

Marriage and Cohabitation

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Abstract

The goal of this paper is to assess the implications of cohabitation on marriage, subsequent marital stability and labor supply behavior of men and women. In order to do this, we develop and estimate a dynamic model of household formation and dissolution, fertility and labor supply using the Panel Study of Income Dynamics. We use the estimated model to perform policy experiments that investigate the implications of divorce laws and marriage tax regulations on cohabitation, marriage, divorce rates, and labor supply of men and women.

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Keywords: Cohabitation, Living Arrangements, Household Labor Supply, Divorce

1 Introduction

The number of unmarried couples living together has increased tenfold between 1960 and 2000. Today, there are 9.7 million Americans living with an unmarried different-sex partner. More importantly, the marital stability, labor supply, and fertility of men and women are strongly related to their living arrangements. Despite the large occurrence of cohabitation (living together with an unmarried partner), it has received little attention in the literature concerned about household formation, dissolution and household labor supply.¹ The empirical evidence from the Panel Study of Income Dynamics shows that cohabitation has important consequences for later marriage, fertility, labor supply and divorce behavior of men and women. Table 1 shows that employment rates of cohabiting women are higher compared to married women. Table 1 also shows that for men, employment rate differentials by marital status are much smaller compared to women. These patterns can also be seen in Figure 1, which shows that cohabiting men work less than married men. Also, for couples who have cohabited before marriage, the subsequent risk of divorce is significantly higher.

In this paper, we investigate the implications of cohabitation on marriage, subsequent marital stability and labor supply behavior of men and women. In order to do this, we develop and estimate a dynamic model of household formation and dissolution, fertility and labor supply. The model allows us to control for selection into different living arrangements (marriage, cohabitation, remaining single). We use the estimated model to perform policy experiments that investigate the implications of divorce and tax regulations on cohabitation, marriage and divorce rates.

There are various ways in which cohabitation may differ from legal marriage. First, an important feature of cohabitation is that it enables partners to take advantage of the benefits of living together, without the commitment that legal marriage requires. For example, Brien, Lillard and Stern (2006) show that the lower cost of separation makes co-residential relationships attractive for couples,

¹Except for Brien, Lillard and Stern (2006) who study cohabitation decisions and find that individuals cohabit in order to learn about their potential partners and hedge against future bad relationship specific shocks.

Figure 1: Annual Hours of Work by Length of Marriage/Cohabitation (PSID 1968-1997)

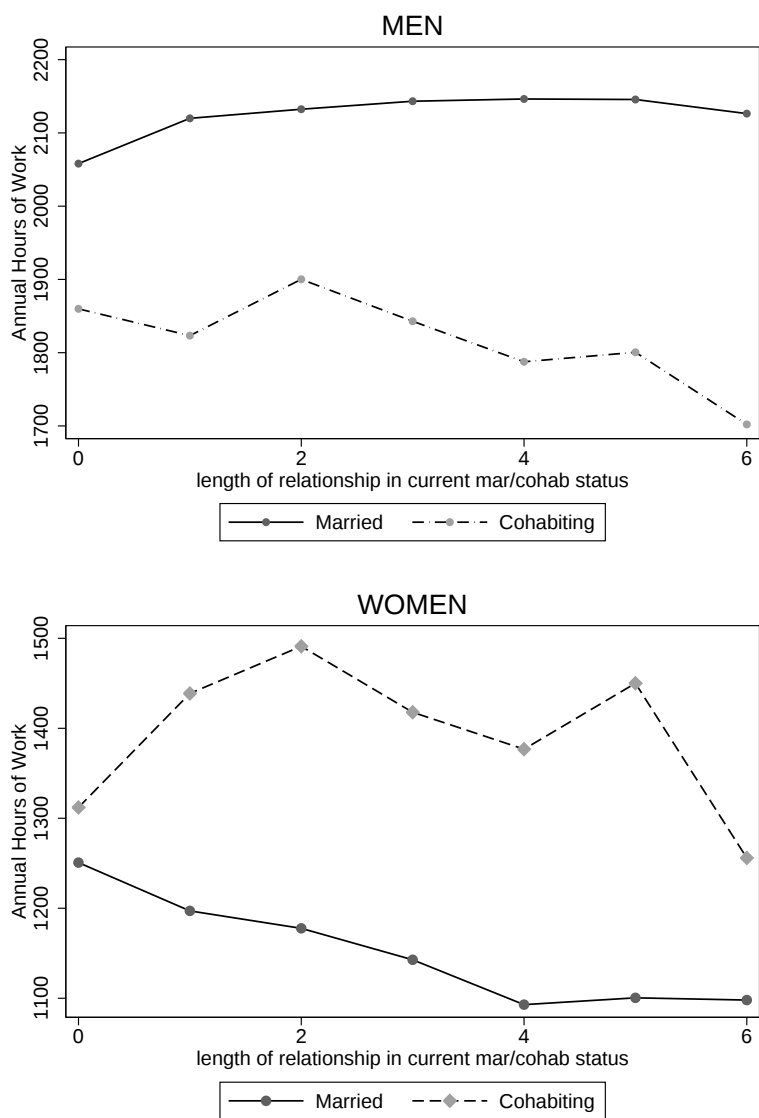


Table 1: **Employment Rates of Men and Women by Marital Status (PSID 1968-1997)**

		WOMEN		MEN	
		Married	Cohabiting	Married	Cohabiting
By Age					
	18-25	55.92%	78.40%	91.52%	89.61%
	26-35	53.88%	81.82%	95.69%	92.35%
	36-45	61.45%	82.98%	95.83%	78.57%
By Education					
	College	59.30%	91.43%	95.84%	89.74%
	No College	55.51%	76.92%	93.52%	89.08%
By Number of Kids					
	No Child	78.09%	87.12%	92.14%	90.98%
	1	55.99%	76.59%	94.38%	80.85%
	2	47.64%	41.67%	95.58%	87.50%
	More than 2	38.57%	41.67%	95.28%	91.67%

as it gives the opportunity to hedge against future bad shocks to the relationship quality while taking advantage of benefits of living together. Some examples to these benefits are returns to specialization, joint consumption of a public good, risk pooling and children. In this regard, cohabitation can be seen as a intermediate stage that is followed by marriage. Therefore, for a lot of couples, the choice is not only between being married and remaining single, but there is a third option that is non-marital cohabitation and it provides a tradeoff between the advantages and disadvantages of getting married and remaining single. In this regard, for a study that is ultimately interested in evaluating policies targeted at household allocation, formation and dissolution behavior, it is important to take into account this intermediate stage.

Second, tax laws determine the tax treatment of individuals according to their marital status. This paper studies the effects that differential tax treatment of married, cohabiting and single individuals on their marital status and labor supply decisions. Chade and Ventura (2002) look at the implications of changing the tax treatment of married people on marriage formation, assortative mating, and labor supply. In their model, when two partners meet, there is a tradeoff between the

marital gains that they will enjoy if they get married and the marriage tax penalty. They do not consider the third option, cohabitation, which enables the partners to take advantage of the benefits of living together (public good consumption, sharing living expenses, children) while avoiding marriage tax penalties.

In the model, each period a single individual meets a potential partner with an exogenous probability and decides whether he/she is going to continue being single, start living together with the partner, or get married to him/her. The value of living together/being married to a partner depends on (1) Match quality of the relationship which is observable, but is subject to change as the relationship progresses, (2) Education level and accumulated work experience of the partner which determine his/her future potential earnings. The individual also decides how much labor to supply to the market given the tax schedule he faces. For characterizing the allocations chosen by married/cohabiting individuals, we employ the collective household model in a dynamic framework with no commitment so that couples cooperate but they are not able to commit to future allocations. For the couple's problem, we make the assumption that the outcomes to the household's allocation problem are constrained efficient so that the solution to the couple's problem is obtained by using a Pareto problem with participation constraints. Due to lack of commitment, the share of the total household resources that a partner receives is subject to change depending on his/her outside option each period. This gives rise to inefficiencies within the relationship since (1) Household members cannot contract over transfers to be made in the future periods of the relationship, (2) Household members cannot make conditional transfers when separated. The potential for inefficiencies increases as the probability of separation increases. Holding everything else constant, this probability is higher for a cohabiting couple as their cost of separation is lower (due to the fact that it is more difficult to legally separate when married). The differences in the level of relationship surplus that can be attained in a co-residential relationship and a marriage can be seen in Table 1.

In the model, we allow cohabitation to differ from marriage in the following ways: (1) Stigma towards living together with an unmarried partner, which determines the utility the partners enjoy from the relationship, (2) Lower cost of

Table 2: **Gains From Living Together in a Cohabitation vs. Marriage**

	Cohabitation	Marriage
Gain from jointness of public cons		=
Gain from returns to specialization		<
Gain from children		<
Gain from match quality		=

separation due to legal rules the partners are subject to in the case of marriage, this enables them to hedge against future bad shocks, (3) Different tax liability when cohabiting compared to when legally married. The questions that are addressed in this paper are: (1) How are marital status, living arrangement, fertility and labor supply decisions jointly determined?, (2) What accounts for the large labor supply differentials between cohabiting and married men and women?, (3) What are the implications of legal divorce costs on agents' choices regarding marital status and living arrangements?, (4) What are the implications of marriage tax penalties/bonuses on living arrangement decisions?

2 Family Laws and Cohabitation

In this section, we outline the differences in the legal regulations the unmarried cohabitants and married couples face in the United States. The first important distinction is that unmarried cohabitants do not need to follow strict procedures to dissolve the living arrangement. Moreover, unmarried cohabitants can avoid the “marriage tax” in the Internal Revenue Code that provides a greater tax rate for married couples than it does for two unmarried individuals.

Marriage creates a legal status between two individuals that gives rise to certain rights to both parties and to the union generally. On the other hand, unmarried cohabitants do not enjoy the same rights as married individuals, particularly with respect to property acquired during a relationship. Marital property laws do not

apply to unmarried couples, even in long-term relationships. Also, laws regarding distribution of property from one spouse to another at death do not apply to unmarried couples. Couples who live together can enter into contracts that provide rights to both parties that are similar to rights enjoyed by married couples. However, such arrangements may be invalid in some states, particularly where the contract is based on the sexual relationship of the parties.

If a couple is married for two years, and a spouse dies, the other spouse is most likely entitled to receive property, insurance benefits, death benefits, etc. from the other spouse's estate. If an unmarried couple lives together for 20 years, and one partner dies, the other is not guaranteed any property or benefits. Different laws exist in each state and city regarding contractual agreements that may provide unmarried cohabitants rights that are analogous to marital rights. When cohabiting couples separate, division of assets often becomes a contentious issue. In the past, courts refused to enforce agreements between unmarried couples to share income or assets, holding that such agreements were against public policy.

In terms of acquisition of property, marital and community property laws govern the ownership of property acquired during a marriage. The characterization of property acquired by unmarried cohabitants is less clear. Some property acquired by unmarried couples may be owned jointly, but it may be difficult to divide such property when the relationship ends. When two people are legally married, they are subject to community property laws in almost all of the states in the US. These laws state that upon divorce the spouses divide all earnings and property acquired during marriage are community property and they are divided equally.

Cohabiting parents may face legal difficulties if they separate without a written parenting agreement. An unmarried father must acknowledge paternity by filing an affidavit with the state legitimating his child and establishing his parental relationship. Likewise, both parents must actively participate in the raising of the child in order to have a legitimate claim to custody or visitation. By legitimating their child and being involved in the child's upbringing, unmarried parents establish their right to seek custody or visitation if the family breaks up. Legitimation is also important for inheritance purposes.

3 A Two-Period Model

In this section, we solve a two-period version of the full model in order to demonstrate the main channels at work. Consider a household that lives for two periods. The example here is a special case of Lundberg (2002).

In the first period, the partners make decisions regarding their relative private consumption levels, as well as their respective labor supplies and housework. The partners get utility from their private consumption, leisure time and consumption of a public good that is domestically produced according to a household production process. The utility in the first period is strongly separable in the private and public goods, and is given by,

$$u(c_i, Q) = u(c_i) + \gamma(Q)$$

The public good Q is produced with a household production technology which uses the spouses' housework time as inputs and is given by, $Q = g(h_m, h_f) = \eta_m h_m + \eta_f h_f$, where h_i denote the amount of time partner i spends on housework and η_i is the productivity of domestic labor of each spouse i . The agents divide their total time between market work and housework.

In the second period, agents' wages are determined by their market work in the first period (the accumulation of human capital in the first period). The second period, there is no production of the public good and the agents only get utility from their private consumption (they work in the market the whole time in the second period). There is an exogenous probability of divorce, p , in the second period, in which case, the agents consume their wages which are determined by the first period labor supplies. The agents maximize the following objective function

with respect to first period consumption and labor supply:

$$\begin{aligned}
& \max_{c_{m1}, c_{f1}, h_m, h_f} && \mu_m u_1(c_{m1}, Q) + \mu_f u_2(c_{f1}, Q) + (1-p) [\mu_m u_1(c_{m2}, Q) + \mu_f u_2(c_{f2}, Q)] + p [u_1(\bar{c}_{m2}) + u_2(\bar{c}_{f2})] \\
& \text{s.t.} && c_{m1} + c_{f1} = w(1 - h_m) + w(1 - h_f) \\
& && c_{m2} + c_{f2} = w_{m2} + w_{f2} \\
& && \bar{c}_{m2} = w_{m2} \\
& && \bar{c}_{f2} = w_{f2} \\
& && w_{m2} = w(1 - h_m) \\
& && w_{f2} = w(1 - h_f) \\
& && Q = g(h_m, h_f) = \eta_m h_m + \eta_f h_f
\end{aligned}$$

The efficient solution to the above problem will have the property that the ratio of marginal utilities of the partners will be constant in the two periods and will be equal to $\frac{\mu_m}{\mu_f}$. The efficient allocation will also prescribe full specialization within the household, whenever $\eta_m > \eta_f$. However, when the agents cannot sign binding contracts over the level of their consumption in the second period, full specialization (and therefore the efficient solution) is not possible. This is because without commitment, when the female works at home in the first period, she foregoes higher wages in the second period. Without commitment, the male is not able to compensate her for this with future period transfers.

In the full model, we endogenize divorce decisions and incorporate differences in the tax schedules by marital status.

4 Model

Agents make decisions regarding marital status, employment and fertility in each period:

1. If single, and meet a partner, decide whether to:
 - (a) Remain single and continue search.
 - (b) Move in with the partner.

- (c) Get married to the partner.
- 2. If married, then decide whether to:
 - (a) Remain married
 - (b) Divorce
- 3. If cohabiting, then decide whether to:
 - (a) Remain cohabiting.
 - (b) Separate.
 - (c) Get married.
- 4. Once the marital status decision is made, then the agent decides whether he is going to
 - (a) Have child (if still fecund), not work
 - (b) Have child (if still fecund), work
 - (c) Not have child, not work
 - (d) Not have child, work

4.1 Fertility

Each period females get a stochastic shock to their fertility that determines the couple's chances of conception in that period. If the female chooses to become pregnant, she has a child in the following period.

4.2 Wages

Each period the agents get shocks to their wages at a job. These are iid across time. Given their marital status, education, labor market experience, and home production, they then decide whether they will work that period or not. Working in a period increases your human capital (measured by labor market experience)

by 1 period and this increases your future wage offers. The wage offer of person i at time t is determined by:

$$\ln w_{it} = \alpha_1 + \alpha_2 x_{it} + \alpha_4 x_{it}^2 + \alpha_5 1_{\{work_{t-1}=1\}} + \alpha_6 e_i + \varepsilon_{it}$$

where e denotes the education level of the individual and x denotes the accumulated labor market experience. The wage is also allowed to depend on an indicator function that denotes whether the individual was working in the preceding period.

4.3 Preferences

The agents are endowed with preferences over the number of children in the household, the match quality of their relationship, consumption of a public good (produced by a intra-household production process with domestic labor supplies of the partners as inputs), leisure, and a private consumption good. The utility function is given by $u^i(c^i, l^i, Q, k, \theta)$.

$$u_i(c_i, l_i, Q, k, \theta) = \alpha_i \ln c_i + (1 - \alpha_i) \ln l_i + \delta_i k \ln Q$$

so that preferences are Cobb Douglas and individual consumption and leisure are separable from the public good Q . l_i is the agent's leisure time. Also, k is the number of children in the household and is allowed to affect the marginal valuation of the public good.

4.4 Home Production Technology

There is a public good that is domestically produced using the domestic labor supplies of the partners as inputs. The intra-household production technology is given by $Q = g(h_m, h_f)$. The output of the intra-household production process is not observable and is not marketable, so that the partners supply labor and privately consume a consumption good purchased on a market, and the other domestically produced according to some concave function produced according to the function $g(h_m, h_f)$ where h_m, h_f are the partners' household work.

4.5 Match Quality

As in Brown and Flinn (2006), we have a finite number of match quality values $\theta_1, \dots, \theta_M$. Each period, given the match quality of the previous period, the match quality decreases one level with a certain probability γ^- and increases with probability γ^+ .

4.6 Household's Problem

If an agent single, each period, he/she draws from a joint distribution of partner characteristics, which also depends on his characteristics. The probability of an agent with education e_i and total labor market experience x_i , drawing a person with e_j and x_j is given by $\lambda(e_i, x_i, e_j, x_j)$. There is also a match specific quality of the relationship, given by θ , and this you draw from a distribution $G(\theta)$ after this is drawn the education and experience characteristics of the partner. Once the agent draws a potential partner with particular characteristics and a relationship specific match quality, he decides whether he will (1) remain single and continue search, (2) get together but just cohabit, (3) get married.

Problem of a cohabiting/married couple:

The first best allocation to the couple's problem can be derived by solving the following social planner's problem:

$$\max_{c_{mt}, c_{ft}, h_{mt}, h_{ft}} \mu_m \sum_t^T \beta^t u_m(c_{mt}, l_{mt}, Q_t, k_t, \theta) + \mu_f \sum_t^T \beta^t u_f(c_{ft}, l_{ft}, Q_t, k_t, \theta)$$

The solution to this problem, the first best allocation, will not be achieved if there is no access to a commitment technology. We formulate the Pareto problem

with participation constraints so that the problem becomes,

$$\begin{aligned}
& \max_{c_{mt}, c_{ft}, l_{mt}, l_{ft}} \quad \mu_m \sum_t^T \beta^t u_m(c_{mt}, l_{mt}, Q_t, k_t, \theta) + \mu_f \sum_t^T \beta^t u_f(c_{ft}, l_{ft}, Q_t, k_t, \theta) \\
& \text{subj to} \quad \sum_{r=t}^T \beta^{r-t} u_m(c_{mt}, l_{mt}, Q_t, k_t, \theta) \geq \bar{V}_{mt} \\
& \quad \quad \quad \sum_{r=t}^T \beta^{r-t} u_f(c_{ft}, l_{ft}, Q_t, k_t, \theta) \geq \bar{V}_{ft}
\end{aligned}$$

We can reformulate this problem in its recursive form using the approach of Marcet and Marimon (2000) and Mazzocco and Yamaguchi (2006) where they expand the set of state of variables by including a new state variable, M_{it} that denotes the Pareto weight plus the cumulative sum of the Lagrange multipliers on the participation constraints at all periods from 1 to t . Hence, whenever spouse i 's participation constraint binds, the weight on this utility function is increased. Divorce is an efficient outcome in this problem and it occurs whenever there are no more gains to staying married. With the new state variable M , the recursive formulation of the above problem is:

$$\begin{aligned}
& \max_{c_{mt}, c_{ft}, l_{mt}, l_{ft}} \quad u_m(c_{mt}, l_{mt}, Q_t, k_t, \theta_t) + M_t u_f(c_{ft}, l_{ft}, Q_t, k_t, \theta_t) \\
& \quad \quad \quad + E [\beta V_{m,t+1}(S_{t+1}) + M_t \beta V_{f,t+1}(S_{t+1}) \mid S_t] \\
& \text{subj. to} \quad c_{mt} + c_{ft} = (1 - \tau^R) w_{1t} h_{1t} + (1 - \tau^R) w_{2t} h_{2t} \\
& \quad \quad \quad \ln w_{it} = \alpha_1 + \alpha_2 x_{it} + \alpha_3 e^i + \alpha_4 x_t^{i^2} + 1_{\{\text{work}_{t-1}=1\}} + \varepsilon_t^i \\
& \quad \quad \quad Q_t = g(1 - l_{ft} - h_{ft}, 1 - l_{ft} - h_{ft})
\end{aligned}$$

where τ^R denotes the income tax which is determined by the individual's relationship status (married, cohabiting or single).

5 Taxes

Married couples pay taxes based on their joint income. There are different tax schedules for married couples and for singles, with the property that the width of

tax brackets for married couples is not equal to twice the width of corresponding brackets for single individuals, so that for those couples with similar incomes, a smaller portion of their incomes end up being taxed at the lower rate and a larger portion ends up being taxed at the higher rate.

Taxable income for a married couple will be:

$$w_m + w_f - d^{mar} - 2e$$

where $d^{married}$ is the standard deduction a married couple is entitled to and e denotes personal exemptions. The taxable income of single males and females are given by:

$$w_m - d^{single} - e$$

Notice that:

1. Combined gross income of a married couple is used in the determination of the taxable income.
2. Only the standard deduction is applied in a way that is contingent on marital status.

5.1 Discussion

The following factors play into an individual's decision to cohabit or marry when he/she draws a partner of a random match quality θ :

1. If an individual meets a potential partner with an average θ , the agent could move in with them and not marry them right away, because they want to be able to take advantage of the consumption complementarities (due to jointness of public consumption) rather than searching longer for a better match. On the other hand, they do not want to get married right away as the match quality is not high enough for a higher degree of commitment (due to higher cost of separation in marriage). When compared to being single, the gain from the jointness of public consumption that they will take advantage of when you live together, dominates the gain from searching longer and possibly finding a better partner.

Comparison of cohabitation and marriage: The agents gain from higher level of specialization (due to higher commitment in marriage) and higher level of risk pooling, and also higher level of utility within marriage, are dominated by the utility cost of being stuck with someone with a low θ (or insure against bad future θ shocks). But the agent might want to take advantage of joint consumption of public good aspect of living together and might not want to search any longer.

2. The agents meets someone with a very high θ , then

Comparison of cohabitation to remaining single: The gain from the jointness of public consumption that he/she will take advantage of when living together, dominates the gain from searching longer and possibly finding a better partner. But also, because of the high θ , he/she will also be able to take advantage of any returns to specialization (since high θ provides you with a higher degree of commitment), so then cohabiting is not that different than marriage in this case. Since the public good is more cheaply provided when living together with someone, a person gets higher utility due to children when living together with someone.

Comparison of cohabitation to being married: Similar level of specialization (due to higher commitment in marriage).

3. If the agent meets someone with a very low θ , they will continue search.

As returns to specialization go down, gains to legal marriage also go down. This is because the commitment that legal marriage provides you is less valuable now since what it allowed was specialization but there is not much gain from that anymore but there is still the higher gains due to children aspect. This is due to the different separation cost when cohabiting vs. when married, the fact that partners cannot promise to transfer resources to each other at future periods will matter less for marriage so that participation constraints bind less frequently. In a cohabiting relationship, because the partners are not able to specialize, the gains from being together for relationships like this will not be returns to specialization, these kinds of relationships will be built more around consumption complementarities as opposed to production complementarities. So

that in cohabiting relationships, one would expect to see more pairing between people with income/education differences. Hence, the model has implications for assortative mating patterns. More specifically, the model implies that assortative mating patterns will look different for cohabiting couples compared to married couples.

Once the couple has children, the cost of separation is higher than when they don't have children. Then, children can also be viewed as a commitment device within the relationship.

6 Data

The core PSID sample consists of two independent samples: a cross-sectional national sample, known as the SRC (Survey Research Center) sample, and a national sample of low-income families, known as the SEO (Survey of Economics Opportunities) sample. This core sample originated in 1968 and the individuals from families in the core sample were interviewed from 1968 to 1996 every year. In 1990 and 1997, a supplemental sample of Latino households and Immigrant families were added to the core PSID sample. The estimation sample used in this paper includes only those individuals who are associated with families from the SRC.

The criteria used to construct the estimation sample are as follows. White male heads that are observed from the first year of marriage for at least three periods are selected. In order to obtain information about the first year of marriage, the Marriage History File is used, which has retrospective histories of marriages and is collected in the 1985-2005 waves of the PSID.² If the 1985-2005 retrospective marriage history is not available, the marriage history is constructed by using the 1968 survey that contains information on the duration of the current marital status of the head. The employment, wage and location histories of the male heads and their partners are followed during the course of their relationship.

An individual is considered to be married if the marital status of the head at

²The PSID collects retrospective histories of marriages for those individuals who are of marriage-eligible age and who are living in a PSID family at the time of the interview in the 1985-2005 waves.

the time of interview is “Legally married”. For the years 1968-1977, PSID does not make the distinction between marriage and cohabitation. However, after 1977, the variable for marital status distinguishes the married couples from those that are just cohabiting. Divorce or separation is assumed to occur when the individual is observed to be married in period t , and not married in the next period. A period corresponds to a calendar year in the data.

For the years 1968-1977, the PSID does not make the distinction between marriage and permanent cohabitation, and identifies a respondent in either kind of relationship as “married.”. Starting in 1978, the survey records the legal marital status of the head, which can be used to distinguish between those who are legally married and those who are cohabiting. After 1993, the survey asks only for the legal marital status so it is no longer possible to distinguish a respondent who is single from one who is cohabiting using these questions.

Alternatively, starting in 1983, the PSID records in greater detail the relationship of each member of the household to the head. First-year cohabiters are identified by a special code, as are “permanent cohabiters,” defined as those cohabiters who have been in the household long enough to have appeared in an earlier wave of the survey. (Information such as hours worked that is collected for wives is also collected for permanent cohabiters.) From the relationship code assigned to the head’s wife or partner, we are able to construct an alternative measure of the relationship’s status.

For our tabulations, we use both approaches to identify married and cohabiting couples, using one if the other is ambiguous, and discarding the few observations where the two measures contradict each other. When we report transition probabilities by the duration of the relationship in its current status, we keep only observations where we can clearly identify the start of the relationship.³ Because the PSID is administered only once per year, there is a limit to the precision with which we can identify the length of a relationship. For example, a relationship

³We can do this either if we see one spouse in a particular wave and then the other spouse enters the household the following wave, or if we explicitly see the status of relationship change from cohabiting to married, or if the cohabiter is coded as first-year cohabiter. In addition, there are cases where a partner appears for the first time, but is not identified as a first-year cohabiter, but is coded as permanent cohabiter the following wave.

that is observed in one wave and has dissolved or changed status by the next wave is assumed to have lasted for one year. Similarly for a relationship that is observed for longer.

The method by which we identify married and cohabiting couples does not let us clearly identify the relationship status of any observations before 1977. We also do not use observations after 1997, when the PSID switched from an annual to a bi-annual format. Finally, we restrict our analysis to the original SRC sample and eliminate those respondents for whom a relationship status is ever ambiguous.

This leaves us with a sample containing 170,637 observations of 12,048 distinct individuals between 1977 and 1997. Fifty-one percent of the sample is female, 18.1% have at least some college, 86.7% identify themselves as white and 10.5% as black.

During the years in which these respondents are surveyed, 45.4% are observed to be married and 9% to cohabit (these include the 6.1% who are observed both cohabiting and married). When broken down by race, we find that white respondents are much more likely to have been married than black respondents (47.5% compared to 29.6%) but just as likely to cohabit (8.1% of white respondents compared to 8.9% of black). Differences are much more pronounced when analyzed by education. Among respondents with at least some college, 75.5% are observed to be married at some point during the sample period and 13.4% to cohabit, compared to just 55.4% married and 10.9% cohabiting for those with less education.

The average age of respondents in our sample is 31. Among married couples, the average age for husbands is 47.6 and for wives 45.1. Among cohabiting couples, the male partner has an average age of 33.1, and the female partner 31.2. The fact that married respondents tend to be older than cohabiting ones reflects the longer durations of marriages compared to cohabiting relationships, rather than a difference between older and younger couples in their choice of whether to marry or cohabit upon first forming the relationship. In marriages whose formation is captured in the sample, the average age of the man and women at marriage are 31.0 and 29.9 respectively. This compares to average ages of 31.2 for men and 28.3 for women at the start of cohabiting relationships.

We next consider the choice of relationship status by the joint education status

of couples. Among couples in which both members have at least some college, 6.4% cohabit at some point, including those who do or do not eventually marry. This statistic is similar, 6.9%, for couples in which neither partner has some college education. Among couples with different educational status, 11.5% of those in which the female has more education cohabit at some point compared with just 6.9% in which the male has more education.

7 Estimation Results

To be completed

8 Conclusion

To be completed

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