strife, conflict, appeal to outside counseling and other indicators of low marriage quality as being highly “stable”; we shall follow suit and reserve the term “durable” for marriages that have a low probability of divorce.

³This is close to the notion of career woman as one who works regardless of marital status (e.g. Goldin, 1995); in 2000, over 85% of single women 25 to 34 were working, while only 70% of married women were.

⁴There is a crucial inference problem that arises in cross-section or short-panel data. In a cross-section of women we might observe that working women are more likely to be divorced, but this could simply reflect their need to make up for lost income from the break up. Similarly, in a short panel in which data are collected at only two dates, women who happen to anticipate a divorce in the near future may be (temporarily) working at the first date and be divorced at the second date. This could make it appear as though working women contribute to marital fragility when in fact it is just an instance of precautionary or remedial working.

quality that are correlated with career orientation. We handle this concern by exploiting a battery of quality-of-marriage questions in our data that allow us to assess whether career women in fact select into better marriages.

We find that all else equal, those couples in which the women are more attached to the labor force are less likely to divorce. Moreover, female labor force attachment has the strongest stabilizing effect in couples in which the woman earns close to 50% of family income. However, we do not find that these families have lower rates of marital disagreement. Taken together, our results suggest that it is the flexibility to accommodate disagreement, rather than a reduction in its incidence, that is keeping two-career marriages together.

Literature

Existing explanations connecting divorce and MFLP are varied, but all suggest that MFLP and divorce rates should covary. Most find causality running from MFLP to divorce rates: career women are more independent and therefore more willing to divorce, (Nock, 2001); the incomes of husbands and wives are substitutes, making marriage between equals less valuable (Becker, Landes, and Micael, 1977); or there is increased marital conflict within career couples (Mincer, 1985; Spitz and South, 1985).

Some authors have suggested that the two trends reflect a spurious correlation: improvements in home production technology, which both lowers the opportunity cost of working and reduces the value of a marriage, have contributed to increased MFLP and to increases in divorce (Ogburn and Nimkoff, 1955; Greenwood and Guner, 2004). In recent work, Stevenson and Wolfers (2007) suggest that other technological factors, such as the contraceptive pill, and changes in the wage structure, that have been found to be important determinant for the increase in labor force participation of married women might also be responsible for a concurrent increase in divorce rates.⁵

Finally, as already mentioned in conjunction with remedial earners, there is a possibility that causality runs the other way, and there is indeed a significant set of papers that explore this possibility. The earliest papers in this vein pointed out that in the face of high divorce rates, married women have increased incentives to invest in careers, as a kind of self insurance (Greene and Quester, 1982; Johnson and Skinner, 1986; Johnson 1994). Married women’s labor force participation might also increase as the result of conflicting spousal preferences towards the adjustment of marital consumption in the face of increased divorce risk (Fernandez and Wong, 2014). Relatedly, an increase in divorce risk (as proxied by the shift from mutual consent to unilateral consent divorce) might reduce the returns from marriage-specific investments and increase the incentives to invest in labor marketable skills (Stevenson, 2007), or can result in limited commitment within marriage and in a realloca-

⁵Rasul (2006) suggests that changes in divorce law would have led to temporary increases in divorce that would then have fallen back to trend levels, which have in fact been falling over the past twenty years; see also Wolfers (2006). It is not clear whether this “pipeline” effect can account for the whole trend over forty years, and in any case it makes no connection between divorce and MFLP.

tion of resources inside the household that impact married women’s labor supply decision (Voena, 2015).⁶

As we will discuss, there is evidence that this causal link is operative for a substantial fraction of women, enough to confound inference on the effects of female work on marriage durability. In fact, though all the theoretical links we have mentioned seems intuitive and plausible, on balance empirical findings have been inconclusive, with different mechanisms seemingly predominating across data sets or over time (Stevenson and Wolfers, 2007; Killewald, 2016).

Bertrand et al. (2015) provide evidence that some women display labor supply behavior that effectively ensures their shares of household income remain below 50%. This is consistent with our own data in which high attachment women typically earn around 30-40% of the household income, and there are no cases in which the wife’s earning exceeds 50%. Moreover, our theory also suggests that should such counterfactual couples exist, their divorce rates would be somewhat higher than those in which the woman earns closer to 50%.

In addition to re-examining the relationship between divorce and MFLP, this paper contributes to a literature that seeks to distinguish empirically the effects of varying degrees of transferability within households and other institutions. It has long been understood theoretically that the non- or imperfectly-transferable-utility case differs radically from the transferable-utility one in terms of both predicted behavior (intra-household allocations, choice of organizational design in firms, sorting patterns, or investment behavior) and welfare (Becker, 1973; Legros-Newman 1996, 2007; Peters and Siow, 2002). There has been rather less work that derives practically testable implications of these differences (e.g., Cherchye, deRock and Vermuelen, 2015) or that implements them empirically (Udry, 1996).

The rest of the paper proceeds as follows: in the next section we present a simple model of the transferability effect. The main empirical analysis based on longitudinal data is presented in Section 3. Section 4 offers concluding remarks, with some discussion of trends and policy implications.

2 Conceptual Framework

The purpose of this section is to provide a simple reduced form model that isolates the transferability effect in order to show how it affects marriage durability. In the empirical section we will, of course, have to take account of other effects (some of which we have already mentioned) that may effect durability but whose logic is already well established in the literature.

We employ the standard household bargaining framework in which the two decision makers derive utility from private goods and a local public good that is enjoyed if and only if

⁶Voena (2015) argues that whether the increase in divorce risk increases or decreases the labor force participation of married women depends on the property division laws. Equitable distribution and unilateral divorce, by rewarding the spouse with the lower share of marital resources, might incentivized lower married women’s labor force participation.

they remain together. Assume that preferences can be represented by an additively separable utility of the form $u_i(c) + \phi$, where c is a vector of private good consumption and ϕ represents the utility of “local public goods” (LPG) derived from the marriage (companionship, children, possible scale economies in housing or other private goods), representing the net benefit of remaining married.⁷ Assume that preferences are monotone and that the indirect utilities corresponding to $u_i(c)$ are linear in income.⁸ If the couple were to divorce, they would each obtain an autarky payoff represented by the indirect utilities $(v, I - v)$, where v is the monetary earnings of one partner, and $I - v$ that of the other.

Money facilitates transferability. There are several possible reasons for this. One is that money enables the purchases of balanced bundles of consumption goods that may be transferred between partners. In-kind transfers are less efficient means of transferring utility. The second reason, inspired by contract theory, is that money can be transferred now, whereas in-kind payments may have to be transferred in the future. The monetary transfers are thus less subject to moral hazard and other commitment problems than are other means of intrahousehold transfers. Third, money enables an aggrieved party to directly purchase a suitable good that may compensate for a loss of LPG utility rather than engaging in costly bargaining to get the partner to do so.

Thus, utility transfers can be made one-for-one transfers with money. Beyond the limit of monetary means, utility transfers are accomplished less efficiently: along the frontier, the utility given up by one partner exceeds that gained by the other. Thus when one partner’s utility is less than ϕ , the slope of the frontier is less than 1 in magnitude, while above $\phi + I$, the slope exceeds one. We assume these non-monetary means of making utility transfers are equally effective on the margin, given their level, for each partner: the frontier is symmetric about the 45°-line.

Figure 2 illustrates the basic logic. Two households, 1 and 2, with equal incomes I and equal initial realizations ϕ of the payoffs from the LPG, share a utility possibility frontier (W_0). There is perfect transferability achieved by sharing earned income (so that the indirect utilities are given by $(y_1 + \phi, y_2 + \phi)$, where y_i is the income used by partner i to purchase private consumption. The frontier illustrates the extreme case of *no* transferability once earned income I has been exhausted. The households differ *only* in the way in which earned income is initially distributed. Household 1 has one earner: this is reflected by the utility distribution that would occur if the household were to divorce, which is represented by the autarky point A_1 . Household 2 has two (equal) earners, with autarky payoffs represented by A_2 . Suppose that the households have reached an equilibrium allocation of private goods

⁷Though ϕ might depend on income in some of these interpretations, we suppress that dependence here, as we control for household income in both the theoretical and empirical analyses.

⁸There is a significant literature (e.g. Bergstrom and Varian, 1985) that studies restrictions on preferences lead to such utility functions and to transferable utility possibility frontiers *assuming that there is frictionless trade between the partners in all goods*. It is worth emphasizing that we are not so much concerned with this issue as with money’s role in diminishing frictions such as transaction costs or moral hazard that would turn a linear frontier into a nonlinear one; our basic point would remain valid even if preferences did not satisfy the Bergstrom-Varian restrictions, though the computations would naturally be rather more complex.

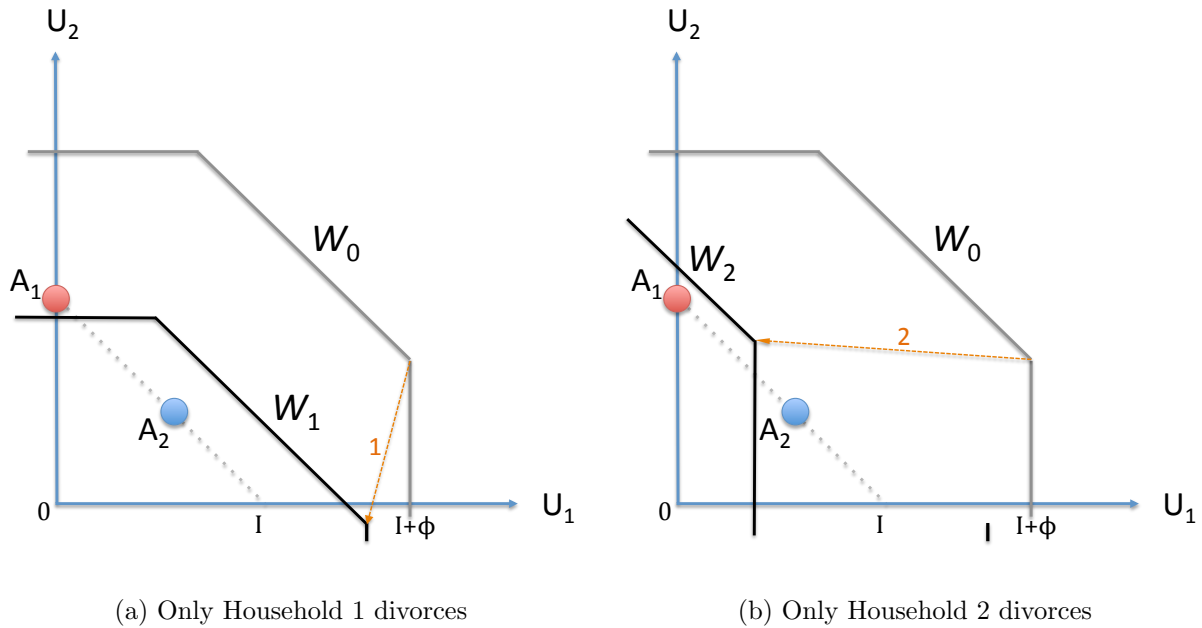


Figure 2: Bargaining sets before and after preference shocks.

— we make no particular assumptions about the bargaining protocol they use except that it does lead them to some point on their (constrained) Pareto frontier.

Now let each partner experience a “shock” to the payoff from the LPG, indicated by the dashed arrow 1 in panel (a) of the diagram. This could represent such things as a change in how they feel about each other, the unexpected pleasure (or stress) from an additional child, or since the LPG simply represents the partners’ net benefits of being married to each other, a change in outside opportunities. Following the shocks, there is a new utility possibility frontier W_1 . Shocks could be positive or negative; in this case W_1 reflects a mild negative shock for partner 1 and a rather large one for partner 2. The partners may be induced to renegotiate the allocation of private goods following the change in LPG. As long as the autarky payoff vector is Pareto dominated by some point on the frontier, the couple will remain married and settle on a payoff allocation on the new frontier. But should the autarky payoff now lie “outside” the frontier, there are now no realizable net gains from trade, and the couple will divorce. In the figure, the one-earner household 1 divorces, but following the *same* shock, the two-earner household 2 remains married.

There are of course shock realizations that could result in divorce for Household 2 but not for Household 1 (shock 2 in panel (b)). But under mild restrictions on the distribution of shock values (namely, that large ones are less probable than small ones), this is a less likely outcome, and averaging over all possible shocks, the result is that *the 2-earner household’s marriage is more durable*. Though our focus in the empirical analysis is on the difference between egalitarian households like the two-earner Household 2, and rather less egalitarian

ones like Household 1, it turns out that these same properties of shock distributions imply that the relationship between earnings equality and marriage durability is monotonically increasing.

To be a bit more formal, represent the household utility possibility frontier by $(x, W(x))$, where $W(x)$ is a continuous, strictly decreasing (therefore a.e.-differentiable), self-inverse function on \mathbb{R} , with $W(x) = I + 2\phi - x$ for $x \in [\phi, \phi + I]$. Elsewhere,

$$0 \geq W'(x) > -1 \text{ a.e. on } (-\infty, \phi) \text{ and } W'(x) < -1 \text{ a.e. on } (I + \phi, \infty).$$

The self-inverse property $W(W(x)) \equiv x$ captures the symmetry of the partners in their (ex-ante) tastes for the LPG and for their ability to make utility transfers beyond those effectuated with monetary earnings. One partner earns v , the other earns $I - v$, where $0 \leq v \leq I$. Thus $v = I/2$ is the egalitarian two-earner household, and $v = 0$ (or $v = I$) is the one-earner household.

The value of the local public good is subject to a shock for each partner, after which they renegotiate the intra-household allocation. Shocks are drawn independently from the same distribution $F(\cdot)$ with support $(-\infty, \infty)$ and density $f(\cdot)$. The density f is *log concave*, which is a convenient way to formalize the idea that larger shocks are (weakly) less likely than small ones.⁹

If the household divorces, each member gets an autarky payoff equal to the indirect utility of earnings, i.e., the autarky payoff is $(v, I - v)$. It is convenient to think of the shocks as being added to the autarky payoffs rather than subtracted to the value of the public good. As long as the shocks (ϵ, η) added to the autarky payoffs remain inside the frontier, that is, $I - v + \eta \leq W(v + \epsilon)$, the marriage continues. Given ϵ , this happens with probability $F(W(v + \epsilon) - (I - v))$, and the marriage's *durability* – the probability that it stays together – is then

$$D(v) = \int_{-\infty}^{\infty} f(\epsilon) F(W(\epsilon + v) - I + v) d\epsilon$$

One special case is worth noting. When $W(x) = I + 2\phi - x$ everywhere (full transferability), then the argument of $F(\cdot)$ is just $2\phi - \epsilon$, i.e. the distribution of earnings within the household, as well as their aggregate level, are irrelevant.

We now state and prove the main theoretical result.

Proposition 1 *Suppose the household has income I and the value of local public good is ϕ for each partner. Assume*

- (1) *The household utility possibility frontier is symmetric, transferable on $[I, I + \phi]$ and imperfectly transferable outside of $[I, I + \phi]$;*
- (2) *Preference shocks are i.i.d. with log-concave density.*

Then the durability of marriage is increasing in the equality of household earnings.

⁹The density f is log-concave if $\log f$ is concave; this implies $f(x)f(y) - f(x - \delta)f(y + \delta) \geq 0$ for $x < y$ and $\delta > 0$, among other things; many commonly used distributions (including the uniform, normal, logistic, and Laplace) have log-concave densities. See e.g., Bagnoli and Bergstrom (2005).

Proof We show that $D(\cdot)$ is increasing below $I/2$ and decreasing above $I/2$. Now,

$$D'(v) = \int_{-\infty}^{\infty} f(\epsilon)f(W(\epsilon + v) - I + v)(W'(\epsilon + v) + 1)d\epsilon.$$

Make the change of variable $x \equiv \epsilon + v$; then

$$D'(v) = \int_{-\infty}^{\infty} f(x - v)f(W(x) - I + v)(W'(x) + 1)dx.$$

Since $W'(x) + 1 = 0$ for $x \in (\phi, \phi + I)$,

$$\begin{aligned} D'(v) &= \int_{-\infty}^{\phi} f(x - v)f(W(x) - I + v)(W'(x) + 1)dx \\ &\quad + \int_{\phi+I}^{\infty} f(x - v)f(W(x) - I + v)(W'(x) + 1)dx. \end{aligned}$$

Use the change of variable $\hat{x} = W(x)$ in the second term, and note that $W(\hat{x}) = x$, $x = \phi + I$ implies $\hat{x} = \phi$, and $x \rightarrow \infty$ implies $\hat{x} \rightarrow -\infty$, to rewrite this as

$$D'(v) = \int_{-\infty}^{\phi} [f(x - v)f(W(x) - I + v) - f(x - I + v)f(W(x) - v)](W'(x) + 1)dx. \quad (1)$$

Since $x < W(x)$ on $(-\infty, \phi]$ log-concavity of f implies $f(x - v)f(W(x) - I + v) - f(x - I + v)f(W(x) - v) \geq 0$ iff $v \leq I - v$, with strict inequality on a non-null set. Moreover, $W'(x) + 1 > 0$ a.e. on $(-\infty, \phi]$. Thus, $D' > 0$ when $v < I - v$ and $D' < 0$ when $v > I - v$, as claimed. \square

Remark 1. Symmetry is the natural benchmark. But in the asymmetric case in which one partner values the marriage more than the other, durability will tend to be maximized at a point where that partner has a higher monetary income. A leading example of such preferences is when one partner dislikes being in the labor force relative to remaining in the home. If marriage allows this partner to remain at home, the distribution of earnings is opposite to what it needs to be to maximize durability, reinforcing our contention that marriages in equitable two-career households are the most durable.

Remark 2. It is not necessary that autarky payoffs equal the (indirect utility of) within-marriage earnings: what matters is that the autarky payoffs corresponding to equal earnings are equal and that the difference in the autarky payoffs is monotonically increasing in the earnings difference.

Remark 3. The result is not merely about the role of inequality; transferability is also important. Consider the extreme case where utility is strictly non-transferable from the autarky point (i.e., the partners cannot transfer any income to the other). The couple's Pareto frontier is then the autarky point translated by the initial value of the LPG. Thus the distribution of (non-transferable) earnings has no impact on the likelihood of divorce:

shocks that drive the autarky point northwest, southeast or northeast of the frontier result in divorce, and this is *independent* of where the autarky point may be initially (moving the autarky point implies a parallel movement of the frontier). By contrast, as we have seen, when income is transferable, moving the autarky point has no effect on the position of the frontier, and equality maximizes durability. In this sense transferability and equality are complements.

3 Empirical Analysis

The starting point of the analysis is to construct marital and employment histories for a cohort of married couples and study how, all else equal, wives' employment status affects the stability of a couple's marriage over time. This requires the use of a panel data set where we can follow a couple over a sufficiently long period of time to distinguish women who are temporarily working from those who are permanently working (hence labor force attachment), as well as observe whether the marriage ultimately ends in divorce.

3.1 Data

We draw on the MILC data set that follows married couples over a 20-year span.¹⁰ This data set is very useful for our purposes as it was designed in order to examine the causes of marital instability of a group of married individuals.¹¹ It consists of a national probability sample of 2,034 married men and women under 55 who were interviewed by telephone for the first time in the fall of 1980. They were re-interviewed five times, which generated a total of six waves of data, collected in 1980, 1983, 1988, 1992-1994, 1997 and 2000. The characteristics of the sample were compared with estimates made by the U.S. Census Bureau, and the 1980 sample was found to be nationally representative with respect to age, race, household size, presence of children, region, and female participation to the labor market.

We select only couples who are in their first marriages in 1980¹² and in which both spouses are older than 18. We obtain a sample of 827 marriages of which 627 are still intact in year 2000, that is, 24% of the couples in our sample divorced by the end of the survey.

Our dependent variable is an indicator function equal to one if a couple is no longer together by the end of the survey and zero otherwise. All the relevant time-varying variables

¹⁰Booth, Johnson, Amato, and Rogers (2003), ICPSR Study No.: 3812: Marital Instability Over the Life Course [United States]: A Six-Wave Panel Study, 1980, 1983, 1988, 1992-1994, 1997, 2000.

¹¹The paper most closely related to our study is Booth, Johnson, White and Edwards (1984). In this paper the first two waves of the survey are used to analyze the impact of wives' employment on marital instability (broadly defined as the set of all divorce-related activities: from thinking about it to filing for separation/divorce). They find a positive but small effect of a wife's hours of market work on marital instability. But as suggested above, this is likely the result of the confounding effects that a short panel cannot distinguish.

¹²Restricting the data analysis to first marriages is a common assumption when studying marital outcomes. See for example Isen and Stevenson (2010).

are updated to the last wave preceding divorce. For example, take a couple who divorced between 1997 (wave V) and 2000 (wave VI). We record this couple as being divorced by the end of the survey and record all the time-varying stock variables (e.g. marriage duration, number of children, wife’s work experience) as of 1997. Averages and standard deviations of the other relevant time varying variables (e.g. household earnings, earnings shares, qualitative measures of the state of a marriage) for this couple are computed using information from 1980 (wave I) to 1997 (wave IV). Take instead a couple who divorced between 1992-94 (wave IV) and 1997 (wave V), we record information for this couple as of wave IV and compute averages over wave I to wave IV, and so forth. The reason for doing this is that, we do not know the relevant marriage-specific information at the time the marriage dissolved, which for all couples in our sample occurs between surveys. For consistency, we use the same rule, stopping in 1997, also for marriages still intact by year 2000.

Our baseline labor attachment construct (which we often will refer to as “High Attachment”) is a dummy equal to 1 if a wife worked more than 75% of the marriage, and zero otherwise. It is obtained by combining the information about whether the wife worked post-marriage (as recorded in the 1980 survey), whether she has a job at the time of each subsequent survey and whether she did any work in between each round of the survey. The main construct excludes wife’s labor force participation before marriage, but we add this information as a control in all the regressions. Approximately 68% of wives in our sample are classified as having high labor force attachment according to this fairly loose measure of the extensive margin of labor supply.¹³

Nonetheless, our measure of High Attachment seems to capture essential features commonly associated with the notion of being a working or career woman. In Appendix Table C2 (column 1 and 2) we show that High Attachment women are more likely to have attended at least a few years of college. They earn more than Low Attachment women. However, as shown in column 3 and 4 of Table C2, their husbands’ characteristics (education, earnings) do not differ systematically from those of men married to low attachment women. Moreover, High Attachment women display a much lower volatility both in the earnings and earnings share of household income (measured at the time of the survey) than Low Attachment women.¹⁴ We interpret this as capturing the fact that working women have current incomes that are more closely tied to their permanent incomes, which is one interpretation of our bargaining story.

As an alternative we also use a measure of attachment, which we call “Career,” based on individual responses to a battery of qualitative questions. Specifically, we define *Career* = 1 if a respondent said that “pretty important” or “very important” reasons for wife working were having a career, for a sense of accomplishment, for contact with other people and for

¹³Our definition of attachment includes both part-time and full-time work. Unfortunately, we cannot capture work intensity because information on work hours is available at the time of the survey but not for all the years in between surveys.

¹⁴The distributions are statistically different from each other at the 1 percent significance level based on a Kolmogorov-Smirnoff test.

financial independence. According to this definition 64% of wives in our sample are career women. Women who are classified as being career women according to this definition also have, on average, higher wage characteristics than non-career women, but their husband are not ‘better’ on any of the standard observable dimensions. Besides being higher on average, their earnings and earnings share of household income exhibit a much lower volatility than those of non-career women. The correlation between High Attachment and Career is relatively high and statistically significant (0.6, p-value=0.001). We interpret this as further indication that our High Attachment measure captures essential features of being a career woman.

Summary statistics for the sample are reported in appendix table C1. On average, wives in our sample entered their first marriage at age 20 and are 34 years old in the first wave. Husbands are on average two years older. Roughly 90% of the sample is white and 23% of wives and 31% of husbands are college educated. Wives earn on average 22% of household income. The wife is the respondent in 51% of the cases.

3.2 Results

The results using our benchmark measure of labor force attachment are reported in Table 1.

As previously discussed, the dependent variable is a dummy equal to one if the couple divorced by the end of the survey and the main explanatory variable is an indicator function equal to one if the wife was highly attached to the labor force during marriage.

Across all specifications (column 1 to 3), we find that couples where the wife has a stronger attachment to the labor market are significantly less likely to divorce than couples where the wife has a more intermittent participation to the labor force. Having a wife with high labor force attachment decreases the probability that the marriage ends in a divorce by 9 to 10 percentage points. Given that 24% of the couples in our sample are divorced by year 2000, this is a sizable number. In column 4 to 6 we show that the results are robust to dropping from the sample 76 marriages with missing information on the race of one or both spouses.¹⁵

We worry that a number of factors might be driving this correlation. For example, more educated women are less likely to divorce than less educated women (Martin, 2005; Isen and Stevenson, 2010), as well as more likely to work. Black women are more likely to divorce than white women and tend to have slightly lower labor force participation (Isen and Stevenson, 2010). In addition, Rotz (2013) shows that age at first marriage has an independent negative effect on divorce. Thus in all specifications we add marriage duration and age at first marriage (of both spouses), and in Column 2,3, 5 and 6 we include an array of control variables: husband’s and wife’s education (two dummies for having high school or some college and being a college graduate), husband’s and wife’s race, number of children,

¹⁵In our regressions, we set race equal to missing for these couples. Given the limited sample size we opted for working with the largest possible number of observations. As shown in column 4 to 6 the results are very similar whether we include these observations or not.

average family income and the average wife’s share of household income, both computed over the length of marriage.

We find that the coefficient on our labor attachment variable does not change substantially. The control variables that are statistically significant have the expected sign. Divorce is less likely the longer the marriage and if there are children in the household. Consistent with Rotz (2013) we find a negative correlation between the wife’s age at (first) marriage and divorce (though the estimate loose significance once we add the richer set of controls). Consistent with the results reported by Isen and Stevenson (2010), we find that divorce rates are lower for college-educated couples though the coefficients are not statistically significant. We obtain similar results if instead of adding wife’s and husband’s education separately we control for wife education and add indicators of husband’s educational attainment being below or above that of his wife.

There are a number of additional concerns to be addressed. For example, our main finding could be explained by differences in household wealth. Wealthier household have more resources available for side payments. If households with a high attachment wife are wealthier, this could be driving our result. In practice, most households in our sample have very little wealth and, when they do, it is mostly in the form of illiquid assets (e.g. home ownership). Another potential concern has to do with gender roles preferences. Fernandez et al. (2004) argue that men whose mother worked are more likely to like and, therefore, marry a working woman (relative to men who grew up with a stay at home mother). In addition, they would be more likely to have socialized with women whose mother also worked. This mechanism could potentially give rise to more stable marriages and explain our result. It has also been suggested that lower occupational sex-segregation increases the meeting rate with opposite sex co-workers, which could reduce marital durability (McKinnish, 2004). This mechanism would work against our finding of higher marriage durability for working women.

In column 3 and 6 we show that including households assets, a measure of husband’s and wife’s gender norm socialization (whether their mother worked full time during adolescence) and a measures of the likelihood that the wife is in contact with male coworkers does not change the point estimate.

In Table 1 we also find that a higher wife’s share of family income is associated with a higher probability of divorce. Since ‘High attachment’ women earn, on average, a larger share of household income, 28% and 12%, respectively, this finding seems to be at odds with our hypothesis. We argue that this is another instance of ‘precautionary working’. Low attachment women whose marriage are in trouble are more likely to enter the labor market and earn a higher share of household income right around the time of divorce. We will return to this point in section 3.3.

We also performed a series of robustness checks of to assess the sensitivity of our results to the way we define wife’s labor force attachment. In Table 2 we present the results obtained using two alternative definitions of labor attachment. In column 1 and 2 we show that including a woman’s pre-marital work experience in our calculation of labor force attachment,

if anything slightly increases the size of the main coefficient. Having a high attachment wife is associated with a 10 to 14 percentage points lower probability of divorce. This is about two percentage points larger than the effect estimated with our benchmark definition. In column 3 to 6 we use our qualitative “career” variable as defined above. Based on this definition, a Career woman’s divorce probability is 4 to 7 percentage points lower than that of a non-career woman. It is likely that, at least in part, this lower estimate is due to the higher measurement error typically associated with qualitative indicators. In fact, the estimate obtained for the sample where the wife responded to the career-related questions are larger, though the difference between column 3-4 and 5-6 is not statistically significant.

Since the MILC data set is small and relatively unexplored in economics we replicate our analysis using data from the 2008 Survey of Income and Program Participation (SIPP) that have been prominently used in this literature (e.g. Isen and Stevenson, 2010).¹⁶ The results of this analysis are discussed in Appendix B. The analysis confirms our finding that, all else equal, a woman with higher labor force attachment has a lower propensity to divorce.

The SIPP also allows us to explore whether our results can be explained by differences across US states in divorce legislation. There is a large literature that studies the impact of the changing divorce legislation on divorce rates and female outcomes (see Gray, 1998, Stevenson, 2007, and Stevenson and Wolfers, 2007, for a survey). In recent work Voena (2015) shows that women in unilateral divorce states with common property laws are less likely to work and more likely to divorce. This could, in principle, explain our results. We cannot use our MILC data for this robustness check because the information on state of residence is only recorded in 1997 (the next to last wave), when almost all of the ever divorced couples in our sample have already split. However, as shown in appendix Table B1 (column 5) our results using SIPP data are robust to the inclusion of state dummies for the presence of community property and unilateral divorce.¹⁷

3.3 Wife’s work, household inequality and divorce

In table 1 and 2 we find that women who earn a larger share of income are significantly more likely to divorce. We argue that this finding is driven by the fact that we are mixing two groups. On the one hand, career women work for the same reason that men work: to provide for family, for financial independence, or for personal satisfaction. On the other hand, for women who are in the labor force “remedially,” the marriage is already rocky (possibly because the husband loses his job or is disabled, but also for other reasons), and the woman anticipates divorce. The wife works e to compensate for his lost earnings or to prepare for working post-divorce. What these two very different groups have in common is

¹⁶We can construct a measure of a woman’s labor force attachment over the course of her marriage based on retrospective information on both work history (from Topical Module 1) and marriage history (from Topical Module 2).

¹⁷The cross-state analysis if Table A1 also supports this conclusions.

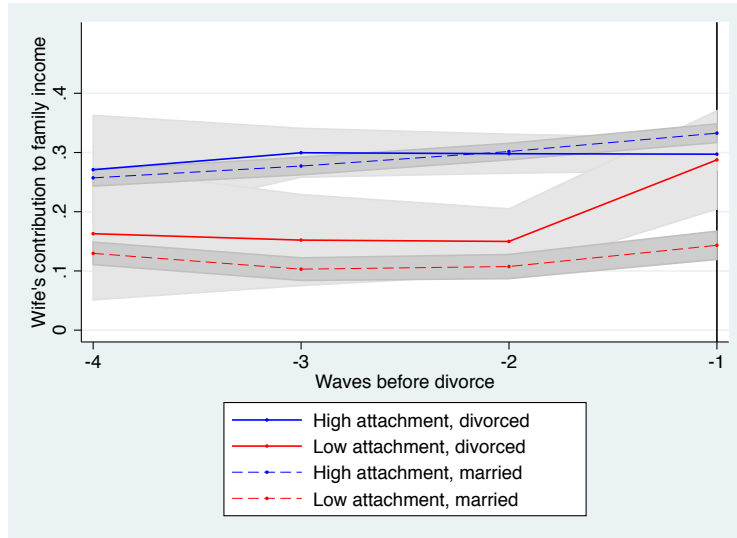


Figure 3: Share of household income by wife’s labor force attachment and marriage outcome

For divorced couples the x-axis measures waves preceding divorce. For married couple it indexes waves preceding wave VI. So “-4” is wave II, “-3” wave III etc.

that the wife is working and likely earning a substantial share of the household income. But they have very different implications for the durability of marriage.

We start by showing in Figure 3 evidence suggesting that this distinction is operative in the data. The figure plots wife’s earnings share by labor force attachment and marriage outcomes (divorced, married). For couples who divorce, the last data point is the wife’s earnings share in the wave preceding the marriage dissolution, the second to last is the wife’s earnings share two waves before the separation, and so on up to four waves before divorce (this would be couples that divorced between 1992-94 and 1997). For couples who stay together, the last point corresponds to 1997 and the first to 1983.¹⁸

As shown in the figure, the share of household income earned by High Attachment women over the course of their marriage hovers around 30 percent and does not vary with the marriage outcome (the blue lines do not differ statistically). Low Attachment women (the red lines) earn a much lower share of household income, around 10 percent. However, this share increases to 30 percent about two waves before the marriage dissolves. This suggests that Low Attachment women might be working remedially because their marriage is in trouble and this remedial work also results in earning a higher income share.

Our model predicts that households that are more equal are more likely to stay together. To get direct evidence for this prediction, in Table 3 we reports the results for a specification that includes a full interaction between High Attachment and a dummy variable that is equal to one if the wife makes between 45 and 55 percent of household income (column 2 and 3). In column 4 and 5 we run a similar specification but define as being ‘Equal Share’ households

¹⁸There are only two couples who divorce between 1997 and 2000. So we drop the data point corresponding to 5 waves before divorce and, for consistency, 1980 for never divorced couples.

where the wife makes 40 to 60 percent of household income. We find that households in which the wife is High Attachment have a 10 percentage point lower probability of breaking up than a marriage to a Low Attachment woman. An equal share of family income further reduces the likelihood of divorce of a High Attachment woman by 12 percentage points (column 3) and the difference is statistically significant. Consistent with the theory, this effect is smaller when we broaden the interval defining an equal share household (column 5).

Summarizing the results from Table 1 to 3, we find that high female labor force attachment reduces the probability of divorce by about half, particularly when she earns close to half of the total family income.

4 Do Career women have better marriages?

So far we have shown that career women's marriages are more durable. There are a number of alternative mechanisms that could be driving this results. For example, it could be the case that career women differ in some inherent characteristic from non-career women: maybe they are generally more reliable, care more about children, or are intrinsically better at compromising or negotiating, both in their jobs and in their marriages. Career women could be choosier in their search for mates, taking longer to marry and consequently having higher quality marriages. Dual-career marriages might face different sources of stress from one-career marriages, such as less time together in the household, or differential opportunities for meeting new people (note these would have to result in less stress for dual-career households to accord with our findings). Finally, the career women's greater marriage durability could be an artifact of sorting, whereby egalitarian households might somehow reflect better matching; this would also account for why the equal earning households are the most durable. All of these alternatives imply that we should observe evidence of higher marriage quality in households where the wife is a career woman than in those in which she is not and that quality should be increasing in equality of earnings. In order to tease out whether these alternative mechanisms can explain our findings, we use MILC's subjective indicators of marital happiness/stability.

Table 4 reports the results obtained using the same specification as in Table 1 and 2 but the dependent variable is now the average value (over the course of the marriage) of different indicators of marriage quality. Column 1 and 2 report results for the marital instability index. This is a summary indicator of around forty items that measure thoughts and behaviors tapping into some aspects of marriage instability. For example, whether the respondent was thinking about divorce, if either spouse thought the marriage was in trouble, whether either spouse had ever talked about marital problems with significant others, friends, clergy or counselors (see C for the full list). We find that households where the wife has high work attachment are not statistically different from those where she is low attachment. The same is true for marital happiness (column 3 and 4) and marital problems (column 5 and 6). Overall high-attachment marriages are as happy, or as unstable and problematic, as low

attachment ones.

The only control variable that is statistically significant is whether the wife is the respondent, which is significantly associated with more stable (column 2) and happier (column 4) marriages but more marital problem (column 6). This finding does not depend on the wife being low-attachment (for example, it could be the case that low attachment women are more likely to be at home). The correlation between high attachment and wife respondent is positive but statistically insignificant (the correlation is 0.023 with p-value 0.51).

In Table 5 we examine three among the many sub-items used to compute the marital instability summative score. We find that high attachment marriages are significantly more likely to report either spouse having ever suggested a divorce or having talked to a friend, clergy or counselor about marital problems, although the difference is not significant once we control for our baseline set of controls.¹⁹ Female respondents are more likely to report that they talked to someone about their marriage troubles (column 6, table 5).

Overall the evidence in table 4 and 5 suggests that high attachment marriages are not better than low attachment marriages. If anything, they are *more* unstable.

Another way of looking at this is to show the evolution of the average quality of marriages by wife's attachment and marital outcome (Figure 4). The figure shows that, among the divorced, the average quality of high and low attachment marriages does not differ significantly during the years preceding a divorce (the red and blue solid lines). Marriages that stay together are more stable, increasingly so over the course of the marriage (compare the blue and red dashed lines). However, at any point over the life course high attachment marriages are more stable on average than low attachment marriages. This goes counter to selection stories implying higher quality marriages for high-attachment women. Comparing Figure 4 to Figure 3 suggests that for low-attachment marriages ending in divorce marriage instability leads the increase in wife's income share. We interpret this as further evidence that labor-force-unattached women might be likely to work because the marriage is in trouble and not the other way around.

In Table 6 we study whether the average marital quality varies by attachment and intra-household income equality. Panel A reports results for the three summary indicators discussed in Table 4, panel B for three marital instability sub-items in Table 5. We find that average marriage quality is lower in high-attachment unequal marriages than in low-attachment marriages with similarly unequal income distribution (see column 1 and 3 in Panel A, and column 2 and 3 in panel B). However, high attachment women in equal earnings households are associated with lower instability or problems (and happier marriages). The coefficients are similar in magnitude to the direct effect of high attachment but not statistically significant. It may not be very surprising that attached women who earn small fractions of household income have somewhat less happy marriages (e.g., disappointment relative to expectations particularly with respect to housework shares or career success),

¹⁹It would be interesting to compare husband's and wife's responses but only the respondent is asked the battery of qualitative questions. The respondent does not change across survey waves.

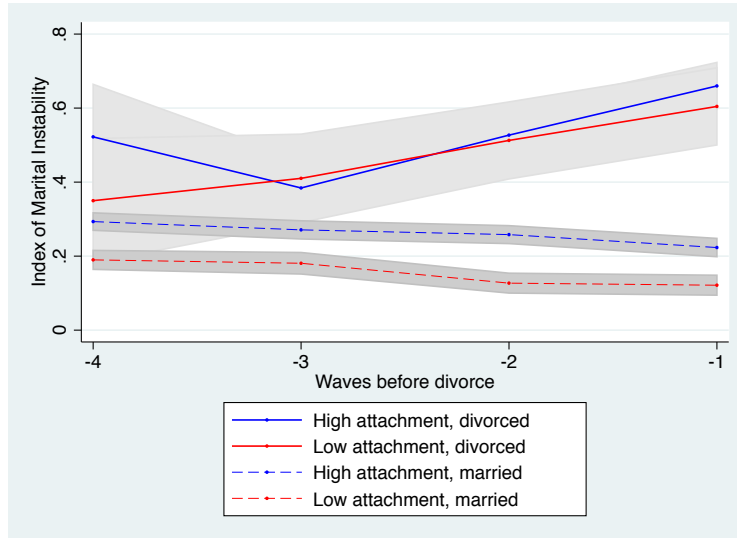


Figure 4: Marital instability by wife's labor force attachment and marriage outcome

For divorced couples the x-axis measures waves preceding divorce. For married couple it indexes waves preceding wave VI. So "-4" is wave II, "-3" wave III etc.

but the fact that the equal share attached women have somewhat better marriages should dispel concerns that any aspects of the instability measures that are money-dependent (e.g professional marriage counseling) are playing a significant role in our findings that attached women have no more happy marriages than unattached ones.

Finally, in Table 7 we show that this indicators of marriage stability are indeed good predictors of marital dissolution. The dependent variable is now the indicator function for marriage ending in divorce (as in Table 1 to 3) and we control for marriage quality, attachment and the interaction between the two. As expected, unstable marriages are more likely to break up (column 1). However, consistent with previous findings, high attachment wives are still significantly more likely to stay married (column 2). The interaction term between attachment and quality is of the right sign but not significant.

We then use as the dependent variable the indicator measuring "whether either spouse thought the marriage was in trouble." This is of easier interpretation relative to the index of marital instability although it does not seem to be a good predictor of divorce for the average couple in our sample either on its own (column 4) or having controlled for wife's attachment (column 5), which maintains its strong negative relationship to divorce. Column 6 reports results for the specification where we interact having thought the marriage was in trouble and wife's high attachment. The first coefficient in the column now measures the impact that trouble has on the probability of divorce of *low-attachment* marriages. This effect is positive and significant, implying a 13 percentage point higher probability of divorce relative to low-attachment marriages that are not in trouble. On the other hand, high attachment women whose marriage is in trouble are significantly less likely to divorce.

One potential concern, as we have already suggested, is that the marital instability index

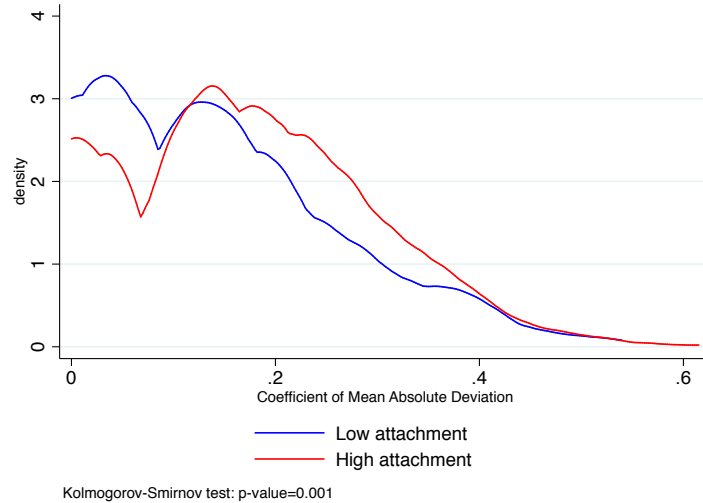


Figure 5: Distribution of within-marriage variability of Marital Instability Index by wife’s labor force attachment

is endogenous (and that this explains why the marriage quality does not differ by the wife’s type): some parts of the instability measure (e.g. professional counseling) might be increased by certain market purchases that only working women could access. We can address this concern in another way: we repeat the analysis in Table 4-7 using the “initial” (i.e. as of 1980) battery of qualitative questions. The results are unchanged. Also, we note that the indicator of marital problems is somewhat less “endogenous” because it summarizes answers to questions that don’t have a clear association with having money (for example, it captures whether one or both spouses gets angry easily or gets easily hurt. See C for the full list of sub-items.)

Finally, it could still be that high attachment marriages are ‘better’ than low attachment marriages, even if they are on average the same or lower quality, because they are less volatile. However, this does not seem to be the case in our data. As shown in Figure 5 high attachment marriages display a higher degree of variation in the index of marital instability. The marital instability indicator includes items such as talking to a lawyer that could be more easily purchased by high attachment wives. Thus in Figure 6 we show the distribution of the coefficient of variation (or absolute deviation) for the index of marital problems, which, as we discussed above, can be thought of as being less affected by having money. In this case high and low attachment marriages exhibit the same degree of variation. The two distribution are not statistically different from each other.

Putting it all together: High attachment women do not seem to have intrinsically better (higher quality and more stable) marriages. In fact, summary measure of marital instability suggests that their marriages are more volatile.

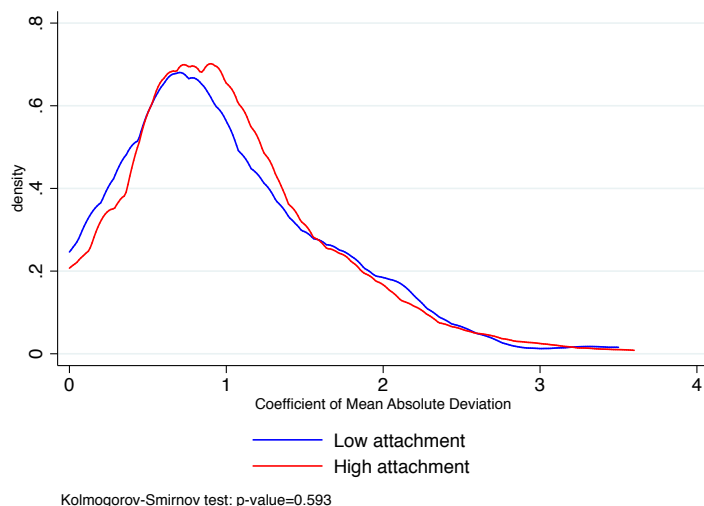


Figure 6: Distribution of within-marriage variability of Marital Problems Index by wife's labor force attachment

5 Conclusion

Economic theory predicts that two-earner households, particularly those with two career workers with relatively equal incomes, ought to have the most durable marriages; we have provided evidence that this prediction is borne out in practice. The basic mechanism is that earners bring money – the most efficient mode of utility transfer – into the household, which maximizes the flexibility to find compensatory intra-household re-allocations in the face of changes in preferences or outside opportunities.

We face two chief empirical challenges in trying to identify the transferability effect on divorce. One is to control for selection effects, which we do with measures of number of observable traits, as well as controls that measure marriage quality. The second is to separate the effect we are interested in, in which causality runs from female labor supply to divorce, from the confounding effect of divorce and marital instability on female labor supply. This is accomplished by using a number of measures of female career attachment that help distinguish wives who are permanent earners from those are remedial earners. Once we do this we find that all else equal, career women have 5-6 percent lower divorce rate than non-career woman, that the effect is strongest when women earn nearly the same as their husbands, but that there is no evidence that career women select into higher quality marriages.

The effects of increased transferability, as well as the distinction between career and remedial earning, has both positive and normative implications. On the positive side, it may explain recent trends in divorce and MFLP. Since the mid 1980's, U.S. divorce rates have been declining. Meanwhile, MFLP has been increasing, leveling off with the 2008 financial crisis. This contrasts with the positive trend in both variables that lasted from the early

1960s to the mid 1980s and which no doubt helped spawn the large literature on female labor and divorce. Could the transferability effect account for the trend reversal? In principle it might (see Neeman, Newman and Olivetti, 2007 for a theoretical attempt); moreover four documented trends may have contributed to its increasing importance over time.

First, the gender wage gap has been closing, which corresponds to increased equality of household earnings in our model. Second, the fraction of female workers who are career rather than remedial earners has increased. As we have already pointed out, simply observing in a cross section that a woman works could reflect remedial earning/marital instability rather than career status: to the extent that the former is relatively less common now than in the past, the rate of divorce should now be lower. Third, to the extent that the variety of private goods enjoyed by household members can only be produced within the household rather than purchased on the market, monetary earnings will be less effective instruments of utility transfer. It seems likely that over the period in question, there has been an increase in the market availability of goods that are close substitutes for those produced in households (for evidence on this “marketization” trend, see Freeman and Schettkat, 2005). Finally, divorce laws, particularly those having to do with property division and alimony, evidently affect the post-divorce autarky payoff, and therefore the durability of marriage. Greater egalitarianism in these laws over the years may also have contributed to the trend reversal. In short, for a variety of reasons, the transferability mechanism has likely strengthened over the years, eventually overwhelming the countervailing effects of MFLP on divorce that had been the subject of other scholarship. Further research is needed to examine the extent to which this conjecture is borne out quantitatively.

On the normative side, failing to control for the difference between career and remedial earnings may confound inference about the effects of female labor supply on divorce. Indeed, the policy ramifications depend crucially on this distinction. For the woman who is contemplating joining the labor force after years of non-participation, the decision to enter is likely a predictor of impending divorce. But for the young woman concerned about the impact of working on her future family life, the best strategy for ensuring a durable marriage may be to invest in a career.

Appendix 1. Decreasing shock densities

If the frontier W is concave, the conclusion of Proposition 1 can be established by substituting log-concavity of f with the hypothesis that f is decreasing on $[\phi, \infty)$. To see this, observe from (1) that $D'(v) = 0$ when $v = I - v$. Then the result follows if $D'' < 0$ on $[0, I]$.

Differentiate (1) to obtain

$$D''(v) = \int_{-\infty}^{\phi} [f(x-v)f'(W(x)-I+v) - f'(x-v)f(W(x)-I+v)](W'(x)+1)dx \\ + \int_{-\infty}^{\phi} [f(x-I+v)f'(W(x)-v) - f'(x-I+v)f(W(x)-v)](W'(x)+1)dx \quad (2)$$

Use integration by parts to rewrite (2) as (perform the operation on the second terms in each integral, using $f(x-v)$ and $f(W(x)-I+v)(W'(x)+1)$ as the parts in the first case and $f(x-I+v)$ and $f(W(x)-v)(W'(x)+1)$ in the second; then use $\lim_{z \rightarrow \pm\infty} f(z) = 0$ and $W(\phi) = \phi + I$ and regroup terms):

$$D''(v) = -f(\phi-v)f(\phi+v)(W'(\phi)+1) - f(\phi-I+v)f(\phi)(W'(\phi)+1) \\ + \int_{-\infty}^{\phi} f(x-v)f'(W(x)-I+v)(W'(x)+1)^2 dx + \int_{-\infty}^{\phi} f(x-I+v)f'(W(x)-v)(W'(x)+1)^2 dx \\ + \int_{-\infty}^{\phi} f(x-v)f(W(x)-I+v)W''(x)dx + \int_{-\infty}^{\phi} f(x-I+v)f(W(x)-v)W''(x)dx$$

Since $1+W'(\phi) \geq 0$, the first two terms are non-positive. Moreover, $x < \phi$ implies $W(x)-v$ and $W(x)-I+v$ exceed ϕ , and since the density is decreasing on $[\phi, \infty)$, the second pair of terms are negative. Finally, concavity of $W(\cdot)$ implies $W'' \leq 0$ a.e., and we conclude $D''(v) < 0$.

A Appendix: Evidence from the Census

We show that the negative relationship between the divorce and married women's labor force participation (MFLP) depicted in Figure 1 is robust to a number of state-level controls.²⁰ Table A1 presents the results, where we progressively add other factors.²¹

Column 1 reports the regression coefficient for the basic regression (this corresponds to the correlation coefficient reported in Figure 1). According to our estimate, which is significant at the 1% level, a state in which an additional 10% of the married women are in the labor force than in another has 0.86 fewer divorces per 1000 people per year. Since the average divorce rate is 3.6 per 1,000, this corresponds to a 24% reduction in the divorce rate. Column 2 adds the marriage rate. The coefficient is positive, reflecting the greater per capita stock of marriages that can end in divorce. Nevertheless, the negative correlation between divorce and labor force participation is unaffected, so it is not driven by hypothetically lower

²⁰In an earlier version of the paper we showed that the same negative correlation across US states is observed based on Census 2000 data.

²¹See below for a detailed discussion of data sources and variable definitions and Table A2 for summary statistics. In all the regressions the state level variables are population-weighted.

marriage rates in states where more women work. MFLP, marriage rate, age at first marriage and education are all important: taken together they can explain 61 percent of the overall cross-state variation in divorce rates.²² The result is also robust to the inclusion of a number of additional explanatory variables. For example, it has been suggested that higher male income inequality increases the option value of a searching for a mate, which could result in higher quality marriages (Loughran, 2002; Gould and Paserman, 2003). Moreover, there is evidence that women in unilateral divorce states with common property laws are less likely to work and more likely to divorce (Voena 2014). As shown in column 4 and 5, the correlation between divorce and married woman LFP retains its sign and significance even after having controlled for all these factors.

Data sources.

Labor force participation, education, race, income, occupation, industry: 2005-2009 American Community Survey (ACS). The sample is restricted to working-age population (16-64 years old), not living in group quarters (GK=1). All state-level averages and medians (for income) are population-weighted. The “gender concentration” in industries/occupations is computed as the percentage of working women in industries, occupations, and industry-occupation cells where the state-level ratio of women to men is less than 50%. We use the 1950-adjusted industry and occupation codes from the Census.

Marriage and divorce rates: U.S. National Center for Health Statistics, National Vital Statistics Reports (NVSR), Births, Marriages, Divorces, and Deaths: Provisional Data for 2009, Vol. 58, No. 25, August 2010; and prior reports. Marriage and divorce rates used for most states are for 2009 (the most recent). For states that didn’t report divorce rates in 2009 we use the most recent available. That is, Georgia (2003); Hawaii (2002); Louisiana (2003); Minnesota (2004). Since data for California are from 1990 and data from Indiana are not available after 1980, we drop these two states from the main analysis. However, in robustness checks we use the 1980s figure and we also use 2009 ACS data to estimate both marriage and divorce rates.

Age at first marriage: U.S. Census Bureau’s American Community Survey 2009, 1-year estimates (from factfinder.census.gov).

Religion: 2007 ARDA (Association of Religion Data Archives) survey, www.thearda.com. According to the site, “data [was] collected by representatives of the Association of Statisticians of American Religious Bodies (ASARB).” Note that “While quite comprehensive, this data excludes most of the historically African-American denominations and some other major groups.” The ARDA survey reports missing values for Alaska, Hawaii and DC. For these states, the information comes from Pew’s “U.S. Religious Landscape Survey” (2007’),

²²Column 5 omits Nevada, which leaves the results unchanged. We have experimented with alternative measures of married women labor force participation, such as full- and part-time participation, labor force participation of white women and labor force participation of 25-54 year old women. For all specifications we obtain results similar to the ones reported here.

<http://religions.pewforum.org/maps> and <http://religions.pewforum.org/reports>.

Population density: Census 2010 -http://www.census.gov/geo/www/guidestloc/select_data.html.

B Appendix: Evidence from the SIPP

Our measure of labor force attachment *during marriage* is obtained by matching information on labor market interruptions (from the employment history module) with information on marriage spells (from the marital history module). Unfortunately, the questionnaire does not give any indication of when the time off was taken, making it difficult to determine whether a spell of non-employment occurred before, during, or after marriage, especially for women whose first marriage dissolved before the survey. In addition, it is not clear whether time off is considered separately from time off spent caregiving, and one needs to avoid double-counting any time off. Because of this limitation of the data, we exploit information on start and end dates of employment and marriage to construct a binary indicator of whether a woman worked at all during her first marriage rather than more continuous estimates of time spent working. This indicator takes a value of one if a woman started, but didn't stop, working before entering her first marriage, or if she first started working after her first marriage started but before it ended (if it ended). It takes a value of zero if she never worked; if she worked, but stopped working before her first marriage began; if she started working only after her first marriage ended; or if her time caregiving spanned her entire marriage. While this indicator does not capture the intensity of labor force attachment during marriage, it does not rely on 'ad hoc' assumptions and is relatively clean.²³

At the same time it seems to capture the essence of being a 'career' woman. As shown in appendix Table B3, our measure of work during marriage is positively correlated with age at first marriage and at first birth, conditional on having children during first marriage, full-time work and earnings (three alternative measures). 'Career' women are also more likely to have a college or post-graduate degree, and to work in professional occupations.

We consider the sample of all women age 25-54, who are either in their first or second marriage, or separated/divorced by the time of the survey. We include in our sample only marriages that occurred in the 1990s or later. This is to minimize the bias due to the retrospective nature of our data and to make our sample as comparable as possible to that used in our state cross section. Summary statistics for the sample are reported in appendix table B2. Women in our sample are 37 years old, on average, 81% of them are white, 11% are blacks and 6% asian, 57% of the women in our sample have at least a four-year college degree. They entered their first marriage when they were about 26 years old, on average, and they have, on average, 1.94 children. Approximately thirty percent of all marriages in our sample end in divorce; of these, the average marriage lasts five years, and 60% of divorces occur by year 5.

²³The only errors in creating it came from observations for which the working end date comes before the working start date. These observations have a missing value, but there are relatively few of them (41).

We report the regression results in Table B1. The dependent variable is the probability that a marriage dissolves by year 5. Overall we find that, all else equal, a marriage to a career woman is about 6 percentage points less likely to end in divorce, which corresponds to a 34% decline in the 5-year divorce probability.²⁴

The negative association between divorce and labor force attachment stands even after having added controls for race, age at first marriage, marriage duration, an indicator of whether the couple had a child under the age of 6, an indicator of property division laws in the current state of residence which is equal to one if the state has community property (that is, is characterized by an equal distribution of property upon divorce independent on title ownership) and a dummy equal to one if the state of residence has unilateral divorce (as opposed to mutual consent).²⁵ Consistent with Isen and Stevenson (2010) we find that blacks are more likely to divorce. Finally, we find that women who reside in states with community property (who, except for Louisiana, also have unilateral divorce) are less likely to divorce, while residing in a unilateral divorce state does not seem to affect the probability of divorce one way or another. This is consistent with findings by Wolfers (2006).

C Appendix: Marital Quality Measures in MILC data

In the analysis we use three main summary indicators of marital quality. We provide details about their definitions and scale in this section.

Marital Instability

The *Marital Instability* index²⁶ is a summative score based on several items asked of married people: feeling that marriage was in trouble; talking to others about marital problems; wish of living apart from spouse; divorce thoughts; divorce suggestion from one of the spouses; talking about consulting a divorce attorney; talking about property division; talking about filing; consulting an attorney; filing a divorce or separation petition; occurrence of trial separation; length of the last period of separation.

The index was logged and averaged over marriage years and it ranges between 0 and 1.31, with higher scores corresponding to greater marital instability and 50% of the couples having an index below 0.24.

²⁴We also ran regressions looking at the probability of dissolution by year 7 and 10 as well as a Cox proportional hazard model and found very similar results.

²⁵Obviously assigning divorce law by current state of residence rather than state of residence at time marriage or divorce is not ideal. However, SIPP does not report this information so this is the most we can do.

²⁶Booth, Alan, David Johnson, and John N. Edwards. 1983. "Measuring Marital Instability." *Journal of Marriage and the Family* 45: 387-393.

Edwards, John N., David R. Johnson, and Alan Booth. "Coming Apart: A Prognostic Instrument of Marital Breakup." *Family Relations* 36: 165-170.

Johnson, David R., Lynn K. White, John N. Edwards, and Alan Booth. "Dimensions of Marital Quality: Toward Methodological and Conceptual Refinement." *Journal of Family Issues* 7: 31-49.

In the analysis we also highlight three of the sub-items contributing to the marital instability summative score.

The variable *Either Spouse Ever Suggested Divorce* is a dummy equal to one if the respondent answered "yes" to the question: "Have you or your (husband/wife) ever seriously suggested the idea of divorce?"

The variable *Either Spouse Ever Talked About Marital Problems with Clergy, Counselor, etc.* is a dummy equal to one if the respondent answered "yes" to any of the following questions: "Have you ever talked with family members, friends, clergy, counselors, or social workers about problems in your marriage? As far as you know has your (husband/wife) talked with relatives, friends, or a counselor about problems either of you were having with your marriage?"

The variable *Either Spouse Thought Marriage was in Trouble* is a dummy equal to one if the respondent answered "yes" to any of the following questions: "Even people who get along quite well with their spouse sometimes wonder whether their marriage is working out. Have you ever thought your marriage might be in trouble? As far as you know, has your spouse ever thought your marriage was in trouble?"

Marital Happiness

The *Marital Happiness* index is a summative score based on several items capturing the amount of happiness in the couple: extent of understanding received from spouse; amount of love received; extent of agreement about things; sexual relationship; spouse as someone who takes care of things around the house; spouse as someone to do things with; spouse's faithfulness; evaluation of marriage as very happy, pretty happy, or not too happy; compared to other marriages, respondent's is better, same, or not as good; comparing marriage to 3 years ago, it is getting better, staying the same, or getting worse; strength of feelings of love respondent has for spouse.

The index was averaged over marriage years and it ranges between 13 and 33, with higher scores indicating higher marital happiness and 50% of the couples having an index below 28.6.

Marital Problems

The *Marital Problems* index is a summative score based on several items capturing the presence of marital problems because either or both spouses: gets angry easily; gets easily hurt; is jealous; is domineering; is critical; is moody; won't talk to the other; has sexual relationship with others; has irritating habit; is not home enough; spends money foolishly; drinks or uses drugs; has been in trouble with the law.

The index was averaged over marriage years and it ranges between 0 and 12, with higher scores indicating greater marital problems and 50% of the couples having an index below 2.2.

References

- [1] Bagnoli, Mark, and Ted Bergstrom (2005), “Log-concave probability and its applications,” *Economic Theory* 26:445-469.
- [2] Becker, Gary S (1973), “A Theory of Marriage: Part I,” *Journal of Political Economy* 81: 813-846.
- [3] Becker, Gary S., Elisabeth M. Landes, and Robert T. Michael (1977), “An Economic Analysis of Marital Instability,” *Journal of Political Economy*, 85(6): 1141-1188.
- [4] Bergstrom, Ted and Hal Varian (1985), ”When Do Market Games Have Transferable Utility?” *Journal of Economic Theory* 35: 222-233.
- [5] Bertrand, Marianne, Emir Kamenica and Jessica Pan (2015), “Gender Identity and Relative Income within Households,” *Quarterly Journal of Economics*, 130(2): 571-614.
- [6] Bougheas, Spiros and Yannis Georgellis (1999), “The effect of divorce costs on marriage formation and dissolution,” *Journal of Population Economics*, 12(3): 489-498.
- [7] Cherchye, Laurens, Thomas Demuynck, and Bram De Rock (2015), “Is utility transferable? a revealed preference analysis”, *Theoretical Economics*, 10(1): 51-65.
- [8] Freeman, Richard B. and Ronald Schettkat (2005), Marketization of Production and the EU-US Gap in Work (Jobs and Home Work: Time Use Evidence),” *Economic Policy* 20(41): 5-50.
- [9] Goldin, Claudia (1995), “The U-Shaped Female Labor Force Function in Economic Development and Economic History,” in T. Paul Schultz, ed., *Investment in Women’s Human Capital and Economic Development*. Chicago, IL: University of Chicago Press, pp. 61-90.
- [10] Gould, Eric D. and M. Daniele Paserman (2003), “Waiting for Mr. Right: rising inequality and declining marriage rates,” *Journal of Urban Economics*, 53(2): 257-281.
- [11] Greene, William and Aline Quester (1982), “Divorce Risk and Wives’ Labor Supply Behavior,” *Social Science Quarterly* 63(1): 16-27.
- [12] Greenwood, Jeremy, and Nezih Guner (2004), “Marriage and Divorce Since World War II: Analyzing the Role of Technological Progress on the Formation of Households,” NBER Working Paper #10772.
- [13] Gray, Jeffrey S. (1998), “Divorce-Law Changes, Household Bargaining, and Married Women’s Labor Supply,” *American Economic Review*, 88 (3): 628-642
- [14] Hakim, Danny (2006), “Panel Asks New York to Join the Era of No-fault Divorce,” *New York Times*, Febraury 6.

- [15] Isen, Adam and Betsey Stevenson (2010), "Women's Education and Family Behavior: Trends in Marriage, Divorce and Fertility," <http://www.nber.org/papers/w15725>
Adam Isen, Betsey Stevenson
- [16] Johnson, John H. (2004), "Do Long Work Hours Contribute To Divorce?," John H. Johnson, *Topics in Economic Analysis and Policy*.
- [17] Johnson, William R., and Jonathan Skinner (1986), "Labor Supply and Marital Separation," *American Economic Review* 76: 455-469.
- [18] Jovanovic, Boyan (1984), "Matching, Turnover, and Unemployment," *Journal of Political Economy*, 92(1): 108-22.
- [19] Legros, Patrick, and Andrew F. Newman (2007), "Beauty is a Beast, Frog is a Prince: Assortative Matching with Nontransferabilities," *Econometrica* 75(4): 1073-1102.
- [20] Lehrer, Evelyn (2008), "Age at Marriage and Marital Instability: The Becker-Landes-Michael Hypothesis Revisited" *Journal of Population Economics* 21(2): 463-484.
- [21] Lehrer, Evelyn and Yu Chen (2013), "Delayed Entry into First Marriage and Marital Stability: Further Evidence on the Becker- Landes-Michael Hypothesis,?" *Demographic Research* 29(20):521-542.
- [22] Martin, Steven P. (2005), "Growing Evidence for a "Divorce Divide"? Education and Marital Dissolution Rates in the U.S. since the 1970s." Russel Sage Foundation Working Papers.
- [23] McKinnish, Terra G. (2004), "Occupation, Sex-Integration and Divorce," *The American Economic Review*, 94 (2): 322-325.
- [24] Michael, Robert T. (1985), "Consequences of the Rise in Female Labor Force Participation Rates: Questions and Probes," *Journal of Labor Economics* 3: s117-s146.
- [25] Mincer, Jacob (1985), "Intercountry Comparisons of Labor Force Trends and Related Developments: An Overview," *Journal of Labor Economics*, 3(1), pt. 2: S1-32.
- [26] Neeman, Zvika, Andrew F. Newman, and Claudia Olivetti (2007), "Are Working Women Good for Marriage?: Notes on a Search and Bargaining Model with Endogenous Offers" mimeo, Boston University.
- [27] Nock, Steven L. (2001) "The Marriage of Equally Dependent Spouses," *Journal of Family Issues* 22(6): 755-775.
- [28] Noer, Michael (2006), "Don't marry a career woman,"
http://www.forbes.com/2006/08/23Marriage-Careers-Divorce_cx_mn_land.html.
- [29] Ogburn, William F. and Meyer F. Nimkoff, (1955) *Technology and the Changing Family*, Boston: Houghton Mifflin Company.
- [30] Parkman, Allen M. (1992) "Unilateral Divorce and the Labor-Force Participation Rate of Married Women, Revisited," *American Economic Review*, 82 (3): 671-678.

- [31] Peters, Michael, and Aloysius Siow (2002), "Competing pre-Marital Investments" *Journal of Political Economy* 110:592-608.
- [32] Rasul, Imran (2006), "Marriage Markets and Divorce Laws," *Journal of Law, Economics and Organization*, 22 (November): 30-69.
- [33] Rotz, Dana (2011), "Why Have Divorce Rates Fallen? The Role of Women's Age at Marriage," http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1960017
- [34] Spitze, Glenna, and Scott South (1985), "Women's Employment, Time Expenditure, and Divorce," *Journal of Family Issues*, 6(3): 307-329.
- [35] Stevenson, Betsey (2007), "Divorce-Law Changes, Household Bargaining, and Married Women's Labor Supply Revisited," Manuscript, University of Pennsylvania.
- [36] Stevenson, Betsey (2007), "The Impact of Divorce Laws on Investment in Marriage-Specific Capital," *Journal of Labor Economics*, 25(1): 75-94.
- [37] Stevenson, Betsey and Justin, Wolfers (2007), "Marriage and Divorce: Changes and their Driving Forces" *Journal of Economic Perspectives*, 21(2): 27-52.
- [38] Udry, Christopher (1996), "Gender, Agricultural Production, and the Theory of the Household," *The Journal of Political Economy* 104(5): 1010-1046.
- [39] Wolfers, Justin (2006), "Did Unilateral Divorce Raise Divorce Rates? A Reconciliation and New Results," *American Economic Review*, 96(5): 1802-1820.

Table 1. Wife's labor force attachment and divorce: Evidence from the survey of Marital Instability over the Life Cycle

	<i>Dependent variable is Divorce by End of Survey</i>					
	(1)	(2)	(3)	(4)	(5)	(6)
High Attachment	-0.0956*** [0.0286]	-0.101*** [0.0313]	-0.0936*** [0.0335]	-0.0812*** [0.0285]	-0.116*** [0.0329]	-0.105*** [0.0346]
Years married	-0.0230*** [0.00105]	-0.0189*** [0.00164]	-0.0195*** [0.00169]	-0.0174*** [0.00147]	-0.0209*** [0.00179]	-0.0217*** [0.00182]
Wife's age at marriage	-0.0145* [0.00753]	-0.00681 [0.00599]	-0.00555 [0.00615]	-0.0136** [0.00686]	-0.00996 [0.00768]	-0.00796 [0.00795]
Husband's age at marriage	-0.0106* [0.00597]	-0.00881* [0.00455]	-0.0105** [0.00478]	-0.00439 [0.00542]	-0.00713 [0.00555]	-0.00934 [0.00569]
Husband's education = HS or some college		0.0416 [0.0457]	0.0552 [0.0546]		0.0501 [0.0504]	0.0621 [0.0607]
Husband's education = College or more		-0.00569 [0.0515]	-0.0136 [0.0593]		-0.00157 [0.0565]	-0.00977 [0.0652]
Wife's education = HS or some college		-0.0693 [0.0606]	-0.109 [0.0717]		-0.0643 [0.0665]	-0.110 [0.0781]
Wife's education = College or more		-0.0886 [0.0683]	-0.124 [0.0792]		-0.0839 [0.0745]	-0.129 [0.0864]
Number of children over the survey period or by wave before divorce		-0.0517*** [0.0108]	-0.0568*** [0.0117]		-0.0599*** [0.0120]	-0.0648*** [0.0127]
Wife worked before marriage		-0.0270 [0.0308]	-0.0161 [0.0325]		-0.0289 [0.0342]	-0.0146 [0.0357]
Avg real family income (in \$1,000)		0.00291*** [0.00107]	0.00249** [0.00122]		0.00224* [0.00119]	0.00185 [0.00134]
Avg wife's contrib to hh income		0.00171** [0.000854]	0.00180** [0.000911]		0.00192* [0.000977]	0.00202** [0.00102]
Additional controls	NO	NO	YES	NO	NO	YES
Observations	827	805	752	750	731	686
R-squared	0.347	0.483	0.481	0.206	0.263	0.275

Notes. Robust standard errors in brackets. The sample includes married couples where the wife is age 18 and above in 1980 and marriage did not end in widowhood. Regressions are weighted using the survey weights.

The dependent variable is marital status as of the end of the interview period. Labor Force attachment is calculated using wife's work start/end dates during the marriage; attachment is low if the wife worked during 0-75% of the marriage time, and high if she worked 76% or more. Labor force attachment, real family income and wife's contribution to household income are averages throughout marriage (or 1997 if couple is still married at the end of survey).

All specifications in columns (2), (3), (5) and (6) include controls for husband's and wife's race and percentage of marriage the husband worked full time. Column (3) and (6) control for religion dummies, assets (joint property value + value of home if owned), whether wife's and husband's mothers worked full time and wife's occupation gender ratio. Wife's occupation gender ratio uses wife's occupation in each survey year, and calculates F/M ratios by occupation/survey year using CPS data (includes employed females and males age 25-55, not living in group quarters). Both Assets and wife's occupation gender ratio are averages throughout marriage (or 1997 if couple is still married at the end of survey). Columns (4)-(6) drop observations with missing race. Omitted categories: low attachment, white, less than high school, wife did not work before marriage, protestant.

Significance levels are: * 10%, ** 5%, *** 1%.

Source: Marital Instability Over the Life Course Survey (Booth et al, 2003).

**Table 2. Alternative definitions of wife's labor force attachment and divorce:
Evidence from the survey of Marital Instability over the Life Cycle**

	<i>Dependent variable is Divorce by End of Survey</i>					
	(1)	(2)	(3)	(4)	(5)	(6)
	Labor Market Attachment (includes wife's work before marriage)		`Career'			
		All		Wife is Respondent		
High attachment/Career	-0.108*** [0.0296]	-0.117*** [0.0319]	-0.0708*** [0.0248]	-0.0519** [0.0264]	-0.105*** [0.0327]	-0.0545* [0.0310]
Years married	-0.0232*** [0.00106]	-0.0190*** [0.00164]	-0.0159*** [0.00150]	-0.0147*** [0.00198]	-0.0175*** [0.00191]	-0.0128*** [0.00247]
Wife's age at marriage	-0.0147* [0.00754]	-0.00863 [0.00566]	-0.00966 [0.00627]	0.000275 [0.00662]	-0.0164* [0.00850]	-0.00320 [0.00878]
Husband's age at marriage	-0.0100* [0.00597]	-0.00806* [0.00460]	-0.00964** [0.00490]	-0.0111** [0.00438]	-0.00533 [0.00666]	-0.00367 [0.00519]
Husband's education = HS or some college		0.0363 [0.0449]		0.0610* [0.0341]		0.0413 [0.0416]
Husband's education = College or more		-0.0121 [0.0507]		0.0158 [0.0368]		0.00613 [0.0422]
Wife's education = HS or some college		-0.0727 [0.0597]		-0.108* [0.0588]		-0.0427 [0.0583]
Wife's education = College or more		-0.0869 [0.0681]		-0.124* [0.0631]		-0.0826 [0.0661]
Number of children over the survey period or by wave before divorce		-0.0510*** [0.0108]		-0.0509*** [0.0108]		-0.0271** [0.0137]
Wife worked before marriage				-0.00976 [0.0275]		-0.0323 [0.0320]
Avg real family income (in \$1,000)		0.00297*** [0.00107]		0.00130 [0.000972]		0.00114 [0.00106]
Avg wife's contrib to hh income		0.00180** [0.000834]		0.000559 [0.000714]		-0.000320 [0.000726]
Wife was the respondent			-0.0149 [0.0231]	-0.0347 [0.0218]		
Observations	827	805	697	678	426	411
R-squared	0.349	0.485	0.239	0.418	0.273	0.501

Notes. Robust standard errors in brackets. See Table 1 for sample selection rules and variable definitions. Regressions are weighted using the survey weights.

Alternative definitions of labor attachment: In columns (1) and (2), the labor attachment variable is calculated using the wife's work start/end dates before and during the marriage. Attachment is low if the wife worked 0-75% of the time, and high if she worked more than 75% of the time. In columns (3)-(6), a woman is considered a "career woman" if she answered that any of the following reasons for working were "Very important or "Pretty important": wants a career, for a feeling of accomplishment, because she likes contact with people, or for financial independence.

All specifications in columns (2)-(6) include controls for husband's and wife's race and percentage of marriage the husband worked full time. Omitted categories: low attachment, white, less than high school, husband is the respondent, wife did not work before marriage.

Significance levels are: * 10%, ** 5%, *** 1%.

Source: Marital Instability Over the Life Course Survey (Booth et al, 2003).

Table 3. Wife's labor force attachment, earned share of family income and divorce: Evidence from the survey of Marital Instability over the Life Cycle

	<i>Dependent variable is Divorce by End of Survey</i>				
	(1)	(2)	(3)	(4)	(5)
		Equal Share = 45-55		Equal Share = 40-60	
High Attachment	-0.0956*** [0.0286]	-0.0990*** [0.0292]	-0.105*** [0.0328]	-0.0942*** [0.0298]	-0.108*** [0.0333]
High Attachment * Equal Share		-0.0725 [0.0512]	-0.123** [0.0546]	-0.0502 [0.0399]	-0.0973** [0.0474]
Low Attachment * Equal Share		-0.0322 [0.0714]	-0.0272 [0.0937]	0.0144 [0.103]	-0.0523 [0.105]
Years married	-0.0230*** [0.00105]	-0.0260*** [0.00104]	-0.0194*** [0.00162]	-0.0260*** [0.00103]	-0.0195*** [0.00162]
Wife's age at marriage	-0.0145* [0.00753]	-0.0147* [0.00750]	-0.00656 [0.00595]	-0.0146* [0.00747]	-0.00588 [0.00589]
Husband's age at marriage	-0.0106* [0.00597]	-0.0142** [0.00575]	-0.00849* [0.00455]	-0.0144** [0.00572]	-0.00913** [0.00449]
Number of children over the survey period or by wave before divorce		-0.0871*** [0.0108]	-0.0569*** [0.0108]	-0.0872*** [0.0110]	-0.0562*** [0.0109]
Avg real family income (in \$1,000)		0.00216** [0.00108]	0.00307*** [0.00108]	0.00218** [0.00107]	0.00304*** [0.00108]
Additional Controls	NO	NO	YES	NO	YES
Observations	827	806	805	806	805
R-squared	0.347	0.397	0.481	0.397	0.479

Notes. Robust standard errors in brackets. See Table 1 for sample selection rules and variable definitions. Regressions are weighted using the survey weights.

Columns (3) and (5) include controls for husband's and wife's race, respondent's and spouse's education, whether the wife is the respondent, whether the wife worked before marriage, percentage of marriage the husband worked full time, average wife's contribution to household income. Omitted categories: low attachment, white, less than high school, wife did not work before marriage.

"Equal Share = 45-55" is an indicator that equals one if the wife contributes 45-55% of family income on average during the marriage and 0 otherwise. "Equal Share = 40-60" is an indicator that equals one if the wife contributes 40-60% of family income on average during the marriage and 0 otherwise.

Significance levels are: * 10%, ** 5%, *** 1%.

Source: Marital Instability Over the Life Course Survey (Booth et al, 2003).

Table 4. Wife's labor force attachment and marital indexes: Evidence from the survey of Marital Instability over the Life Cycle

	<i>Dependent variable is Index of:</i>					
	(1)	(2)	(3)	(4)	(5)	(6)
	Marital Instability		Marital Happiness		Marital Problems	
High Attachment	0.0452 [0.297]	0.0599 [0.357]	0.101 [0.173]	0.0460 [0.198]	0.0378 [0.0236]	0.0318 [0.0265]
Years married	0.0505*** [0.0136]	0.00969 [0.0177]	-0.0449*** [0.00783]	-0.0353*** [0.0119]	-0.0121*** [0.00102]	-0.0104*** [0.00142]
Wife's age at marriage	-0.0354 [0.0742]	-0.0788 [0.0742]	-0.0257 [0.0507]	-0.00285 [0.0516]	0.00413 [0.00644]	0.00437 [0.00614]
Husband's age at marriage	0.00157 [0.0614]	-0.0300 [0.0579]	-0.00168 [0.0384]	0.00247 [0.0346]	-0.00244 [0.00539]	-0.00120 [0.00475]
Husband's education = HS or some college		0.243 [0.644]		-0.225 [0.330]		0.00797 [0.0480]
Husband's education = College or more		0.142 [0.720]		-0.448 [0.366]		-0.00859 [0.0546]
Wife's education = HS or some college		-0.00537 [0.621]		-0.208 [0.396]		0.0477 [0.0424]
Wife's education = College or more		0.547 [0.729]		-0.397 [0.474]		0.0318 [0.0535]
Number of children over the survey period or by wave before divorce		-0.221 [0.140]		0.0596 [0.0816]		0.00718 [0.0118]
% time Husband worked FT		0.552 [0.672]		-0.837* [0.502]		-0.135** [0.0637]
Avg real family income (in \$1,000)		-0.0226 [0.0144]		0.0109 [0.00773]		0.00390*** [0.00113]
Avg wife's contrib to hh income		-0.00844 [0.0112]		0.0103 [0.00641]		0.000523 [0.000830]
Wife is Respondent		-0.556* [0.294]		0.298* [0.168]		0.0503** [0.0218]
Observations	789	769	797	776	810	788
R-squared	0.024	0.077	0.054	0.097	0.182	0.239

Notes. Robust standard errors in brackets. See Table 1 for sample selection rules and variable definitions. Regressions are weighted using the survey weights.

Columns (2), (4), and (6) include controls for husband's and wife's race and whether the wife worked before marriage. Omitted categories: low attachment, white, less than high school, husband is the respondent, wife did not work before marriage.

Marital indices are calculated by the MILC survey. The value used in the regressions is the average index throughout marriage (or 1997 if couple is still married at the end of survey). Marital happiness index uses eleven items reflecting amount of happiness in the marriage, with higher values indicating more happiness; scores range from 11-34. The marital instability index is based on multiple questions asked of married couples; higher scores indicate greater marital instability. The marital instability was logged (by MILC), and scores range from 0 to 1.5. Marital problems index is composed of 13 items indicating the presence of marital problems, with higher scores indicating greater problems; score range is 0-13.

Significance levels are: * 10%, ** 5%, *** 1%.

Source: Marital Instability Over the Life Course Survey (Booth et al, 2003).

Table 5. Wife's labor force attachment and marital trouble: Evidence from the survey of Marital Instability over the Life Cycle

	<i>Dependent variable: Indicator variable equal 1 if:</i>					
	(1)	(2)	(3)	(4)	(5)	(6)
	Either Spouse ever suggested divorce		Either spouse thought marriage in trouble		Either spouse ever talked about marital problems with clergy, counselors etc.	
High Attachment	0.0698** [0.0318]	0.0187 [0.0393]	0.0464 [0.0388]	0.0463 [0.0435]	0.0700* [0.0422]	0.0587 [0.0474]
Years married	-0.00711*** [0.00137]	-0.00773*** [0.00194]	-0.00353** [0.00167]	-0.00480** [0.00194]	-0.00674*** [0.00186]	-0.00931*** [0.00217]
Wife's age at marriage	-0.00146 [0.00752]	-0.00498 [0.00845]	-0.00208 [0.00704]	-0.00430 [0.00772]	0.00127 [0.00797]	-0.00606 [0.00923]
Husband's age at marriage	-0.00252 [0.00661]	-0.000977 [0.00669]	-0.00614 [0.00622]	-0.00439 [0.00637]	0.000901 [0.00696]	0.00196 [0.00697]
Husband's education = HS or some college		-0.0231 [0.0583]		0.230** [0.0891]		0.171** [0.0737]
Husband's education = College or more		-0.0336 [0.0670]		0.199** [0.0972]		0.180** [0.0826]
Wife's education = HS or some college		0.0156 [0.0653]		0.0250 [0.0823]		0.0735 [0.0816]
Wife's education = College or more		0.00501 [0.0789]		-0.0685 [0.0972]		0.0187 [0.0962]
Number of children over the survey period or by wave before divorce		0.0232 [0.0156]		0.0126 [0.0152]		0.0178 [0.0168]
% time Husband worked FT		-0.0391 [0.0802]		-0.114 [0.0887]		-0.108 [0.0966]
Avg real family income (in \$1,000)		0.00346** [0.00150]		0.00363** [0.00166]		0.00247 [0.00175]
Avg wife's contrib to hh income		0.00223* [0.00117]		0.000313 [0.00104]		0.000358 [0.00124]
Wife is Respondent		0.0225 [0.0324]		0.0471 [0.0341]		0.132*** [0.0383]
Observations	827	805	827	805	827	805
R-squared	0.048	0.069	0.016	0.061	0.034	0.093

Notes. Robust standard errors in brackets. See Table 1 for sample selection rules and variable definitions. Regressions are weighted using the survey weights.

Columns (2), (4), and (6) include controls for husband's and wife's race and whether the wife worked before marriage. Omitted categories: low attachment, white, less than high school, husband is the respondent, wife did not work before marriage.

Dependent variables come from questions asked of married couples in the MILC survey. In columns (1) and (2), the dependent variable takes a value of 1 if the respondent reported that either spouse had ever suggested a divorce during the marriage, and 0 otherwise. In columns (3) and (4), it takes a value of 1 if the respondent said that either spouse ever thought the marriage was in trouble, and 0 otherwise, while in columns (5) and (6), it takes a value of 1 if the respondent said that either spouse had ever spoken to somebody (such as a counselor, clergy, etc) about marital problems.

Significance levels are: * 10%, ** 5%, *** 1%.

Source: Marital Instability Over the Life Course Survey (Booth et al, 2003).

**Table 6. Wife's labor force attachment and marital indexes+interaction:
Evidence from the survey of Marital Instability over the Life Cycle**

	(1)	(2)	(3)
Panel A			
<i>Dependent variable is:</i>			
	Marital Instability Index	Marital Happiness Index	Marital Problems
High Attachment	0.0495** [0.0248]	-0.172 [0.307]	0.417** [0.182]
High Attachment * Equal Share	-0.0344 [0.0442]	0.208 [0.539]	-0.337 [0.325]
Low Attachment * Equal Share	0.00221 [0.125]	-1.261 [1.519]	0.0567 [0.906]
Wife is Respondent	0.0443* [0.0228]	-0.437 [0.281]	0.213 [0.168]
Observations	798	779	785
Panel B			
<i>Dependent variable is:</i>			
	Either spouse thought marriage in trouble	Either Spouse ever suggested divorce	Either spouse ever talked about marital problems with clergy,
High Attachment	0.0560 [0.0346]	0.0658* [0.0347]	0.0894** [0.0388]
High Attachment * Equal Share	-0.0130 [0.0625]	-0.00312 [0.0626]	-0.0612 [0.0700]
Low Attachment * Equal Share	-0.117 [0.176]	0.114 [0.176]	-0.116 [0.197]
Wife is Respondent	0.0659** [0.0319]	0.0188 [0.0320]	0.115*** [0.0357]
Observations	815	815	815

Notes. Robust standard errors in brackets. See Table 1 for sample selection rules and variable definitions. Regressions are weighted using the survey weights.

All specifications also include controls for husband's and wife's race and age at marriage, respondent's and spouse's education, whether the wife is the respondent, years married, number of children over the survey period or by wave before divorce, average real family income (in \$1,000), whether the wife worked before marriage and percentage of marriage the husband worked full time. Omitted categories: low attachment, white, less than high school, husband is the respondent, wife did not work before marriage.

See Tables 4 and 5 for descriptions of dependent variables. Equal share is an indicator that equals one if the wife contributes 45-55% to family income on average during the marriage and 0 otherwise.

Significance levels are: * 10%, ** 5%, *** 1%.

Source: Marital Instability Over the Life Course Survey (Booth et al, 2003).

Table 7. Divorce, marital trouble and wife's labor force attachment: Evidence from the survey of Marital Instability over the Life Cycle

<i>Dependent variable is Divorce by End of Survey</i>						
	(1)	(2)	(3)	(4)	(5)	(6)
	Marital Index = Marital Instability			Marital Index = Either spouse thought marriage in trouble		
Marital Index	0.374*** [0.0505]	0.384*** [0.0503]	0.304*** [0.0840]	0.0317 [0.0267]	0.0371 [0.0271]	0.126*** [0.0377]
High attachment		-0.109*** [0.0268]	-0.105*** [0.0329]		-0.0973*** [0.0285]	-0.0248 [0.0384]
Marital Index * High Attachment			-0.00124 [0.0874]			-0.106** [0.0473]
Years of marriage	-0.0179*** [0.00128]	-0.0188*** [0.00129]	-0.0161*** [0.00160]	-0.0220*** [0.00105]	-0.0229*** [0.00106]	-0.0187*** [0.00163]
Wife's age at marriage	-0.0142** [0.00619]	-0.0145** [0.00623]	-0.00717 [0.00551]	-0.0141* [0.00741]	-0.0144* [0.00747]	-0.00653 [0.00594]
Husband's age at marriage	-0.0101* [0.00520]	-0.0104** [0.00528]	-0.00910** [0.00428]	-0.0102* [0.00589]	-0.0104* [0.00596]	-0.00887* [0.00457]
Husband's education = HS or some college			0.0257 [0.0426]			0.0239 [0.0467]
Husband's education = College or more			-0.0169 [0.0475]			-0.0232 [0.0523]
Wife's education = HS or some college			-0.0525 [0.0561]			-0.0715 [0.0608]
Wife's education = College or more			-0.0670 [0.0611]			-0.0856 [0.0680]
Number of children over the survey period or by wave before divorce			-0.0559*** [0.0102]			-0.0523*** [0.0108]
Avg real family income (in \$1,000)			0.00195* [0.00101]			0.00276*** [0.00107]
Avg wife's contrib to hh income			0.00118 [0.000749]			0.00164* [0.000844]
Wife is Respondent			-0.0260 [0.0246]			-0.00228 [0.0256]
Observations	810	810	788	827	827	805
R-squared	0.416	0.429	0.541	0.337	0.348	0.488

Notes. Robust standard errors in brackets. See Table 1 for sample selection rules and variable definitions. Regressions are weighted using the survey weights.

Column (3) and (6) include controls for husband's and wife's race, whether wife worked before marriage, percentage of marriage the husband worked full time. Omitted categories: low attachment, white, less than high school, husband is the respondent, wife did not work before marriage.

Significance levels are: * 10%, ** 5%, *** 1%.

Source: Marital Instability Over the Life Course Survey (Booth et al, 2003).

Appendix Table A1. Divorce rates and labor force participation of married women: Evidence across US states, 2005-2009

	<i>Dependent Variable: Divorce Rate per 1,000 population</i>				
	(1)	(2)	(3)	(4)	(5)
Married Woman LFP	-0.0859*** [0.0305]	-0.0706** [0.0277]	-0.0895** [0.0382]	-0.0824** [0.0400]	-0.0817** [0.0399]
Marriage Rate per 1,000 population		0.0902*** [0.0175]	0.0741*** [0.00949]	0.0607*** [0.0121]	0.0742** [0.0353]
Female Age at First Marriage			-0.283* [0.144]	-0.674*** [0.168]	-0.666*** [0.170]
% High School or Some College			0.120* [0.0702]	0.110* [0.0578]	0.108* [0.0580]
% College			0.0799 [0.0720]	0.0532 [0.0694]	0.0521 [0.0697]
Number of Children				-8.179*** [1.823]	-8.150*** [1.852]
Unilateral				-0.0183 [0.159]	-0.0169 [0.157]
Community property*Unilateral				-0.256* [0.146]	-0.234 [0.158]
Male Income Sdt Dev				4.99e-05*** [1.54e-05]	5.02e-05*** [1.56e-05]
Wage Gap				2.228 [3.307]	2.107 [3.289]
% Working Women in Ind-Occ with State Ind-Occ W/M share<50%				-0.0813* [0.0428]	-0.0811* [0.0431]
Observations	48	48	48	48	47
Adjusted R-squared	0.146	0.390	0.611	0.832	0.797

Notes: Robust standard errors reported in brackets.

Missing observations on divorce rate for California, Indiana and Louisiana. For Georgia, Hawaii and Minnesota divorce rate used is from 2000.

The dependent variable is the labor force participation rate of married women aged 25 to 54. Column (4) and (5) also includes race and religion dummies. Column (5) excludes Nevada.

Sources: Divorce rate and marriage rate are from the U.S. National Center for Health Statistics- National Vital Statistics Reports. We use the average rate over 2005-2009. Protestant and Catholic share are from the Association of Religion Data Archives and are as of 2007. The remaining variables are calculated from data in the 2005-2009 American Community Survey.

States with community property and unilateral divorce (based on Voena, 2015) are: Arizona, California, Idaho, Louisiana, Nevada, New Mexico, Texas, Washington, Wisconsin. States that do not have unilateral divorce are: Arkansas, DC, Louisiana, Maryland, Mississippi, Missouri, New Jersey, New York, Pennsylvania, North Carolina, South Carolina, Vermont, Virginia, Tennessee.

Significance levels are: * 10%, ** 5%, *** 1%.

Appendix Table A2: Summary Statistics, Census Analysis

Variable	Mean	Std. Dev.	Obs	Min	Max
Divorce Rate per 1000 population	3.558	0.819	48	2.2	6.8
Marriage Rate per 1000 population	7.29	4.237	51	4.2	49.4
Divorce Rate / Marriage Rate	0.506	0.095	48	0.14	0.8
Married Woman LFP	69.001	3.915	51	61.67	80.33
Female Age at First Marriage	26.12	0.993	51	23.04	29.7
% Less HS	14.964	2.979	51	9.04	20.46
% High School	35.912	3.767	51	25.82	46.39
% Some College (<4yrs)	23.258	2.067	51	14.19	32.8
% College (4+yrs)	25.866	4.387	51	16.82	46.62
% White	74.893	10.249	51	28.66	96.54
% Black	12.097	8.087	51	0.48	52.22
% Asian	4.884	4.775	51	0.67	47.43
Number of Children	0.764	0.056	51	0.43	1.05
Male Income Std Dev	41971.133	6912.583	51	28839	66297.01
Wage Gap	0.775	0.039	51	0.63	0.91
% of Working Women in Ind-Occ where State Ind-Occ ratio of W/M <50%	22.682	2.406	51	14.88	26.07
State Protestant Share	48.678	15.242	51	11.5	81.4
State Catholic Share	24.376	9.913	51	5.1	44.3
State Density	262.605	490.905	51	1.2	9742.92

Notes. Missing observations on divorce rate for California, Indiana and Louisiana. For Georgia, Hawaii and Minnesota divorce rate used is from 2000.

Sources: Divorce rate and marriage rate are from the U.S. National Center for Health Statistics- National Vital Statistics Reports. We use the average rate over 2005-2009. Protestant and Catholic share are from the Association of Religion Data Archives and are as of 2007. State density is from the U.S. Census Bureau- Population Division as of 2007. LFP, Education, Race, Number of children, Age at first marriage, Wage Gap, Gender Concentration by Industry and Occupation are from the 2005-2009 American Community Survey.

**Appendix Table B1. Women's work behavior during marriage and divorce.
Evidence from the Survey of Income and Program Participation, 2008**

	<i>Dependent Variable: First marriage ended in divorce by year 5</i>				
	(1)	(2)	(3)	(4)	(5)
Worked During Marriage	-0.0791*** [0.0155]	-0.0588*** [0.0159]	-0.0542*** [0.0159]	-0.0457** [0.0197]	-0.0565*** [0.0159]
High Education		-0.0358*** [0.0101]	-0.0328*** [0.0100]	-0.0328*** [0.0100]	-0.0337*** [0.0100]
Age at 1st marriage		-0.00714*** [0.000885]	-0.00826*** [0.000871]	-0.00826*** [0.000871]	-0.00828*** [0.000870]
Any children under age 6 in year 5 or year of divorce (if earlier)			-0.0816*** [0.00957]	-0.0601** [0.0303]	-0.0815*** [0.00956]
Any children * Worked During Marriage				-0.0247 [0.0317]	
Married in decade 1990			-0.0718*** [0.0109]	-0.0717*** [0.0109]	-0.0719*** [0.0109]
Black			0.0772*** [0.0177]	0.0770*** [0.0177]	0.0756*** [0.0177]
Other Race			-0.0630*** [0.0129]	-0.0630*** [0.0129]	-0.0597*** [0.0129]
Community Property					-0.0279** [0.0112]
Unilateral					0.00375 [0.0111]
Constant	0.242*** [0.0147]	0.431*** [0.0273]	0.531*** [0.0291]	0.523*** [0.0310]	0.539*** [0.0299]
Observations	7,160	7,160	7,160	7,160	7,160
R-squared	0.005	0.02	0.042	0.042	0.043
Adj/Pseudo R-squared	0.00491	0.0196	0.041	0.041	0.0417

Sample: all women age 25-54; married once or twice; 1st Marriage >=1990.

The labor attachment variable is calculated using the work start/end dates and marriage start/end dates, and equals zero if the woman did not work at all during her first marriage, and one if she worked for at least some of her first marriage.

Education variable is defined as Low (<HS, HS degree, or some college classes) and High (post-college degree, including Vocational, Associates, Bachelors and higher).

Omitted categories: Low education; Married in decade 2000, Didn't work during 1st marriage.

Significance levels are: * 10%, ** 5%, *** 1%.

Source: SIPP 2008. Regressions are weighted according to weights provided by SIPP.

Appendix Table B2: Summary Statistics, SIPP Sample

Variable	Mean	Std. Dev.	Obs
Age	37.21	6.50	7,160
White	0.81	0.40	7,160
Black	0.11	0.31	7,160
Asian	0.06	0.23	7,160
Low education	0.43	0.50	7,160
High education	0.57	0.50	7,160
Age at 1st Marriage	25.98	5.75	7,160
Total number of children	1.94	1.27	7,160
1st marriage ended in divorce within 5 years	0.17	0.38	7,160
1st marriage ever ended in divorce	0.29	0.45	7,160
Years to divorce of 1st marriage, if ended in divorce	5.27	3.97	2,058
Number of times married	1.10	0.30	7,160
Worked during 1st marriage	0.87	0.34	7,160
Share of 1st marriage spent working	0.73	0.37	6,601
Earnings	3,119.62	2,889.20	5,012

Sample: women age 25-54; married once or twice; 1st Marriage \geq 1990; includes only women we have both work and marriage information for.

Education categories refers to Final Education at time of survey. \leq HS includes women with some college, but no Post-HS degree/diploma; Post-HS Degree includes women who earned a vocational, associates, bachelors or higher degree/diploma/certificate.

“Worked during 1st marriage” is calculated using the work start/end dates and marriage start/end dates, and equals zero if the woman did not work at all during her first marriage, and one if she worked for at least some of her first marriage.

“Share of 1st marriage spent working” is calculated using the work start/end dates, marriage start/end dates, and information on time off of work and time spent care-giving provided in the SIPP. This information is not complete or perfect for all individuals, and may have some errors.

Earnings = person’s total earned income for the reference month.

Source: SIPP2008. Weighted according to weights provided by SIPP.

**Appendix Table B3: Wife Working, earnings and wife's characteristics SIPP
2008 Sample**

	<i>Dependent Variable = 1 if wife worked at all during marriage</i>		
	(1)	(2)	(3)
	All Women		Only
Age at 1st marriage	0.00355*** [0.000832]	0.00424*** [0.000631]	0.00351*** [0.000799]
Final Educ =HS (+ some college)	0.252*** [0.0229]	0.0558** [0.0222]	0.0582** [0.0238]
Final Educ = Post-HS degree (Associates, Vocational, BA+)	0.336*** [0.0218]	0.0770*** [0.0214]	0.0730*** [0.0236]
Earnings		2.45e-06** [1.05e-06]	3.46e-06*** [1.11e-06]
Age at 1st Child			0.00160** [0.000738]
Obs	6,448	4,533	3,790

	<i>Dependent Variable is Log of Current Earnings</i>		
	(4)	(5)	(6)
	All Women		Fulltime Workers Only
Final Educ = Post-HS degree (Associates, Vocational, BA+)	0.507*** [0.0289]	0.498*** [0.0253]	0.521*** [0.0265]
Worked during 1st marriage		0.205*** [0.0616]	0.184*** [0.0674]
Age	0.0360* [0.0205]	0.0509*** [0.0175]	0.0409** [0.0172]
Age-squared	-0.000269 [0.000263]	-0.000487** [0.000225]	-0.000356 [0.000220]
Black	0.0241 [0.0462]	-0.0589 [0.0397]	-0.0704* [0.0407]
Full-Time		1.114*** [0.0392]	
Obs	4,536	4,533	3,689

Notes. Regressions are weighted according to weights provided by SIPP. Sample = black and white women age 25-54; married once or twice; 1st Marriage>=1990; same as used in divorce regressions. Omitted education category is <HS. All data refers to wife's own characteristics.

Earnings = person's total earned income for the reference month.

"Worked during 1st marriage" is calculated using the work start/end dates and marriage start/end dates, and equals zero if the woman did not work at all during her first marriage, and one if she worked for at least some of her first marriage.

Significance levels are: * 10%, ** 5%, *** 1%.

Source: SIPP2008. Weighted according to weights provided by SIPP.

Appendix Table C1: Summary Statistics, MILC Sample

Variables	Mean	Std. Dev.	Obs.
Marriage intact at end of survey	0.755	0.430	827
Divorced at end of survey	0.245	0.430	827
Wife's age in 1980	33.866	9.154	826
Husband's age in 1980	35.839	9.265	826
Wife's race = white	0.886	0.317	827
Wife's race = non-white	0.062	0.242	827
Husband's race = white	0.886	0.318	827
Husband's race = non-white	0.065	0.246	827
Wife education = less than high school	0.072	0.259	826
Wife education = high school or some college	0.701	0.458	826
Wife education = college or more	0.226	0.419	826
Husband education = less than high school	0.075	0.264	827
Husband education = high school or some college	0.615	0.487	827
Husband education = college or more	0.31	0.463	827
Years married	28.097	11.119	827
Number of children over the survey period or by wave before divorce	1.764	1.178	827
Wife's age at marriage	20.389	2.769	827
Husband's age at marriage	22.351	3.251	827
Husband's avg % of time worked full-time during marriage	0.850	0.224	827
Avg real family income	32534.862	11560.558	816
Wife in school in 1980	0.027	0.163	826
Wife worked before marriage	0.745	0.436	827
Wife's % of time worked	0.785	0.287	827
High Attachment = Wife worked >75% of the time	0.684	0.465	827
Wife's avg % contribution to family income	22.490	17.547	813
Wife is a "Career Woman"	0.639	0.481	697
Marital Instability Index	0.322	0.328	810
Marital Problems Index	2.675	2.211	797
Marital Happiness Index	27.821	3.694	789
Spousal Disagreement Index	3.970	1.969	738
Either spouse ever talked about marital problems with others	0.637	0.481	827
Either spouse ever thought marriage was in trouble	0.771	0.421	827
Either spouse ever suggested divorce	0.228	0.420	827
Wife was the survey respondent	0.509	0.500	827

Notes. Sample used in baseline regressions - includes couples where wife was at least age 18 in 1980 and whose marriage did not end in widowhood. Variables are updated through 1997. Statistics are weighted using the survey weights.

Percentage of time worked: includes work after marriage, and during/between surveys, through 1997 (calculated during marriage only).

Career Woman: when asked, in 1997, why the wife worked, respondent said that either “career”, “for a sense of accomplishment”, “for contact with other people”, or “for financial independence” were pretty or very important reasons.

Marital/Spousal Index values are calculated as the average value over the course of the marriage, through 1997. Marital Instability Index: Range = 0 - 1.4; higher score = more unstable. Marital Problems Index: Range = 0 - 1.4; higher score = more unstable. Spousal Disagreement Index: Range = 0-12; higher score = greater disagreement. Marital Problems Index: Range = 0-13; higher score = more marital problems.

Source: Marital Instability Over the Life Course Survey (Booth et al, 2003).

Appendix Table C2 Wife's labor force attachment and Characteristics of Wife and Husband Evidence from the survey of Marital Instability over the Life Cycle

<i>Dependent variable is Wife's labor force attachment</i>				
	(1)	(2)	(3)	(4)
	Wife's characteristics		Husband's characteristics	
		Only wives with children		Only husbands with children
Age at marriage	-0.0157** [0.00695]	-0.00683 [0.00873]	-0.00250 [0.00589]	-0.000480 [0.00867]
Education = HS or some college in 1980	0.109 [0.0763]	0.0988 [0.0768]	0.0635 [0.0918]	0.0902 [0.0977]
Education = college or more in 1980	0.151* [0.0853]	0.151* [0.0882]	0.106 [0.0945]	0.166* [0.101]
Average real income during marriage (in \$1,000)	0.0297*** [0.00263]	0.0301*** [0.00303]	-0.00203 [0.00196]	-0.00197 [0.00209]
Age at 1st child		-0.00804 [0.00509]		-0.00671 [0.00576]
Observations	806	723	806	723
R-squared	0.183	0.176	0.004	0.011

Notes. Robust standard errors in brackets. See Table 1 for sample selection rules and variable definitions. Regressions are weighted using the survey weights.

Age at first child is inferred from information on age and relation to respondent of people living in the household in each survey year. Omitted education category: Less than High School in 1980.

Significance levels are: * 10%, ** 5%, *** 1%.

Source: Marital Instability Over the Life Course Survey (Booth et al, 2003).

Appendix Table C3: Wife's lagged work status and divorce: Evidence from the survey of Marital Instability over the Life Cycle

	(1)	(2)
Lagged Wife Work Status	0.0289 (0.0243)	0.0152 (0.0278)
Years married	-0.0162*** (0.00156)	-0.0188*** (0.00172)
Wife's age at marriage	-0.00901 (0.00552)	-0.00560 (0.00596)
Husband's age at marriage	-0.00769* (0.00457)	-0.00920** (0.00451)
Husband's education = HS or some college		0.0455 (0.0478)
Husband's education = College or more		0.000987 (0.0535)
Wife's education = HS or some college		-0.0727 (0.0627)
Wife's education = College or more		-0.101 (0.0710)
Number of children over the survey period or by wave before divorce		-0.0548*** (0.0109)
Wife worked before marriage		-0.0284 (0.0315)
Log avg real family income		0.00273** (0.00109)
Avg wife's % contrib to family income		0.000192 (0.000838)
Observations	819	798
R-squared	0.456	0.479

Notes. Robust standard errors in brackets. See Table 1 for sample selection rules and variable definitions. Regressions are weighted using the survey weights.

Lagged work status is an indicator variable that equals 1 if the wife worked in the survey period prior to divorce, and 0 if she did not (it is missing if there was no information). For couples that were still married in the last survey period, the wife's work status in the previous period was used.

All specifications also include controls for: Husband's and wife's race and percentage of marriage the husband worked full time. Omitted categories: low attachment, white, less than high school, wife did not work before marriage.

Significance levels are: * 10%, ** 5%, *** 1%.

Source: Marital Instability Over the Life Course Survey (Booth et al, 2003).