

# Prenups

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## ABSTRACT

Before the mid-1980s, prenuptial agreements had tenuous legal standing in US state courts, which often refused to enforce them. In 1983 the National Conference of Commissioners on Uniform State Laws promulgated legislation called the Uniform Premarital Agreement Act (UPAA) that was designed to strengthen these agreements' legal enforcement. Since then, 26 states and the District of Columbia have adopted the UPAA, rendering prenuptial contracts reliably enforceable in their courts. This paper uses data on UPAA adoption to investigate the effect that making prenuptial contracts legally enforceable has had on divorce rates. We find that rendering prenuptial agreements legally enforceable reduced divorce rates in America. We also present the first data on persons who use prenuptial agreements and the substance of those agreements in the United States.

## 1. INTRODUCTION

In the 1970s a unilateral-divorce revolution swept the United States. Economists have closely studied and frequently debated the effect of this revolution on divorces rates in America. Perhaps because of this, the fact that just a decade later a second and potentially equally important divorce-law revolution swept America escaped economists' attention: the prenuptial-enforcement revolution.

Before the mid-1980s prenuptial agreements had tenuous legal standing in US state courts, which often refused to enforce them. In 1983 the National Conference of Commissioners on Uniform State Laws promulgated legislation called the Uniform Premarital Agreement Act (UPAA) that was designed to strengthen these agreements' legal enforcement. Since then, 26 states and the District of Columbia have adopted the UPAA, rendering prenuptial contracts reliably enforceable in their courts.

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Prenuptial (or premarital) agreements, known colloquially as “prenups,” are contracts between persons considering marriage that define the terms of their prospective union and/or the terms of its dissolution should their marriage later end. Typically these contracts define spousal property rights in the event of divorce or death, such as asset distribution. However, they may also define property rights in ongoing marriages, such as one spouse’s choice of children’s religious upbringing.

For decades, experts and casual commentators have speculated about the helpful or deleterious influence of prenups on divorce in the United States. Yet no one has endeavored to determine what effect, if any, these contracts in fact have.<sup>1</sup> Indeed, no one has endeavored even to determine what American prenup users or the substance of their premarital contracts might look like. This paper’s purpose is to begin to fill these holes in scholars’ understanding of American prenuptial agreements. It provides the first empirical look at prenup users, the substance of their agreements, and the effect of prenup enforceability on divorce rates in the United States.

We created a new data set covering more than 2,000 American premarital agreements and their users between 1985 and 2013. Examination of these data suggests that prenup-using couples in the United States are composed of an economically well-off and a significantly less economically well-off spouse whose premarital contract is used to protect the former’s financial interest against the latter’s financial claims in the event of divorce.

To investigate the effect that making such contracts enforceable has had on divorce rates in the United States, we created a new data set on prenups’ enforceability across America’s states between 1985 and 2009. Analyses of these data suggest that rendering prenups legally enforceable reduced divorce rates in the United States. A large number and wide variety of empirical models consistently find that the long-run effect of the UPAA reduces the average divorce rate in the United States by approximately 14 percent. This is true whether our regressions are estimated using population weighting or no weighting, whether we consider divorce rates in level form or in log form, whether we control for unilateral-divorce reform or do not, whether we exclude potential outlier states or include them, whether we exclude states with varying degrees of incomplete divorce-data reporting or include them, whether we measure the di-

1. On the types of arguments typically offered for and against prenups on the grounds of their alleged effects on marriage, see Marston (1997).

orce rate in terms of annual divorces per 1,000 married persons or in terms of annual divorces per 1,000 persons, and whether we use interpolated decadal census data or annual data from the Current Population Survey (CPS) to measure the proportion of the population that is married in each state.

The magnitude of the divorce-rate reduction we find, which was achieved by a divorce-law reform that affected only a modest proportion of married persons in the United States—those with prenups—is consistent with a substantially higher underlying divorce propensity in this subpopulation of married persons than among non-prenup-using married persons in the United States. We explain why this is likely the case and demonstrate that, for plausible estimates of prenup users' underlying average divorce rate, if the UPAA reduced that rate to its level among prenup nonusers, this would fully account for the overall divorce-rate reduction that our empirical analyses consistently find.

While premarital agreements generally, and the UPAA in particular, have received some attention in the legal literature, economists have said little about them. In a theoretical treatment, Rainer (2007) uses an incomplete-contract approach to model how prenuptial agreements can raise spouses' investments in marital-specific assets. Drawing on a transaction-cost framework, Hamilton (1999) considers prospective spouses' decision to sign premarital contracts and their property rights choices in nineteenth-century Quebec. Smith (2003) surveys theoretical work on marital contracts in general, including prenups. Habibi (1997) discusses a prenuptial-contract term common in Iranian marriage—the *mahr*.<sup>2</sup> And Ambrus, Field, and Torero (2010) examine the *mehr*, or traditional Islamic bride-price, which functions as a premarital contract in Bangladesh. No one, however, has studied the characteristics of prenup users in the United States, the substance of Americans' premarital contracts, or the effect of America's prenuptial-enforcement revolution on divorce rates empirically.

Our paper is most closely connected to the growing literature that empirically investigates the effect of changes in divorce law on divorce rates in the United States.<sup>3</sup> To date, this literature has focused on one such change in particular: the unilateral-divorce revolution (see, for instance,

2. Liebermann (1983) considers a similar contract—the *kethubah*—in Jewish law.

3. A related literature considers countries outside the United States. See, for instance, Kidd (1995), Allen (1998), Binner and Dnes (2001), Coelho and Garoupa (2006), Olah (2001), Smith (1997), and Kneip and Bauer (2009).

Peters 1986, 1992; Allen 1992; Ellman and Lohr 1998; Friedberg 1998; Gray 1998; Rasul 2003; Gruber 2004; Drewianka 2006; Mechoulan 2006; Wolfers 2006; Matouschek and Rasul 2008; Lee and Solon 2011).<sup>4</sup> We contribute to this literature by analyzing the effect of a potentially equally important but hitherto neglected divorce-law change on divorce rates in the United States: the prenuptial-enforcement revolution.

## 2. PRENUPS, THEIR USERS, AND THEIR ENFORCEMENT

### 2.1. The Uniform Premarital Agreement Act

The history of prenuptial agreements in America traces its roots to sixteenth-century England. Wealthy wives-to-be used prenuptial contracts to preserve some of their premarital property rights, which otherwise devolved to their husbands-to-be upon marriage under English common law (Graham 1993, pp. 1039–40).<sup>5</sup> The legal systems of America's states, descendant from England's, continued the practice of permitting such agreements in limited circumstances following the United States' founding.

Early modern prenups were not, as is the norm today, made in contemplation of divorce—that is, with an eye to property distribution in the event of marital breakdown. Rather, those prenups defined property rights within marriage, such as a woman's ownership of assets that would otherwise revert to her husband and the disposition of property upon spouses' death (Trebilcock and Keshvani 1991, pp. 543–44). Modern prenuptial agreements, which, in defining property rights in the event of divorce, publicly admit that spouses have the possibility of marital failure in mind and are in fact making plans in expectation of such failure, would have been seen as anathema to the institution of marriage in the early modern period and thus would have been legally unenforceable.

Perhaps surprisingly, this is the same view contemporary American courts took of such prenuptial agreements until late into the twentieth century. Before the 1970s, American courts held prenuptial agreements made in contemplation of divorce invalid *per se* and thus refused to en-

4. Allen and Gallagher (2007) provide a comprehensive review of this literature from 1995 to 2006. On the potential (political-)economic determinants of America's unilateral-divorce revolution, see Leeson and Pierson (forthcoming).

5. On early modern English marital-property law and the peculiar institutions it sometimes generated, see Leeson, Boettke, and Lemke (2014).

force them (see, for instance, Bix 1998; Mahar 2003; Uniform Law Commission 2012). Prenups, it was argued, were contrary to public policy. They undermined the institution of marriage by encouraging divorce and abrogating the state-established obligations of matrimony.

In the 1970s prenup enforcement in the United States improved modestly. Some courts adopted a more generous attitude toward premarital contracts, or at least did not reject their validity out of hand as their predecessors had done. Still, enforcement remained difficult and uncertain.

To be deemed enforceable, prenups had to pass significant tests of both procedural and substantive fairness. Typically this meant showing that a prenuptial agreement's signatories had consulted lawyers, that relevant financial disclosure had occurred between signatories, that any rights waived had been waived with full knowledge of those rights, and that the terms set down in a prenuptial contract were not severely damaging to a signatory's material interest at the time the contract was created or its enforcement was sought. While at least some of these requirements are similar for other types of contracts, "[m]ost of the jurisdictions applying these fairness requirements held premarital agreements to a higher standard than they held ordinary agreements under comparable protective doctrines of standard contract law such as unconscionability, misrepresentation, and duress" (Bix 1998, p. 154). Prenup enforcement in America thus remained in a tenuous state, where it stayed until the mid-1980s.

In 1983, the National Conference of Commissioners on Uniform State Laws approved newly drafted legislation called the Uniform Premarital Agreement Act (UPAA) aimed at reforming prenup enforcement. The commissioners' purpose in creating the UPAA was, as a prefatory note to the legislation put it, to remove the "substantial uncertainty as to the enforceability of all, or a portion, of the provisions of [prenuptial] agreements" (NCCUSL 1983, prefatory note). And this is precisely what the UPAA accomplished. The UPAA provides for the full enforcement of prenups as created by their signatories excepting but two circumstances (NCCUSL 1983, prefatory note):

[I]f the party against whom enforcement is sought proves that (a) he or she did not execute the agreement voluntarily or that (b) the agreement was unconscionable when it was executed and, before execution of the agreement, he or she (1) was not provided a fair and reasonable disclosure of the property or financial obligations of the other party, (2) did not voluntarily and expressly waive, in writing, any right to disclosure of the property or financial obligations of the

other party beyond the disclosure provided, *and* (3) did not have, or reasonably could not have had, an adequate knowledge of the property and financial obligations of the other party.<sup>6</sup>

In stark contrast to courts' treatment of prenups prior to the UPAA, which held these contracts to a higher standard of enforceability than conventional contract law, the UPAA "require[s] a greater showing before invalidating a [premarital] agreement than would conventional contract law. Under conventional contract standards, unconscionable terms are not enforceable, and a court also could invalidate an agreement for lack of disclosure if it found that the engaged individuals were in a fiduciary relationship" (Bix 1998, p. 156). However, to be held unenforceable under the UPAA, a prenup requires both these showings. In a striking reversal of the pre-UPAA state of affairs, the UPAA made premarital contracts easier to enforce than under conventional contract law.

In 1985 the first three states adopted the UPAA, rendering prenups reliably enforceable in their courts.<sup>7</sup> Between 1986 and 2007, 23 other states and the District of Columbia did so too. The effect of this American premarital-agreement revolution on prenup enforcement has been dramatic. Today in states that have enacted the UPAA, "courts appear to be enforcing almost all prenuptial agreements" (Mahar 2003, p. 5).<sup>8</sup>

## 2.2. The Characteristics of American Prenups and Their Users

Because prenuptial agreements are private contracts, what little is ostensibly known about their contents or the persons who use them is limited to a handful of cases involving celebrities whose premarital contracts, or at

6. The act also provides for one circumstance in which a prenup as written may be modified (NCCUSL 1983, prefatory note): "[I]f a provision of a premarital agreement modifies or eliminates spousal support, and that modification or elimination would cause a party to be eligible for support under a program of public assistance at the time of separation, marital dissolution, or death, a court is authorized to order the other party to provide support to the extent necessary to avoid that eligibility."

7. Although California, North Dakota, and Virginia adopted the Uniform Premarital Agreement Act (UPAA) in 1985, the law took effect in 1985 only in North Dakota, becoming effective in the other two states in 1986.

8. Cases in which parties who have executed a premarital agreement in one state but, because they at some point moved, ultimately divorced in another state are rare. Only 145 of the 2,171 cases in our data set on American prenups involved couples who entered prenups in one state and sought divorce in another. Although enforcement of choice-of-law provisions varies across jurisdictions, as McLaughlin (2007) points out, the tendency for courts to apply the law of the state with the greater material interest in a case means that the state where a divorce is recorded will typically be the state whose law is applied to a prenuptial agreement.

least alleged aspects of them, have been reported in tabloid news outlets. Besides the fact that such prenup information relates to only a tiny number of celebrities, this information is highly circumspect, its basis generally being unspecified or unknown, since there exists no repository of premarital contracts or database on their users that external parties might rely on to confirm or deny media reports.

In an effort to shed more light on prenup users and their contracts' contents, we created the first data set on premarital agreements and the spouses who use them in the United States. Although prenups are private contracts, information about their users and contents enter the public record when legal disputes involving such contracts go to state courts. Typically such legal disputes are divorces. However, prenups may also appear in cases involving disagreements about estates and a small number of other instances.

There is no way to ensure that the information gleaned from such cases is representative. Prenup users who ultimately divorce may use premarital contracts with different features or have different demographic characteristics than other prenup users. Still, prenup information collected from court records has several distinct advantages over the other potential source for such information: tabloids. Court-collected information permits us to consider a much larger number of observations, consists of verifiable facts, and is not based on movie stars and celebrity athletes.

To create our data set on premarital agreements and their users, we searched the LexisNexis database of court cases for the terms “prenuptial,” “antenuptial,” and “premarital” in all courts in the US states and the District of Columbia between 1985 and 2013. We then read through each of the court cases this search generated to find and collect information about the contents of prenups and demographic characteristics of their parties in each instance.<sup>9</sup> The resulting data set supplies information about 2,171 American premarital agreements and their users over the last 29 years.

The prenups in our data set reflect three kinds of cases. The vast majority—1,625—are from cases in which prenup users are divorcing; 488 of the prenups in our records are from cases in which one party has died and the status of his or her estate is being litigated. The remaining 58 prenups in our records are from cases arising out of other forms of litigation,

9. We exclude oral prenuptial agreements and cases in which agreements were alleged to exist but were not produced by the parties or found to have existed by the court.

such as the issue of whether an agreement shields one party's assets from their spouse's creditors.

Table 1 summarizes the demographic characteristics of the prenup users in our premarital-agreement data set. For comparative purposes, it also reports those characteristics of the US population as a whole. Our data on husbands and wives in the US population as a whole are collected from the June supplement of the CPS and cover the period from 1985 to 1995.

Several features stand out in Table 1. First, prenup users tend to be older at marriage. Prenup-using husbands' median age at marriage is 51 years and wives' is 39 years. In contrast, median age at marriage among husbands and wives in general is only 28 years and 25 years, respectively. Moreover, the difference in median age at marriage between prenup-using husbands and wives, 12 years, is substantially larger than between husbands and wives in general, which is only 3 years.

Second, prenup users tend to be well educated at marriage. A large majority of both prenup-using husbands and wives are college educated when they marry. In contrast, husbands and wives in general tend to have considerably less education at marriage. For example, nearly 90 percent of prenup-using husbands are college educated at marriage compared with only 30 percent of husbands in general.

Third, prenup-using husbands tend to have considerable wealth at marriage. Median net assets owned by such husbands when they marry are worth (in 1990 dollars) over \$900,000. We do not have data on wealth at marriage among husbands in general. However, we do have data on their income, and, perhaps unsurprisingly, median annual income at marriage of husbands in general is nearly 15 percent lower than that of prenup-using husbands.

Finally, and most striking, economic inequality between prenup-using spouses at marriage tends to be substantial. Prenup-using husbands' median net worth at marriage is more than 21 times wives', and wives' median annual income at marriage is less than 39 percent of husbands'. Similarly, while both prenup-using husbands and wives tend to be well educated at marriage, there is a large education gap between them. The percentage of prenup-using husbands with a college education at marriage is 20 points higher than the percentage of prenup-using wives with a college education. In contrast, economic and educational inequality at marriage among husbands and wives in general is modest. In this group, wives' median annual income at marriage is more than 76 percent of hus-



**Table 1.** The Demographic Characteristics of Prenuptial-Agreement Users in the United States

|                                       | Newlyweds<br>with<br>Prenups | All<br>Newlyweds | Newlyweds with<br>Prenups |                 |
|---------------------------------------|------------------------------|------------------|---------------------------|-----------------|
|                                       |                              |                  | Divorce                   | Death           |
| Median age, husbands                  | 51<br>(383)                  | 28               | 47<br>(319)               | 68<br>(59)      |
| Median age, wives                     | 39<br>(378)                  | 25               | 37<br>(325)               | 57.5<br>(50)    |
| High school educated, husbands (%)    | 100<br>(131)                 | 91               | 100<br>(125)              | 100<br>(3)      |
| High school educated, wives (%)       | 93<br>(121)                  | 92               | 94<br>(112)               | 75<br>(8)       |
| College educated, husbands (%)        | 89<br>(131)                  | 30               | 89<br>(125)               | 100<br>(3)      |
| College educated, wives (%)           | 69<br>(121)                  | 29               | 70<br>(112)               | 50<br>(8)       |
| Median income, husbands (1990 \$)     | 50,504<br>(75)               | 43,956           | 49,982<br>(72)            | 199,601<br>(3)  |
| Median income, wives (1990 \$)        | 19,623<br>(79)               | 33,580           | 20,052<br>(75)            | 12,850<br>(3)   |
| Median net assets, husbands (1990 \$) | 910,673<br>(240)             | N.A.             | 910,673<br>(192)          | 971,503<br>(47) |
| Median net assets, wives (1990 \$)    | 42,408<br>(187)              | N.A.             | 37,831<br>(156)           | 85,347<br>(30)  |

**Note.** Data on newlyweds with prenups are for 1985–2013; data on all newlyweds are for 1985–1988, 1990, 1992, and 1994–95. Numbers of cases are in parentheses. N.A. = not applicable.

bands', and the percentage of husbands with a college education at marriage is nearly identical to that of wives.

Of the cases in our sample, 1,738 supply information about the content of prenup users' premarital contracts. All but a handful of these contracts in some way provide protection for the economically better-off party's assets. They contain three basic kinds of such provisions: those that limit or waive entirely rights to marital property in the event of divorce, those that limit or waive entirely rights to alimony in the event of divorce, and those that limit or waive entirely rights to inheritance in the event of death.<sup>10</sup>

Table 2 summarizes the content of prenup users' contracts in our

10. Marital property is property that is owned separately prior to marriage but by default becomes owned commonly upon marriage, prospectively entitling both parties to some portion of it in the event of divorce.

**Table 2.** The Contents of Prenuptial Agreements in the United States, 1985–2013

|                  | Alimony       | Marital<br>Property | Inheritance   |
|------------------|---------------|---------------------|---------------|
| Waive rights (%) | 11.7<br>(203) | 35.3<br>(613)       | 12.0<br>(209) |
| Limit rights (%) | 12.4<br>(216) | 41.0<br>(713)       | 13.3<br>(231) |
| Total (%)        | 24.1<br>(419) | 76.3<br>(1,326)     | 25.3<br>(440) |

**Note.** Percentages are calculated as a share of all prenups for which any content information is available ( $N = 1,738$ ). The number of prenups containing each provision type is in parentheses. Some prenups contain more than one provision type; thus the totals sum to more than 100%.

premarital-agreement data set. It describes the frequency of each kind of provision in the prenuptial contracts for which content information is available in our records. The most popular provision is to modify marital property rights, which is found in more than three-quarters of the premarital agreements in our records. The second most common provision is to modify inheritance rights, which is found in approximately a quarter of the premarital agreements in our records. The third most common provision is to modify alimony, which is found in approximately 24 percent of the premarital contracts in our records.

The information furnished by our data on prenup users and their premarital contracts presents the following picture of American prenup-using couples and the substance of their premarital agreements: such couples are composed of an economically well-off and a significantly less economically well-off spouse whose premarital contract is designed to protect the former's financial interest against the latter's financial claims in the event of divorce.

### 3. THEORIZING THE UNIFORM PREMARITAL AGREEMENT ACT'S EFFECT ON DIVORCE RATES

In light of the data that describe American prenup users and the contents of their premarital agreements, to understand how enforceable prenups, and thus the UPAA, might affect divorce rates, we focus on potential channels of influence operating through enforceable prenups' effect on

the incentives of spouses who are significantly unequal economically and whose premarital agreements protect the economically well-off party's financial interest against the significantly less economically well-off party's financial claims in the event of divorce.<sup>11</sup>

The first category of potential channels of prenups' influence on divorce rates we consider operates through premarital contracts' effect on spouses' incentives to engage in divorce-precipitating behavior—that is, behavior that is likely to motivate one's marital partner to seek divorce. Consider a wealthy individual married to a significantly less wealthy spouse. In the event the spouses divorce, the courts are likely to award substantial income and/or assets acquired by the wealthy spouse to his or her former marital partner. This benefits the significantly less wealthy spouse financially but at his or her marital partner's expense.

A premarital agreement that predistributes property rights in the event of divorce, limiting financial benefit for the significantly less wealthy spouse and thus financial damage to his or her marital partner in this case, alters the price of divorce for both spouses. It makes divorce more expensive for the significantly less wealthy spouse and less expensive for his or her marital partner. Compared with the situation in which the spouses do not have a prenup that predistributes property rights along these lines in the event of divorce, such a prenup therefore makes the significantly less wealthy spouse both less likely to engage in behavior that may lead his or her marital partner to seek divorce and more likely to stick it out with his or her marital partner if his or her partner engages in such behavior. By discouraging significantly less economically well-off spouses from engaging in divorce-precipitating behavior, and by encouraging them to countenance their economically better-off marital partners' divorce-precipitating behavior, prenups can reduce the likelihood that the couples who use them will divorce.

By the same token, however, compared with the situation in which the spouses do not have a prenup that predistributes property rights along the lines described in the event of divorce, such a prenup makes the wealthy spouse both more likely to engage in behavior that may lead his or her marital partner to seek divorce and less likely to stick it out with his or her

11. Of course, the channels we focus on are not the only possible channels through which enforceable prenups might affect divorce rates. Other potential channels through which enforceable premarital contracts, and thus the UPAA, might affect divorce rates include, for example, altering would-be spouses' incentives for making investments in marital-specific capital (Becker and Becker 1997; Allen 1990) and altering the legal cost of obtaining a divorce.

marital partner if his or her partner engages in such behavior. By encouraging economically well-off spouses to engage in divorce-precipitating behavior and by discouraging them from countenancing their significantly less well-off marital partners' divorce-precipitating behavior, prenups can increase the likelihood that the couples who use them will divorce.

The second category of potential channels of premarital agreements' influence on divorce rates we consider operates through prenups' effect on the quality of marriage matches. A prenup that predistributes property rights between spouses in the event of divorce (or the economically well-off party's death) can help wealthy individuals considering marriage to screen out would-be spouses whose motives for marriage to them are opportunistic, such as so-called gold diggers.<sup>12</sup> By making agreement to a premarital contract that limits the property distributed to his or her spouse in the event of divorce (or his or her death) a condition of marriage, a wealthy individual can improve his or her ability to avoid marriage to a potential spouse who is more likely to behave opportunistically within marriage, which is more likely to end in divorce. Since gold diggers, for example, are less likely to sign premarital contracts that prevent them from benefiting financially in the event of divorce (or their spouses' death), a prenup that achieves this can prevent marriage matches that are more likely to end in divorce. In this way, prenups can decrease divorce rates by preventing lower-quality marriage matches.

By the same token, however, because prenuptial contracts that protect wealthy individuals' financial interests against opportunistically motivated potential spouses in the event of divorce (or their death) insure them against financial damage in this event, such prenups can induce a moral-hazard problem that leads to poorer-quality marriage matches, which are more likely to end in divorce. Insured against the prospect of financial damage in the event of marrying an opportunistically motivated spouse whom they ultimately divorce (or after their death), wealthy individuals may perform less due diligence in selecting marriage partners, leading them to choose spouses who are worse matches, marriage to whom is more likely to end in divorce. In this way, prenups can increase divorce rates by encouraging lower-quality marriage matches.

12. Survey data collected by Prince & Associates suggest that this motivation for marriage may be more common in the United States than is often thought. Nearly three-quarters of surveyed female respondents in their 30s said they were willing to marry for money, and more than 70 percent of surveyed female respondents in their 20s who said they would marry for money indicated they also expected to get divorced (Frank 2007).

Both the potentially divorce-reducing and divorce-increasing effects of prenups described above depend critically on prenups' enforceability. For example, a premarital agreement that claims to limit a spouse's property distribution in the event of divorce but is not legally enforceable has neither the power to deter divorce-precipitating behavior nor the power to induce moral hazard, since, if spouses know their agreement is not binding, their incentives remain unaffected. In contrast, where premarital agreements are enforceable and thus binding, the incentive effects described may operate, generating potential for prenups to affect divorce rates. How enforceable prenups may affect divorce rates, however—reducing or increasing them—and whether enforceable prenups have any measurable effect on divorce rates at all is ambiguous a priori. Our analysis of the UPAA's influence on divorce investigates the effect that enforceable prenups have had on divorce rates empirically.

#### 4. EMPIRICAL ANALYSIS

##### 4.1. Data

To examine the effect that making prenuptial contracts legally enforceable has had on divorce rates in America, we create a new panel data set that covers the US states and the District of Columbia for the years 1985–2009. To create our independent variables of interest—dummy variables for the first 2 years in which the UPAA was in effect in states that adopted prenup-enforcement reform, for years 3 and 4 following UPAA adoption in such states, for years 5 and 6, and so on—we collect data on which states adopted the UPAA and the years in which their legal reforms became effective from Goldberg (2000) and Curry (2010).<sup>13</sup>

Wolfers's (2006) influential work that studies unilateral-divorce reform's effect on American divorce rates finds that this divorce-law change may have influenced divorce rates in the United States at least temporarily. We therefore also want to consider the UPAA's effect on divorce

13. Goldberg (2000) identifies Texas as enacting the UPAA in 1987, whereas Curry (2010) identifies Texas as doing so in 1997. We confirm through Texas' Legislative Archive System that legislation SB 893 introduced the UPAA into Texas's legal code in 1987 and thus code our data following the date given in Goldberg (2000). In Virginia, Oregon, California, the District of Columbia, and Iowa, the UPAA went into effect the year after these jurisdictions adopted the law. In all other states, the UPAA went into effect the same year in which it was adopted. For all states our coding reflects the year in which the UPAA went into effect.

rates when controlling for this prior divorce-law change. To create our unilateral-divorce reform variables—dummy variables for the first 2 years in which unilateral divorce was in effect in states that adopted unilateral-divorce reform, for years 3 and 4 following unilateral-divorce reform adoption in such states, for years 5 and 6, and so on—we collected data on which states adopted unilateral-divorce reform and the years in which they did so from Wolfers (2006), who uses the same coding as Gruber (2004). Table A1 presents information about which states adopted the UPAA and unilateral divorce and the years in which these laws became effective.

To create our dependent variable—annual divorces per 1,000 married people—we use data from two sources. For the annual number of divorces in each state, we use data from Wolfers (2006) supplemented with hand-entered data from National Vital Statistics Reports for the 11 years our panel extends beyond his, from 1999 to 2009.<sup>14</sup> For the annual proportion of the population that is married in each state, we linearly interpolate decadal census estimates using census data from IPUMS (Ruggles et al. 2015).<sup>15</sup> Table 3 presents summary statistics for our variables.

Divorce-data reporting varies considerably across US states. Although the majority of states continuously report divorce data for the period our sample covers (1985–2009), a substantial minority of states have 1 or more years of missing divorce data, and several states report divorce data for only a handful of years. California, for example, stopped reporting divorce data in 1991. To ensure that uneven reporting does not unduly influence our estimations, our empirical analyses examine several subsamples that consider only states that satisfy a variety of thresholds in terms of the percentage of years in our panel for which they report divorce data.

#### 4.2. Empirical Strategy

Our empirical strategy for estimating the UPAA's effect on divorce rates is similar to the one Wolfers (2006) uses to estimate the effect of unilateral-divorce reform on divorce rates but departs from that strategy in several important ways to reflect the critiques of Wolfers's approach and sugges-

14. We also use National Vital Statistics Reports to provide data for several missing observations in Wolfers's (2006) data. These include the following state-years: Connecticut 1991, District of Columbia 1996, Illinois 1991, Maine 1996, New Jersey 1991, New Mexico 1986, New Mexico 1987, and Texas 1996.

15. The 2010 census was not a full census. We use estimates from the American Community Survey (Ruggles et al. 2015) in place of census estimates for that year.

**Table 3.** Summary Statistics, 1985–2009

|   | Mean       | SD         | N     |
|---|------------|------------|-------|
| All states:                               |            |            |       |
| Annual divorces per 1,000 married persons | 9.70       | 2.69       | 1,182 |
| Annual divorces per 1,000 persons         | 4.17       | 1.25       | 1,182 |
| Proportion of population that is married  | .42        | .02        | 1,275 |
| State population                          | 12,000,000 | 9,600,000  | 1,275 |
| UPAA-adopting states:                     |            |            |       |
| Annual divorces per 1,000 married persons | 10.05      | 3.00       | 626   |
| Annual divorces per 1,000 persons         | 4.33       | 1.37       | 626   |
| Proportion of population that is married  | .42        | .03        | 675   |
| State population                          | 15,000,000 | 11,500,000 | 675   |
| Non-UPAA-adopting states:                 |            |            |       |
| Annual divorces per 1,000 married persons | 9.38       | 2.31       | 556   |
| Annual divorces per 1,000 persons         | 4.01       | 1.11       | 556   |
| Proportion of population that is married  | .42        | .02        | 600   |
| State population                          | 8,500,000  | 5,200,000  | 600   |

**Note.** Statistics are weighted by state population. UPAA = Uniform Premarital Agreement Act.

tions for future analyses of the effect of divorce-law changes on divorce rates offered by Lee and Solon (2011).

As Wolfers (2006) points out, the short- and long-run divorce-rate responses to a policy shock may be very different, necessitating an approach that traces out the full adjustment path of divorce rates to legal change. Central to Wolfers's (2006) empirical strategy is therefore the explicit modeling of divorce rates' dynamic response to policy shocks by including variables that estimate shocks' effects 1 and 2 years following the adoption of legal reform, 3 and 4 years following adoption, and so on, up through as many periods after adoption as the data permit.<sup>16</sup> Such an approach is especially important in the context of the UPAA, since states that adopted the UPAA did not apply the law retroactively to premarital agreements created before its implementation.<sup>17</sup> In the United States, first marriages that end in divorce take on average approximately 8 years to do so (Kreider and Fields 2001). Any effect the UPAA may have on divorce rates should therefore be expected to grow over time and to become sizeable only after the UPAA has been in place for perhaps a decade or longer.

16. In adopting this approach, Wolfers (2006) modifies Friedberg (1998), who does not consider divorce rates' dynamic response to divorce-law reform.

17. With a single (partial) exception: Indiana adopted the UPAA in 1997 but applied it retroactively to premarital agreements written after July 1, 1995.

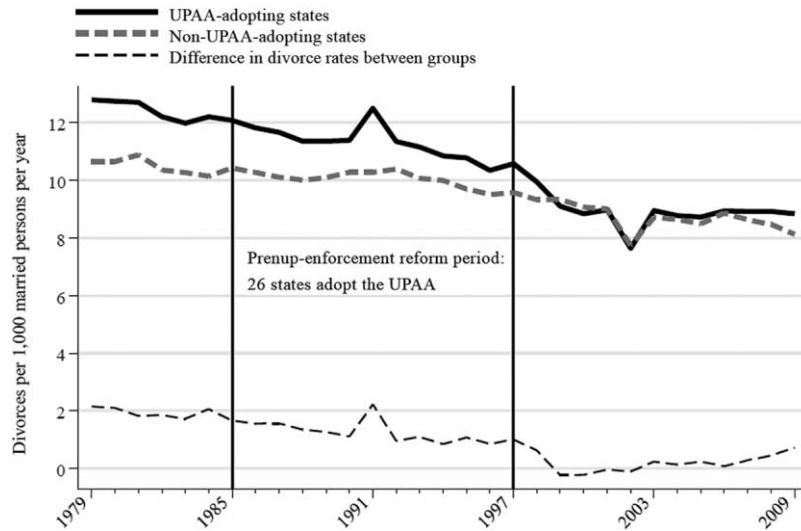
Lee and Solon (2011) praise the dynamic element of Wolfers's approach but raise important concerns with several of its other aspects. First, and perhaps most crucially, they note that Wolfers (2006) estimates his standard errors on the assumption that the error term in his regressions is homoskedastic and serially uncorrelated. This is problematic, they argue, both because his regressions show evidence of strong serial correlation and because his method of addressing potential heteroskedasticity—estimating his regressions using population-weighted least squares (WLS)—may in fact induce heteroskedasticity relative to (unweighted) ordinary least squares (OLS) regressions if the individual error terms are positively correlated because they share a common state-level error component. Lee and Solon's (2011) suggested strategy is therefore to cluster standard errors at the state level and to report the results of both weighted and unweighted regressions.

Lee and Solon (2011) also find that Wolfers's (2006) WLS estimates of unilateral-divorce reform's effect on divorce rates are sensitive to the inclusion or exclusion of California—the most populous American state—as well as to whether his dependent variable—divorce rates—is measured in log or level form. Their analysis thus suggests the importance of considering model specifications that both include and exclude California when weighting is used and that measure divorce rates in both logs and levels.

Given the foregoing concerns and findings of Lee and Solon (2011), our empirical analysis of the UPAA's effect on divorce rates follows Wolfers (2006) in estimating legal change's effect on divorce rates dynamically 1 and 2 years, 3 and 4 years, and so on, up through 15 or more years following the UPAA's adoption in each state, as endorsed by Lee and Solon, but differs in considering each of the specifications and model modifications that Lee and Solon suggest, discussed above. These include models that estimate our regressions using both WLS and OLS, models that consider divorce rates in both level and log forms, and WLS specifications that both include and exclude California. Moreover, we estimate all our regressions with comprehensive state and year fixed effects and calculate robust standard errors clustered at the state level, as indicated by Lee and Solon.<sup>18</sup>

18. Wolfers (2006) includes state-specific time trends in his regressions, which are estimated using data from years before unilateral-divorce reform was adopted, to account for preexisting divorce-rate trends. Because divorce-rate trends were markedly different in the years prior to 1985 than in the years following, trends estimated using data from years before prenup-enforcement reform are unlikely to accurately track state-specific trends in the period our sample considers: 1985–2009. Our regressions thus include only fixed effects.





**Figure 1.** The Uniform Premarital Agreement Act and divorce rates

#### 4.3. Preliminary Evidence

Before we turn to our formal empirical analysis, it is useful to consider the relationship between UPAA adoption and divorce rates in the raw data. Figure 1 depicts the trajectory of (population-weighted) divorce rates in America between 1979 and 2009. Two features stand out from this figure. First, although UPAA-adopting states began with significantly higher divorce rates than nonadopting ones, by 1999 divorce rates in the former group had converged with those in the latter group. Second, this divorce-rate convergence was achieved by divorce rates falling faster in UPAA-adopting states than in nonadopting ones between 1985 and 1999—a window nearly coextensive with that of American prenup-enforcement reform, which extended from 1985 to 1997, during which time all states but one that eventually adopted the UPAA implemented this legislation.

#### 4.4. Regression Analysis

To investigate the relationship between the UPAA and divorce rates further, we turn to our formal empirical analysis. Table 4 presents our first set of results, which considers the UPAA's dynamic effect on divorce rates

**Table 4.** Effect of the Uniform Premarital Agreement Act on Divorce Rates, 1985–2013

| Years          | Level            |                  | Log                |                   |
|----------------|------------------|------------------|--------------------|-------------------|
|                | WLS<br>(1)       | OLS<br>(2)       | WLS<br>(3)         | OLS<br>(4)        |
| 1–2            | –.170<br>(.171)  | –.569<br>(.451)  | –.00692<br>(.0132) | –.0282<br>(.0334) |
| 3–4            | –.536<br>(.219)  | –.734<br>(.476)  | –.0330<br>(.0170)  | –.0324<br>(.0325) |
| 5–6            | –.615<br>(.320)  | –.913<br>(.498)  | –.0542<br>(.0302)  | –.0560<br>(.0377) |
| 7–8            | –.613<br>(.300)  | –1.047<br>(.592) | –.0447<br>(.0248)  | –.0595<br>(.0430) |
| 9–10           | –.974<br>(.448)  | –.979<br>(.627)  | –.0772<br>(.0366)  | –.0527<br>(.0489) |
| 11–12          | –.876<br>(.442)  | –1.094<br>(.670) | –.0636<br>(.0318)  | –.0615<br>(.0482) |
| 13–14          | –1.208<br>(.596) | –1.318<br>(.723) | –.143<br>(.0719)   | –.143<br>(.0812)  |
| 15+            | –1.360<br>(.633) | –1.317<br>(.797) | –.147<br>(.0622)   | –.158<br>(.0930)  |
| Constant       | 13.50<br>(.196)  | 13.66<br>(.281)  | 2.616<br>(.0174)   | 2.618<br>(.0220)  |
| R <sup>2</sup> | .889             | .859             | .874               | .790              |

**Note.** All columns include state and year fixed effects and report robust standard errors clustered by state in parentheses.  $N = 1,182$ . WLS = population-weighted least squares; OLS = ordinary least squares.

in our full sample. Each column considers one combination of the model alternatives suggested by Lee and Solon (2011).

Every coefficient in Table 4 is negative, and every specification delivers significant estimates. Rendering prenups legally enforceable reduced divorce rates in America. In each column the UPAA's divorce-reducing effect grows as the number of years the law has been in force grows, and this effect is only consistently significant in the long run—that is, after the legal change has been in effect for at least 13 years. This is what one would expect given that states that adopted the UPAA did not apply the law retroactively to premarital agreements created before its implementation. Over time, as new couples marry and existing couples are broken up through divorce (or death), the proportion of couples married since the UPAA was implemented, and consequently the proportion of couples

with premarital agreements that enjoy improved legal enforcement, rises, which in turn leads the UPAA's effect on divorce rates to increase as well.

Our estimates are similar whether we use population weighting or not, whether we measure divorce rates in level or log form, and for any combination of these alternatives. In column 1 the long-run effect of rendering prenups legally enforceable reduces the average divorce rate by approximately 1.36 divorces per 1,000 married persons, or about  $([1.36/9.7] \times 100 \approx)$  14 percent. In column 2 it reduces the average divorce rate approximately  $([1.32/10.28] \times 100 \approx)$  13 percent. In column 3 it reduces the average divorce rate approximately 15 percent. And in column 4 it reduces the average divorce rate approximately 16 percent. Indeed, the primary effect of not using population weighting and/or measuring divorce rates in logs is simply to reduce the precision of our estimates relative to using population weighting and measuring divorce rates in levels, which produces uniformly smaller standard errors in both cases. This suggests the superiority of the benchmark model in column 1.

We consider in detail the plausibility of the magnitude of the UPAA's divorce-reducing effect according to our estimates. Before doing so, however, it is useful to consider their consistency in a still larger array of alternative specifications.

Our first step in doing so is to consider the same set of regressions just discussed but controlling for unilateral-divorce reform's dynamic effect on divorce rates. We present the results of this analysis in Table 5. Each column here is identical to its counterpart in Table 4 but also includes variables that consider unilateral-divorce reform's effect on divorce rates 1 and 2 years after implementation, 3 and 4 years after implementation, and so on, up through 25 or more years following states' adoption of unilateral-divorce reform.

The results in Table 5 are virtually unchanged from those in Table 4. The UPAA's long-run effect on divorce rates is negative and significant in every column. Moreover, this effect's magnitude is nearly identical to that found above. Controlling for unilateral-divorce reform's dynamic effect on divorce rates, we find that the long-run effect of the UPAA reduces the average divorce rate between approximately 13 and 16 percent.

Looking at unilateral-divorce reform's long-run effect on divorce rates, we find a pattern similar to that found by Lee and Solon (2011). In contrast to prenupe-enforcement reform, the estimated long-run effect of unilateral-divorce reform on divorce rates is sensitive to the model we use. Unilateral-divorce reform's long-run effect on divorce rates is always

**Table 5.** Controlling for Unilateral-Divorce Reform, 1985–2013

| Years | Level            |                  |  |                  |                  |  | Log                |                   |  |                   |                   |  |
|-------|------------------|------------------|--|------------------|------------------|--|--------------------|-------------------|--|-------------------|-------------------|--|
|       | WLS              |                  |  | OLS              |                  |  | WLS                |                   |  | OLS               |                   |  |
|       | UPAA             | Unilateral       |  | UPAA             | Unilateral       |  | UPAA               | Unilateral        |  | UPAA              | Unilateral        |  |
| 1–2   | -.103<br>(.167)  | -.702<br>(.699)  |  | -.626<br>(.500)  | -1.162<br>(.753) |  | -.00250<br>(.0128) | -.0701<br>(.0647) |  | -.0308<br>(.0405) | -.119<br>(.0709)  |  |
| 3–4   | -.402<br>(.264)  | -.516<br>(.488)  |  | -.770<br>(.526)  | -.920<br>(.539)  |  | -.0229<br>(.0216)  | -.0535<br>(.0455) |  | -.0319<br>(.0432) | -.101<br>(.0483)  |  |
| 5–6   | -.483<br>(.339)  | -.606<br>(.377)  |  | -1.012<br>(.549) | -.676<br>(.399)  |  | -.0477<br>(.0306)  | -.0638<br>(.0399) |  | -.0625<br>(.0463) | -.100<br>(.0398)  |  |
| 7–8   | -.406<br>(.382)  | -1.164<br>(.307) |  | -1.108<br>(.641) | -.544<br>(.530)  |  | -.0305<br>(.0372)  | -.108<br>(.0289)  |  | -.0634<br>(.0535) | -.0969<br>(.0484) |  |
| 9–10  | -.775<br>(.407)  | -.975<br>(.380)  |  | -1.037<br>(.676) | .263<br>(.719)   |  | -.0620<br>(.0368)  | -.0979<br>(.0392) |  | -.0544<br>(.0591) | -.0430<br>(.0685) |  |
| 11–12 | -.735<br>(.421)  | -.230<br>(.525)  |  | -1.138<br>(.708) | .400<br>(.645)   |  | -.0537<br>(.0349)  | .0742<br>(.0818)  |  | -.0578<br>(.0595) | .0688<br>(.0702)  |  |
| 13–14 | -1.087<br>(.535) | -.787<br>(.376)  |  | -1.368<br>(.740) | -.0697<br>(.581) |  | -.135<br>(.0691)   | -.0604<br>(.0350) |  | -.139<br>(.0741)  | -.0385<br>(.0471) |  |

|                    |                  |                  |                  |                  |                  |                   |                  |                   |
|--------------------|------------------|------------------|------------------|------------------|------------------|-------------------|------------------|-------------------|
| 15-16 <sup>a</sup> | -1.255<br>(.539) | -.533<br>(.377)  | -1.380<br>(.799) | -.0576<br>(.642) | -.143<br>(.0583) | -.0656<br>(.0407) | -.155<br>(.0823) | -.0673<br>(.0629) |
| 17-18              |                  | -.488<br>(.396)  |                  | -.0954<br>(.704) |                  | -.0696<br>(.0468) |                  | -.0830<br>(.0698) |
| 19-20              |                  | -.490<br>(.438)  |                  | .287<br>(.965)   |                  | -.0783<br>(.0509) |                  | -.0764<br>(.0772) |
| 21-22              |                  | -.635<br>(.499)  |                  | .153<br>(1.023)  |                  | -.0948<br>(.0571) |                  | -.0965<br>(.0822) |
| 23-24              |                  | -.554<br>(.497)  |                  | .251<br>(.987)   |                  | -.0770<br>(.0604) |                  | -.0812<br>(.0943) |
| 25+                |                  | -1.474<br>(.636) |                  | -.203<br>(1.064) |                  | -.175<br>(.0880)  |                  | -.154<br>(.140)   |
| Constant           | 14.79            |                  | 13.83            |                  | 2.753            |                   | 2.730            |                   |
| R <sup>2</sup>     | (.554)<br>.897   |                  | (.851)<br>.861   |                  | (.0691)<br>.881  |                   | (.109)<br>.796   |                   |

**Note.** All columns include state and year fixed effects and report robust standard errors clustered by state in parentheses. N = 1,182. WLS = population-weighted least squares; OLS = ordinary least squares; UPAA = Uniform Premarital Agreement Act.  
<sup>a</sup> 15+ years for the UPAA.

negative but significant only when our regressions use population weighting. In those specifications, the long-run effect of unilateral-divorce reform reduces the average divorce rate more than the UPAA, doing so between approximately 15 and 18 percent.

In the Appendix we report the results of numerous additional robustness tests of the UPAA's effect on divorce rates in America (see Tables A2, A3, and A4). We try excluding California from the sample, per Lee and Solon (2011), as well as excluding Nevada, which is not a populous state but is unusual in that, famously, it is home to an abnormally large number of marriages and divorces for its population; restricting the sample to states that report divorce-rate data for at least 50 percent of the years our panel covers, at least 80 percent of those years, and 100 percent of them; measuring the divorce rate in terms of annual divorces per 1,000 persons instead of annual divorces per 1,000 married persons; and measuring the proportion of the population that is married in each state using annual CPS data instead of interpolated decadal census data. In each case, we find nearly the same result as above: the long-run effect of the UPAA reduces the average divorce rate by approximately 14 percent.

##### **5. IS THE UNIFORM PREMARITAL AGREEMENT ACT'S ESTIMATED EFFECT ON DIVORCE RATES PLAUSIBLE?**

Our estimates raise the question of how a divorce-law reform that affected what is presumably only a modest subpopulation of married persons—those with prenups—could, short of implausibly preventing all divorces among prenup users, reduce the divorce rate in the total population of married persons by the foregoing amount. This divorce-rate reduction is smaller than the estimated long-run divorce-rate reduction achieved by unilateral-divorce reform in of the population-weighted least squares specifications in Table 5, which is between 15 percent and 18 percent. However, in contrast to prenup-enforcement reform, unilateral-divorce reform's divorce-reducing effect is fragile. Moreover, unilateral-divorce reform affected all married persons, whereas prenup-enforcement reform could have affected only a small fraction of such persons.

Information about the frequency of premarital agreements in American marriages is nearly nonexistent. No surveys of married persons inquire about respondents' prenuptial contract status. However, legal practitioners and commentators estimate that between 5 and 10 percent of new marriages and 20 percent of remarriages in the United States involve

prenuptial contracts (Mahar 2003, p. 1; Dubin 2001, p. 15; Marston 1997, p. 891; Sigler 1994, p. 145).<sup>19</sup> Using these figures and data on the stock of first marriages and remarriages in the United States, we can estimate the percentage of American married persons who have prenups.

According to data from the American Community Survey (Ruggles et al. 2015), approximately 67 percent of American marriages are first marriages for both spouses. Approximately 33 percent of American marriages are therefore remarriages for at least one spouse. If, using the lower-bound estimate of first marriages involving prenups from above, 5 percent of first marriages and 20 percent of remarriages have premarital agreements, this implies that  $(.05 \times .67 + .20 \times .33 \approx)$  10 percent of all married persons in the United States have signed prenups. If, using the higher-bound estimate of first marriages involving prenups from above, 10 percent of first marriages and 20 percent of second marriages have premarital agreements, this implies that approximately 14 percent of all married persons in the United States have signed prenups.

Our estimates of the UPAA's effect on divorce rates thus imply that a subpopulation of married persons that constitutes perhaps 12 percent of the total population of married persons reduced the divorce rate in the total population of married persons by approximately 14 percent. If the UPAA did not prevent all divorces among prenup users, how could it reduce the overall divorce rate by this amount? By reducing the divorce propensity in a subpopulation of married persons responsible for a disproportionate share of the total population's divorces: prenup users.

Divorce rates in the United States vary dramatically across subpopulations. For example, the probability of first-marriage dissolution after 10 years among women who have no religious affiliation is twice that of Catholic women. Women who were not raised with two parents throughout childhood have a rate 1.5 times that of those who were. African American women have a rate 1.5 times that of Caucasian women. And African American women have a rate 2.4 times that of Asian American women (Bramlett and Mosher 2002). Divorce rates in the United States vary more impressively still across other subpopulations, such as those that differ by occupation. For example, persons employed as dancers and choreographers have a divorce rate more than 10 times that of persons employed as optometrists (McCoy and Aamodt 2010). The underlying

19. In Europe prenups tend to be more common. For example, in the Netherlands, an estimated one-quarter of marriages involve prenups (Smith 2003). Mahar (2003) explores potential reasons why prenups are not more common in American marriages.

divorce rate in the subpopulation of American prenup users is unknown. However, there are strong reasons to believe that it is not only higher, but much higher, in this unusual subpopulation relative to the population of American married persons who do not use prenups.

As the data in Table 1 suggest, prenup-using married persons differ substantially from married persons in general in several important ways. Among these differences are characteristics that prenup users have but married persons in general do not, which have been identified by the literature that considers risk factors for divorce in American marriages as significantly increasing the propensity for divorce.<sup>20</sup> For example, according to Table 1, the difference in median age at marriage for prenup-using husbands and wives is not simply large—12 years—it is 4 times larger than the difference in median age at marriage among husbands and wives in general. Large spousal age differences significantly increase the probability of divorce. Francis-Tan and Mialon (2015), for example, find that each additional year of spousal age difference in American marriages increases the likelihood of divorce by 2.2 percent. Considering the age-difference characteristic of prenup-using marriages alone, this suggests that prenup-using couples' underlying divorce propensity may be more than 1.26 times that of married couples with no age difference.

The data in Table 1 also indicate a large education gap in prenup-using marriages. Although both prenup-using husbands and wives tend to be well educated, the percentage of prenup-using husbands with a college education at marriage is 20 percentage points higher than the percentage of prenup-using wives with a college education. In contrast, among married persons in general, the percentage of husbands and wives with a college education at marriage is nearly identical. Large spousal education gaps also contribute to a higher likelihood of divorce in American marriages. According to Francis-Tan and Mialon (2015), a marriage with a one-category difference in spousal education, for example, going from two spouses with some college to one spouse with some college and the other with a 2-year college degree, is associated with nearly 1.25 times the divorce propensity of a marriage with no spousal education difference.

Table 1 does not furnish direct information about the share of prenup-using couples consisting of at least one person who has been previously

20. Of course, not every feature of prenup users identified in Table 1 is associated with a higher divorce propensity. Higher income and more education are associated with lower divorce propensities.



married. However, the considerably older age at marriage among spouses in such couples identified in Table 1, and the fact that many of them have preexisting children at marriage, suggests that a substantial proportion of prenup-using couples' marriages reflect second or higher-order marriages for at least one spouse. Remarriage in the United States is also associated with a higher likelihood of divorce. According to Bramlett and Moser (2001, 2002), for example, American remarriages are 18 percent more likely to be disrupted than first marriages (see also, for instance, Becker, Landes, and Michael 1977; McCarthy 1978; Cherlin 1981; Booth and Edwards 1992; Coleman, Ganong, and Fine 2000; Kreider and Fields 2001; Teachman 2008; Whitton et al. 2013).

Closely related, many prenup-using couples have children from previous marriages. Indeed, prenups are often used to predistribute property rights affecting such children in the event of marital dissolution. As Becker, Landes, and Michael (1977, p. 1155) point out, preexisting children frequently constitute "negative specific capital" in marriages, making those that have them more likely to break down. Using data from the United States, Becker, Landes, and Michael (1977) and, more recently, Whitton et al. (2013) find empirical support for this effect.

Finally, and most obviously—but also most importantly—the very fact that prenup-using couples have prenups strongly suggests that the underlying divorce rate in this subpopulation is substantially higher than in the population of married persons in general. In every couple that seeks and obtains a premarital contract that addresses divorce: (*a*) spouses have explicitly considered the prospect that their marriage will end in divorce before it even began, (*b*) at least one spouse has explicitly indicated a willingness to divorce his or her partner, (*c*) spouses were willing to enshrine *a* and *b* in writing in a legal document, and (*d*) at least one spouse was willing to pay a third party to make legal provision for the event of his or her divorce.

Each of the foregoing steps displays an atypical willingness to, and expectation of, divorce, which perhaps should not be surprising in light of the divorce-risk characteristics that prenup-using spouses tend to have. It would therefore be unusual, to say the least, if prenup users, who take each of these steps, did not have substantially higher underlying divorce propensities than the vast majority of married persons, who take none of them.

In the absence of divorce-rate data for the subpopulation of prenup users, it is impossible to say exactly how much more likely to divorce

the foregoing characteristics of prenup users may make them relative to prenup nonusers. However, given that divorce-rate differences among American subpopulations that vary according to race can differ by a factor of 2.4, among American subpopulations that vary according to religious affiliation can differ by a factor of nearly 2, and among American subpopulations that vary according to occupation can differ by a factor of more than 10, the possibility that the underlying divorce rate among prenup users may be 2.5 times that of prenup nonusers is quite conservative. And, if this true, it is not difficult for a divorce-law change that affects only this small subpopulation of American married persons to have a large influence on America's overall divorce rate.

It is straightforward to see this by performing a few calculations that use such a divorce-rate difference between prenup users and prenup nonusers and our regression estimates. The average (population-weighted) UPAA-untreated divorce rate for the total population in our sample, which includes both prenup users and prenup nonusers, is 9.7 divorces per 1,000 married persons. If, as estimated above, 12 percent of all married persons have signed prenups and the underlying divorce rate in this subpopulation is 2.5 times that of prenup nonusers, the average divorce rate among prenup nonusers is  $(.88x + .12 \times 2.5x = 9.7 \rightarrow x \approx) 8.2$  divorces per 1,000 married persons, and the average UPAA-untreated divorce rate among prenup users is approximately  $(2.5 \times 8.2 =) 20.5$  divorces per 1,000 married persons.

Our empirical analyses consistently find that rendering prenups legally enforceable reduced the average UPAA-untreated divorce rate for the total population by about 1.35 divorces per 1,000 married persons (an approximately 14 percent reduction). Thus, if the UPAA reduced the average divorce rate among prenup users to its level among prenup nonusers, the result would be a reduction in the average American divorce rate of  $(9.7 - 8.2 =) 1.5$  divorces per 1,000 married persons (an approximately 15 percent reduction)—a divorce-rate reduction that is in fact slightly larger than the one our regressions estimate.

Far from requiring that the UPAA reduced divorces among prenup users to zero, these calculations suggest that if making premarital agreements legally enforceable reduced the average divorce rate in this subpopulation to parity with prenup nonusers, or reduced them even less, one would expect the UPAA to reduce the overall divorce rate by the amount our empirical analyses consistently find. Moreover, if, as is certainly possible, the underlying divorce rate among prenup users is more

than 2.5 times that of prenup nonusers, the UPAA would need to reduce prenup users' average UPAA-untreated divorce rate still less—that is, to some level higher than parity with prenup nonusers—to reduce the overall divorce rate by this amount.

To be sure, a divorce-rate reduction among prenup users that would bring them into parity with prenup nonusers constitutes a large percentage reduction in this subpopulation's divorce rate. If the average underlying divorce rate in the subpopulation of prenup users is 2.5 times that of prenup nonusers, divorce-rate parity entails a 60 percent reduction in prenup users' average divorce rate. However, such a large reduction in this subpopulation's average divorce rate is not unreasonable given that the level to which it is being reduced is not unusually low but merely that of prenup nonusers and given the very high level from which this subpopulation's average divorce rate falls—in our example, more than 20 divorces per 1,000 married persons.

## 6. CONCLUSION

This paper provides the first empirical look at prenup users, the substance of their agreements, and the effect of prenup enforceability on divorce rates in America. Our analysis leads to several conclusions.

First, our examination of new data covering more than 2,000 American premarital agreements and their users between 1985 and 2013 suggests that prenup-using spouses tend to be highly unequal economically and that premarital contracts are overwhelmingly designed to protect economically well-off spouses' financial interests against their substantially less economically well-off marital partners' financial claims in the event of divorce. These findings support popular impressions about the persons who use premarital contracts and those contracts' purpose.

Second, our investigation of the effect that making premarital contracts enforceable has had on divorce rates in the United States suggests that the UPAA reduced divorce rates in America. A large number and wide variety of empirical models consistently find that the long-run effect of the UPAA is to reduce the average divorce rate in the United States by approximately 14 percent. This is true whether our regressions are estimated using population weighting or no weighting, whether we consider divorce rates in level form or in log form, whether we control for unilateral-divorce reform or do not, whether we exclude potential outlier states or include them, whether we exclude states with varying degrees of

incomplete divorce-data reporting or include them, whether we measure the divorce rate in terms of annual divorces per 1,000 married persons or in terms of annual divorces per 1,000 persons, and whether we use census or CPS data to measure the proportion of the population that is married in each state. Moreover, all these estimations include state and year fixed effects and calculate robust standard errors clustered by state.

Finally, the magnitude of the divorce-rate reduction our study finds, which was achieved by a divorce-law reform that affected a subpopulation of married persons that constitutes perhaps only 12 percent of all married persons, is consistent with a substantially higher underlying divorce propensity among prenup users relative to prenup nonusers in the United States. American prenup-using couples exhibit important characteristics known to substantially increase the propensity for divorce in US marriages. More important still, in paying to obtain premarital contracts that make explicit provision for their marriages' failure and dissolution before those marriages have even begun, prenup users display an unusual willingness to resort to divorce and expectation of marital breakdown, which suggests more strongly yet that the underlying divorce rate in this subpopulation is substantially higher than among prenup nonusers. For plausible estimates of prenup users' underlying average divorce rate given these characteristics, if the UPAA reduced that rate to its level among prenup nonusers, this would fully account for the overall divorce-rate reduction that our empirical analyses consistently find.

**APPENDIX: STATE INFORMATION AND ADDITIONAL ROBUSTNESS TESTS**

**Table A1.** Uniform Premarital Agreement Act (UPAA) and Unilateral-Divorce Laws in the United States

|                      | UPAA | Unilateral |                | UPAA | Unilateral |
|----------------------|------|------------|----------------|------|------------|
| Alabama              |      | 1971       | Montana        | 1987 | 1973       |
| Alaska               |      | 1935       | Nebraska       | 1994 | 1972       |
| Arizona              | 1991 | 1973       | Nevada         | 1989 | 1967       |
| Arkansas             | 1987 |            | New Hampshire  |      | 1971       |
| California           | 1986 | 1970       | New Jersey     | 1988 |            |
| Colorado             |      | 1972       | New Mexico     | 1995 | 1933       |
| Connecticut          | 1995 | 1973       | New York       |      |            |
| Delaware             | 1996 | 1968       | North Carolina | 1987 |            |
| District of Columbia | 1996 |            | North Dakota   | 1985 | 1971       |
| Florida              | 2007 | 1971       | Ohio           |      |            |
| Georgia              |      | 1973       | Oklahoma       |      | 1953       |
| Hawaii               | 1987 | 1972       | Oregon         | 1988 | 1971       |
| Idaho                | 1995 | 1971       | Pennsylvania   |      |            |
| Illinois             | 1989 |            | Rhode Island   | 1987 | 1975       |
| Indiana              | 1997 | 1973       | South Carolina |      |            |
| Iowa                 | 1992 | 1970       | South Dakota   | 1989 | 1985       |
| Kansas               | 1988 | 1969       | Tennessee      |      |            |
| Kentucky             |      | 1972       | Texas          | 1987 | 1970       |
| Louisiana            |      |            | Utah           | 1994 | 1987       |
| Maine                | 1987 | 1973       | Vermont        |      |            |
| Maryland             |      |            | Virginia       | 1986 |            |
| Massachusetts        |      | 1975       | Washington     |      | 1973       |
| Michigan             |      | 1972       | West Virginia  |      |            |
| Minnesota            |      | 1974       | Wisconsin      |      | 1978       |
| Mississippi          |      |            | Wyoming        |      | 1977       |
| Missouri             |      |            |                |      |            |

**Note.** The UPAA year refers to the year of legislation's implementation.

**Table A2.** Excluding California and Nevada, 1985–2009

| Years          | Excluding CA<br>(1) | Excluding NV<br>(2) | Excluding<br>CA and NV<br>(3) |
|----------------|---------------------|---------------------|-------------------------------|
| 1–2            | –.196 (.173)        | –.0403 (.151)       | –.125 (.150)                  |
| 3–4            | –.371 (.277)        | –.292 (.234)        | –.263 (.250)                  |
| 5–6            | –.331 (.329)        | –.382 (.324)        | –.231 (.319)                  |
| 7–8            | –.365 (.386)        | –.314 (.371)        | –.273 (.376)                  |
| 9–10           | –.740 (.415)        | –.701 (.401)        | –.665 (.409)                  |
| 11–12          | –.699 (.428)        | –.616 (.403)        | –.581 (.411)                  |
| 13–14          | –1.055 (.541)       | –.934 (.518)        | –.902 (.524)                  |
| 15+            | –1.227 (.547)       | –1.085 (.530)       | –1.056 (.538)                 |
| Constant       | 14.82 (.552)        | 14.87 (.544)        | 14.90 (.543)                  |
| N              | 1,176               | 1,160               | 1,154                         |
| R <sup>2</sup> | .896                | .894                | .893                          |

**Note.** All columns are estimated using population-weighted least squares with divorce rates measured in level form, include state and year fixed effects and controls for unilateral-divorce reform, and report robust standard errors clustered by state in parentheses.

**Table A3.** Percentage of Years with Divorce Reporting, 1985–2009

| Years          | >50%<br>(1)   | 80%<br>(2)    | 100%<br>(3)   |
|----------------|---------------|---------------|---------------|
| 1–2            | –.195 (.173)  | –.219 (.172)  | –.151 (.150)  |
| 3–4            | –.364 (.276)  | –.407 (.275)  | –.298 (.251)  |
| 5–6            | –.328 (.328)  | –.369 (.337)  | –.283 (.334)  |
| 7–8            | –.364 (.386)  | –.440 (.380)  | –.358 (.382)  |
| 9–10           | –.738 (.415)  | –.843 (.410)  | –.804 (.404)  |
| 11–12          | –.697 (.428)  | –.801 (.430)  | –.726 (.413)  |
| 13–14          | –1.053 (.541) | –1.197 (.534) | –1.101 (.509) |
| 15+            | –1.225 (.547) | –1.363 (.546) | –1.236 (.528) |
| N              | 1,170         | 1,114         | 1,050         |
| R <sup>2</sup> | .895          | .898          | .896          |

**Note.** All columns are estimated using population-weighted least squares with divorce rates measured in level form, include state and year fixed effects and controls for unilateral-divorce reform, and report robust standard errors clustered by state in parentheses.

**Table A4.** Alternative Measures, 1985–2009

| Years          | Annual Divorces per 1,000<br>Persons |                | Annual Divorces per 1,000<br>Married Persons |               |
|----------------|--------------------------------------|----------------|--|---------------|
|                | (1)                                  | (2)            | (3)  | (4)           |
| 1–2            | –.127 (.0950)                        | –.0972 (.0857) | –.315 (.207)                                 | –.240 (.195)  |
| 3–4            | –.279 (.0990)                        | –.216 (.116)   | –.682 (.224)                                 | –.532 (.267)  |
| 5–6            | –.283 (.135)                         | –.218 (.142)   | –.535 (.312)                                 | –.381 (.334)  |
| 7–8            | –.264 (.132)                         | –.165 (.163)   | –.673 (.290)                                 | –.443 (.391)  |
| 9–10           | –.418 (.208)                         | –.324 (.184)   | –1.050 (.428)                                | –.829 (.381)  |
| 11–12          | –.370 (.210)                         | –.304 (.194)   | –.929 (.439)                                 | –.769 (.416)  |
| 13–14          | –.508 (.279)                         | –.451 (.246)   | –1.219 (.586)                                | –1.080 (.531) |
| 15+            | –.584 (.303)                         | –.532 (.254)   | –1.422 (.665)                                | –1.297 (.567) |
| Constant       | 5.744 (.0982)                        | 6.075 (.250)   | 13.18 (.203)                                 | 14.36 (.556)  |
| R <sup>2</sup> | .896                                 | .904           | .879   | .888          |

**Note.** Data for annual divorces per 1,000 married persons are from the Current Population Survey. Columns 1 and 3 include Uniform Premarital Agreement Act variables only. Columns 2 and 4 include controls for unilateral-divorce reform. All columns are estimated using population-weighted least squares with divorce rates measured in level form, include state and year fixed effects, and report robust standard errors clustered by state in parentheses.  $N = 1,182$ .

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