

Do Gender-Neutral Custody Laws Increase Divorce Rates?*

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Abstract

I examine the impact of gender-neutral custody laws on divorce. I develop the first systematic coding of custody law changes over the twentieth century and show that states' movement from maternal preference to gender-neutral custody laws is independent of the adoption of unilateral divorce laws. I exploit the variation across states in the timing of the legal changes to identify the effect of the new custody law on divorce. I find that changes in custody laws have a dynamic effect on divorce rates. The divorce rate begins to increase approximately seven years after a state's adoption of the new custody law and persists thereafter. The magnitude of the increase is between 0.1 and 0.2 divorces per 1,000 people per year. Changes in custody laws also increase the likelihood of being separated by roughly 0.5 percentage points for women and 0.3 percentage points for men. The effects I find for changes in custody laws are independent of those of unilateral divorce. The results suggest that child custody law reform play an important and overlooked role in marital dissolution in the U.S.

JEL: J12, J13, K36, J18

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I. Introduction

Between 1960 and 1990, divorce rates in the United States increased dramatically. Numerous factors have been linked to the rising divorce rates—increasing female labor force participation, changes in social attitudes, and decreasing gains to marriage. Researchers have also looked at divorce policy, in particular, the adoption of unilateral divorce laws, to explain the increase in divorce rates (see, for example, Peters, 1986, 1992; Allen, 1992; Friedberg, 1998; Gruber, 2004; Wolfers, 2006). Prior to the divorce law reform, a divorce required the mutual consent of both spouses or a showing of fault by one spouse (such as adultery, abandonment, felony, etc.). The movement to unilateral divorce in the 1970s allowed one to obtain a divorce without spousal consent (Gruber, 2004). By 2004, 34 states had adopted unilateral divorce. The correlation of the two trends (see Figure 1) raises the question of whether the introduction of unilateral divorce *caused* the increase in divorce rates (flow of divorce) and in the number of divorced people (stock of divorce).

While many scholars have looked at divorce law changes, few have paid attention to another major trend in the United States family law in the past few decades: changes in child custody laws. Between the 1970s and 1990s, states moved from explicit maternal preference to gender-neutral custody assignment. Although child custody laws are intimately related to divorce, the effect of this policy change on divorce and other marital outcomes is unknown.

Like divorce, child custody is governed by the custody law in each state. Until the 1970s, maternal preference had been the rule governing child custody assignment in divorce cases (Klaff, 1982; Buehler and Gerard, 1995; Jones, 1978). According to Jones (1978), courts awarded custody of minor children to mothers in more than 95% of all divorce cases prior to this legal change. In many states, maternal preference took the form of the “tender years doctrine”—a formal legal doctrine that *presumes* the mother is the more suitable custodian for children in the case of parental separation.

Legal practice changed between the 1970s and 1990s. In the benchmark case, *Watts v. Watts*, in 1973, Judge Sybil Hart Kooper of the Family Court of New York ruled that any presumptive

preference in favor of maternal custody violated the father's right to equal protection under the Fourteenth Amendment of the U.S. Constitution.¹ This invalidated the "tender years doctrine" in New York State. Other states soon followed the reform either by legislative action or judicial ruling. Since *Watts*, courts moved to the "best interests of the child" doctrine (BIOC), which consists of several criteria to determine which parent is more suitable to be the custodian. The doctrine makes no reference to the gender of the parent, and may include a decision of joint custody. The reform of custody laws was as swift and dramatic as the divorce law reform; by 1990, 39 states had completed the transition to gender-neutral custody laws. As shown in Figure 2, the movement towards gender-neutral custody laws also coincided with the increasing prevalence of divorce.

Since most marriages involve children, the assignment of children in the case of marital dissolution is an overlooked, and potentially important, factor in divorce trends. Under the "tender years doctrine" the majority of mothers went through divorce without having to worry about losing the custody of their children. Similarly, fathers would be nearly certain to lose primary custody of their children in a divorce. The transition to gender-neutral custody assignment increased the likelihood of father custody or joint custody in both contested and uncontested custody cases.² Changes in the legal doctrine will not only result in higher likelihood of father custody after divorce, but also change the relative bargaining power between husbands and wives in marriages. Under the new regime, wives have more to lose in the case of divorce, which might decrease their incentive to divorce. The opposite applies to husbands.

Since the transition in the child custody law works in different directions for women and men regarding their expected gain from divorce, the net impact of the custody law reform on divorce is ambiguous. Changes in custody laws could induce some marriages to break up, but it

¹ 77 Misc. 2d 178, 350 N.Y.S.2d 285 (Fam. Ct. 1973).

² Bianchi (1995) used census data and calculated that the percentage of single-father households in all single-parent households has increased by 48.8% between 1970 and 1990. Garasky and Meyer (1996) broke down the single-parent households and found that the largest share of the increase in single-father households came from formerly-married fathers. My own calculations using census data support their calculations.

could also alter the relative bargaining power within marriage while leaving the marriage intact. There is no literature to date which empirically analyzes the net effect of gender-neutral custody laws on divorce. Moreover, the previous analysis of unilateral divorce is potentially biased without considering child custody laws. The effects that we have previously attributed to divorce may in fact be partially due to changes in other policies related to marital dissolution, which include child custody arrangements. As such, the analysis of divorce is not complete without examining the laws governing custody assignment.

One reason for the lack of empirical evidence is the dearth of a comprehensive coding for when each state underwent a transition to the gender-neutral custody law. The major difficulty with constructing a legal coding is the inconsistency between state statutes and actual court practices. While several states had gender neutrality written into their statutes in the 1970s, courts still practiced explicit maternal preference in child custody cases. This is due to the fact that the tender years doctrine was very often in the form of an implicit presumption used in custody cases rather than a formal legal statute. A coding that takes into account one aspect of the legal change without considering the other would be incomplete. Such mechanical coding would not reflect the timing of changes in actual practices.

To accurately measure changes in custody practices, I construct a custody law coding in an innovative way. I define a state to have completed the change in custody laws if the state has met the following criteria: (1) it has added statutes equalizing parental rights, and (2) maternal preference is clearly no longer in use in court practice. This method of coding utilizes the information from both state statutes and court practices to determine when states completed the change from maternal preference to gender-neutral custody assignment. That is, my coding is directly related to the *actual likelihood* that a custody dispute in a given year would be settled in a gender-neutral way. My legal coding is the first to record each individual state's year of transition into gender-neutral custody assignment in a systematic and transparent way.³ This coding is an important contribution to our ability to describe the effects of custody assignment in

³ My legal coding of custody law changes is available upon request.

empirical research.

Even with the coding, it is important to establish that changes in custody laws and changes in divorce laws are uncorrelated with each other. If states that first liberalized divorce were also the first to reform child custody laws, it will not be possible to disentangle the effects. Not only is this important for estimating the effect of child custody law changes, but also for the empirical analysis of unilateral divorce laws. If the changes in the two laws are highly correlated, the estimates of the impact of unilateral divorce laws on divorce in the previous literature are likely to be biased by the influence of custody laws, as argued by Peters (1992).

In the first part of my empirical analysis, I establish that the transition to gender neutrality is not correlated with changes in divorce laws. Knowing *when* a state adopted the unilateral divorce law does not predict when it changed its child custody law. Also, *whether* a state adopted one of the new laws is not correlated with *whether* or *when* the state changed the other law. The independence of the two legal trends allows me to estimate the effects of both changes on divorce separately *and* jointly.

I next turn to analyzing the effect of gender-neutral custody laws on state divorce rates. My identification strategy exploits the variation from the different timing of child custody law reforms across states. I find that the gender-neutral custody law has a positive impact on divorce rates in the *long term*. State divorce rates start to rise, on average, seven years after the adoption of the gender-neutral custody law in the state. The increase persists after that time. The magnitude of increase is between 0.1 and 0.2 divorces per 1,000 people. The results are still positive and significant when I control for the adoption of unilateral divorce laws in the specification. Moreover, the effect is robust to alternative specifications such as examining only the married population and only the states that have reformed both laws.⁴

Besides examining divorce rates, I also estimate the impact of custody law changes on individuals' marital decisions. I find that the new custody law increases the likelihood of marital separation, but has statistically insignificant effect on the likelihood of being divorced or married.

⁴ The results are much larger and more significant when I use Wolfers' shorter sample period from 1968 to 1988.

Changes in custody laws increase the likelihood of being separated by about 0.5 percentage points for women, and by about 0.3 percentage points for men.

Both the lack of immediate increase in divorce flow and the increase in separation suggest that the adoption of gender-neutral custody laws might not induce marriages to break up immediately after the legal change. Instead, it may lead to redistribution of bargaining power within marriages immediately following the legal reform. As shown by the divorce rate analysis, it took several years until the number of new divorces increased in response to the new custody law.

Overall, my analysis shows that changes in child custody laws have a large long-term impact on the flow of divorce in the second half of the twentieth century that is independent of the impact of unilateral divorce laws. Compared to the changes in divorce regime, child custody laws have a longer-term impact on divorce rates. Results suggest that the child custody law is an important aspect of divorce legislation, and empirical analysis of divorce should include this important factor.

II. Overview of Custody Law Changes

For over a century the dominating rule in assigning child custody in divorce was the “tender years doctrine”, which was an explicit preference for maternal custody. In most states, the doctrine “establishes a presumption that children of their tender years should be placed in the custody of their mother, because she is best equipped to provide for the physical, emotional, and psychological needs of a young child” (Jones, 1978, p. 696). The doctrine was not always explicitly written in state statutes. It was also an implicit judicial presumption employed in case practice and cited by judges in decisions, whether there was a statute or not (Klaff, 1982).

The movement from maternal preference to gender-neutral custody assignment began in the 1970s. The feminist and the fathers’ rights movements started to question the validity of the presumption that mothers are naturally superior to and more suitable for rearing children. In place of the tender years doctrine, courts began to determine children’s custody assignment using

a new guideline, the “best interests of the child” (BIOC) doctrine. BIOC is the dominant rule followed by most states today. It is usually written in the state statutes, and consists of several criteria, such as the emotional ties between children and parents, capacity of parents to meet children’s physical, emotional, and educational needs, stability and desirability of environment, and wishes of the child.

Coding Custody Law Transitions

One of the main contributions of this study is to document the transition from maternal preference to gender neutrality. The major difficulty with constructing a legal coding is the inconsistency between state statutes and actual court practice. While quite a few states had gender neutrality written into their statutes in the 1970s, courts continued to practice maternal preference in child custody cases. This is due to the fact that the tender years doctrine was very often in the form of an implicit presumption rather than a legal statute.

The evolution of maternal preference in Utah is a typical example of the inconsistency between state statutes and case law. Maternal preference had long existed in Utah in the form of an explicit statute.⁵ In 1977, the statutory presumption that mother is the preferred custodian was repealed by the legislature.⁶ However, the court continued to recognize a *judicial* preference in favor of the mother, all other things being equal. Several custody decisions in the late 1970s and the 1980s cited the tender years presumption or maternal preference and awarded child custody to mothers.⁷ It was not until 1986 that the judicial preference towards mothers was explicitly abolished in the case *Pusey v. Pusey*, after which maternal preference ceased to appear in judicial decision making in Utah.⁸

⁵ The statute passed in 1903 required the custody of minor children to be awarded to mother (1903 Utah Laws, ch. 82, § 1). The statute later used the language "the natural presumption that the mother is best suited to care for young children" (1969 Utah Laws, ch. 72, § 7).

⁶ See *Jorgensen v. Jorgensen*, 599 P.2d 510 (Utah 1979).

⁷ See *Henderson v. Henderson*, 576 P.2d 1289 (Utah 1978); *Smith v. Smith*, 564 P.2d 307 (Utah 1977); *Pennington v. Pennington*, 711 P.2d 254 (Utah 1985)

⁸ See *Pusey v. Pusey*, 728 P.2d 117 (Utah 1986)

States like Utah present a serious issue of measurement in the coding of custody law changes. Simply relying on the custody statute would not give an accurate description of the case practice. It is entirely likely that a custody dispute decided in Utah would explicitly depend on maternal preference even with a state statute abolishing the practice. In other words, simply relying on the statute would not reflect the reality of custody assignment.⁹

To measure the actual changes in custody cases, I construct custody law transitions in a uniform way. I apply a consistent rubric to determine states' year of transition – I look for the year in which a custody dispute, if contested in court, would be decided on a gender-neutral basis. This way of coding utilizes the information from both state statutes and court practice to accurately determine when states completed the change from maternal preference to gender-neutral custody assignment. The criteria assure that my coding of legal transition reflects the actual likelihood of a child custody dispute being resolved on gender-neutral terms.

I carefully read through contested custody cases and state statutes during the transition period to identify the exact year when states completed the transition.¹⁰ I develop consistent criteria and apply them systematically to all states. For example, most states had gender neutrality or best interests of the child written into legal statutes before they were mentioned in custody cases later. For case rulings that simply upheld a gender-neutral state statute which was introduced earlier, I code the year when the statute was passed as the year of change. For case rulings that clarified, disavowed, or reinterpreted the previous statutes, the year when the case was decided would be used to code the year of transition.¹¹ I was able to determine the exact year of custody law changes for 48 states and Washington D.C.¹²

⁹ Different methodology often results in different versions of legal codings. One example is the controversies over the legal coding of early legal access to the birth control pill (Bailey, Guldi, and Hershbein, 2013; Joyce, 2013).

¹⁰ I use LexisNexis Academic Dataset for the source of case law. I also compiled information from several secondary sources that summarize the development in custody laws. Information on my sources are available in the legal appendix

¹¹ Legal appendix records detailed information for how each state's time of transition is determined.

¹² Timing of custody law changes was indeterminate for two states: Maine and Washington. I am not able to find sufficient evidence of either maternal preference or gender-neutral rule in the past few decades.

Compared to the legal summaries prior to this study, my coding makes several contributions. First, I capture a more complete picture of the custody law changes as I look at both aspects of custody laws: statutes and case law. Most of the previous taxonomies only emphasize on one aspect, which leads to inaccurate information about the timing of the legal changes. Second, my coding is transparent and conservative. I start from a definition not of policy but of practice. Using the method mentioned earlier, my coding is directly related to the actual likelihood that a custody dispute in a given year would be settled in a gender-neutral way. Third, much of the previous literature covers only a short period of time. Most existing studies summarize custody law development in the 1970s, when the removal of maternal preference first brought attention to the issue. My coding updates and extends the legal transition to the present.

Joint Custody

One issue worth noting is the introduction and development of joint custody. Joint custody, sometimes called shared custody, is the custodial arrangement where parents share the decision making (joint legal custody) or residential care (joint physical custody) of their children (Melli and Brown, 1994). Like gender-neutral custody assignment, joint custody is also a relatively new development in custody laws. Prior to 1975, joint custody was not an option when parents divorced.¹³ The concept of joint custody spread out at a fast rate. By 1982, some form of a joint custody had been instituted in 24 states (Twiford, 1986). By 1990, the number of states that allowed for joint custody assignment increased to 34 (Freed and Walker, 1991). By year 2000, 46 allowed joint custody (Elrod and Spector, 2001).

The adoption of joint custody assignment and gender-neutrality are technically two separate aspects of the custody law. These two custody guidelines are not contradicting in nature or in practice. Joint custody, in essence, is gender neutral by design, as the two parents share the decision making and physical care responsibility of their children. Indeed, some family court judges and parents perceive joint custody as an “easy out” solution when parents cannot reach

¹³ Jacob (1988) recorded that, prior to 1975, only North Carolina had a statutory authorizing joint custody which focused only on situations involving abuse and neglect.

agreement on custody assignment (Miller, 1979).

Theoretically, the establishment of gender neutrality in custody laws is what alters the bargaining within marriage, not the establishment of joint custody. There are a small number of studies that have analyzed the effect of joint custody on divorce (Halla, 2013; Leo, 2008). They found no impact of joint custody on divorce. What these studies fail to account for, however, is the fact that gender-neutral custody assignment is a necessary legal *precondition* for the establishment of joint custody. Only after maternal preference had been destroyed in a state's custody law would joint custody be possibly considered as an option for child custody assignment.¹⁴ On average, the time interval between the two is 5.04 years.¹⁵ This is even more prominent for states that established gender neutrality early in history.¹⁶

Furthermore, the recognition of joint custody after the removal of maternal preference was not an automatic movement. States varied in the length of time between the two. The standard deviation of the time interval is 8.24 years. For example, New York was the first state that completely abolished maternal preference in its custody assignment, but joint custody was not passed in New York until 1980 (Halla, 2013), seven years after the overruling of maternal presumption. In Utah, however, joint custody was introduced only two years after gender neutrality was established in its child custody law.

Since gender neutral custody assignment does not automatically imply joint custody, the two need not have the same effect in empirical analysis. Indeed, joint custody is found to be negatively associated with divorce rates in one study (Brinig and Buckley, 1998a), and have no significant effect on divorce rates in another study (Halla, 2013). My analysis on the relationship between gender-neutral custody laws and joint custody laws reconciles the differences between

¹⁴ Among the 45 states that currently have gender-neutral custody laws and allow for joint custody, 36 of them had established gender neutrality in custody laws before joint custody was mentioned in state statutes or custody cases.

¹⁵ Calculation based my legal coding of gender-neutral custody laws and Halla's (2013) coding of joint custody.

¹⁶ For the 36 states that established gender-neutral custody assignment before 1985, 34 of them had gender-neutrality preceding joint custody in time.

those findings and my findings. The missing component in the previous literature is the establishment of gender-neutral custody assignment.

Joint custody, in essence, is a special case of gender-neutral custody assignment. With maternal preference, it was not possible to assign part of the custody to each parent. In this study, I focus on the transition from maternal preference to gender-neutral custody laws. The reason is that “Gender neutrality” is a more general term than joint custody. It includes not only joint custody, but also other aspects of equal gender treatment, such as the possibility of father gaining sole custody if he is qualified as a suitable custodian. Similar reasoning applies to other recent development in custody assignment such as the improvement of the rights of unwed fathers (Weitzman and Dixon, 1979). Gender neutrality is a necessary prerequisite for joint custody assignment and other related legal development, but not the other way around. The passage of gender neutrality shapes the fathers’ rights landscape in state custody laws and leads to changes in bargaining power within marriage before joint custody was introduced.

Marital-Property Laws

Property division upon divorce has its own development in history. They also affect bargaining in marriage and divorce. Economists have looked at the changes of marital-property laws and various outcomes such as women’s labor supply (Gray, 1998; Voena, 2012). In my study, I will not control for changes in marital-property laws for the simple reason that children have never been perceived as property in divorce cases. Child custody laws and marital-property laws are two separate bodies of the family law that have developed independently in legal history. The two issues are always separately determined in divorce cases.

III. Independence of Custody Law Reform and Unilateral Divorce Reform

Before analyzing the effect of custody law changes, it is important to establish that the movement away from the “tender years” doctrine to gender-neutral custody laws and the movement to unilateral divorce laws are uncorrelated with each other. If the two movements are

related they could have been jointly determined, and disentangling the effects would be difficult. In this section, I will divide the states into two groups: states that have completed both legal reforms and states that have not changed one of the laws. For the former group, I will test the correlation between the time of custody law reform and divorce law reform. For the latter group, I will show that there is no particular pattern in when or whether states changed one law while they have not changed the other law.

Figure 3 plots the states that *have* completed both transitions. There are 31 such states. The vertical axis shows when each state adopted unilateral divorce and the horizontal axis plots when each state changed its child custody law. If there is a strong positive or negative correlation between the timing of the two legal transitions, we would expect to see states clustered in a linear pattern in the graph. However, there is no such pattern. Indeed, when a line is fit to the relationship, the slope of the fitted line is 0.054 (std. err. = 0.08). This suggests that the correlation between the times of changes in two laws is very weak. Knowing *when* a state adopted the unilateral divorce law does not tell us *when* it changed its child custody law.

Similarly, knowing *whether* a state has adopted unilateral divorce does not tell us *when* or *whether* the state adopted the gender-neutral custody law either. Panel A of Table 1 lists the states that have not yet adopted unilateral divorce laws. If there is a strong positive correlation between the two legal changes, we should expect to see that most of these states would have custody laws unchanged. However, this is not the case. There is no pattern of states clustering in a certain year. In fact, states are quite spread out with respect to when they changed custody laws. Panel B of Table 1 lists states that have not yet changed custody laws. Similarly, there is no pattern in when these states adopted unilateral divorce laws.

In fact, if one takes a closer look at each individual state's family law history in the past few decades, it is easy to reach the conclusion that divorce regulations and custody laws indeed developed independently. A typical example is the state of New York. It was the first state to remove the tender years doctrine and establish the gender-neutral custody law in the United States. In the benchmark case, *Watts v. Watts*, in 1973, Judge Sybil Hart Kooper of the Family

Court of New York ruled that any presumptive preference in favor of maternal custody violated the father's right to equal protection under the fourteenth amendment. The case has been regarded as the milestone case that discarded the tender years doctrine from custody dispute cases by legal researchers. On the other hand, New York was the last state to adopt no-fault divorce. In August 2010, New York's Domestic Relations Law §170 permits divorce where "[t]he relationship between husband and wife has broken down irretrievably for a period of at least six months, provided that one party has so stated under oath." However, New York still lacks unilateral divorce regulations in its divorce laws.

Another example is the state of Oklahoma. Contrary to New York, Oklahoma was one of the first states that adopted unilateral divorce. It passed a unilateral divorce bill in 1953. However, Oklahoma was behind most states in the transition to the gender-neutral custody law. In 1980, when more than half of the states had outlawed the use of the tenders year doctrine, the Oklahoma court, in the case, *Boyle vs. Boyle*, stated that the Oklahoma's tender years-maternal preference statute is to be used as a "tie-breaker".¹⁷ It was not until 1986, in the case, *Manhart v. Manhart*, that Oklahoma moved away from maternal preferences in determining custody.¹⁸

IV. Empirical Analysis: Divorce Rates

In this section, I examine the impact of adopting gender-neutral custody laws on state divorce rates, number of new divorces per 1,000 persons within a state each year. I use the data from the *Vital Statistics of the United States* (National Center for Health Statistics) between 1956 and 2010. The time-series of divorce rates is long enough to cover the years when states transitioned in both child custody laws and unilateral divorce laws.

I present my analysis in two parts. First, I estimate the impact of legal changes on state divorce rates *in the same time period* – the contemporaneous effect of the legal changes. The empirical approach used here is similar to Friedberg's (1998) and Wolfers' (2006) analyses. The

¹⁷ See *Boyle vs. Boyle*, 615 P.2d 301 (Oklahoma 1980).

¹⁸ See *Manhart v. Manhart*, 725 P.2d 1234 (Oklahoma 1986).

second part extends the analysis, and looks at the dynamic adjustment path of state divorce rates in the years following legal transitions. This part of the analysis extends Wolfers' (2006) focus on dynamic divorce trends.

Previous studies show mixed results regarding the relationship between unilateral divorce laws and divorce. Using women observed in the 1979 Current Population Survey, Peters (1986) found that divorce rates were not higher in states that adopted no-fault divorce. Allen (1992), however, found that no-fault divorce laws increased divorce rate, while Peters (1992) showed that states might have other unobserved characteristics related to divorce rates. Friedberg (1998) used a panel data of state divorce rates and concluded that unilateral divorce accounted for 17 percent of the increase in divorce rates between 1968 and 1988. Gruber (2004) examined the stock of divorce and confirmed that unilateral divorce regulations significantly increased the incidence of divorce. Wolfers (2006) reconciled the previous findings, arguing that the divorce rates exhibit a dynamic pattern following the adoption of unilateral divorce. It rises immediately after the change in divorce laws, but reverses within about 10 years.

In all regressions below, my own coding is used for state transitions in child custody laws.¹⁹ The transitions in unilateral divorce laws are based on Gruber's (2004) coding, where he incorporates and updates Friedberg's (1998) coding using both primary and secondary sources. This is the most up-to-date coding of unilateral divorce law changes in the literature.²⁰

Part 1: Law changes and divorce rate in the same time period.

To estimate the contemporaneous effect of the laws on divorce rate, I estimate:

$$(1) \quad \text{Divorce rate}_{st} = \beta_1 \text{Custody Law}_{st} + \beta_2 \text{Unilateral}_{st} + \sum_s \text{State fixed effects}_s + \sum_t \text{Time fixed effects}_t$$

¹⁹ Coding for two states (Maine and Washington) is indeterminate. They are thus dropped from all analyses below.

²⁰ Other versions of the coding include, for example, Friedberg (1998), Brinig and Buckley (1998b), Nakonezny, Shull and Rodgers (1995), Ellman and Lohr (1998), and Johnson and Mazingo (2000).

$$+ \sum_s State_s * Time_t + \sum_s State_s * Time_t^2 + \varepsilon_{st}$$

The variable *Custody law_{st}* is a dummy variable which is equal to one when the state, s, has adopted the gender-neutral custody law, at time t, zero otherwise. Similarly, the variable *Unilateral_{st}* is a dummy that equals one when the state has a unilateral divorce law in states at time t, and equals zero otherwise.

Equation (1) is estimated separately in three different specifications: controlling only for state and year fixed effects ($\sum_s State\ fixed\ effects_s + \sum_t Time\ fixed\ effects_t$), adding state-specific linear trends ($\sum_s State_s * Time_t$), and adding state-specific quadratic trends ($\sum_s State_s * Time_t^2$). Results are shown in Panels A, B, and C of Table 2, respectively.

Within each panel, three specifications are estimated: one that only includes the status of the child custody law, one that only includes the status of the unilateral divorce law, and one that incorporates both. Comparisons of the coefficients show that the coefficients on one law are very similar with or without controls of the other law. This is further evidence of the lack of strong correlation between the two legal changes.

Columns 1, 4, and 7 present results from estimating gender-neutral custody laws alone. The effect custody law changes on the contemporaneous divorce rates are not significantly different from zero, no matter what controls are included in the specifications. Columns 2, 5, and 8 report results from estimating unilateral divorce laws alone, similar to Wolfers (2006), which itself was a replication of Friedberg (1998). While the estimates are substantially similar, my results from unilateral divorce differ from theirs for two reasons. First, I use Gruber's (2004) coding of divorce, which may contribute to a small set of differences. Second, and more important, I use an extended time period, 1956 to 2010, compared to the shorter sample used in their analysis, 1968 to 1988. I have re-estimated Table 2 using the shorter sample as in their analysis, and have obtained very similar results as those in Wolfers and Friedberg.²¹

²¹ Those results are presented in Table 1 of the Appendix.

My results confirm the conclusions of Wolfers and Friedberg: adding state-specific trend *increases* the magnitude and significance level of the estimated coefficient on unilateral divorce. The point estimate rises from -0.32 to 0.35 when state-specific linear trends are included, and to 0.19 with state-specific quadratic trends. Underneath each regression I report the F test statistics of whether the controlled fixed effects are jointly significant. As shown in the table, all trends are jointly significant. The estimated coefficients on child custody laws are not significantly different from zero in all regressions in Table 2.

There are have different interpretations regarding the increase in the law estimates brought about by the inclusion of state-specific trends. Friedberg believes that controlling for state-specific trends is necessary, as it takes into account unobserved state factors affecting divorce. Wolfers questions this omitted variable interpretation. He argues that if the state-specific trend controls did capture the omitted variables then adding the controls *increases* the unilateral divorce estimate if the omitted factors are negatively correlated with the divorce rate. However, “one might expect factors associated with a rising divorce rate to have increased the pressure for reform” (p. 1805).

Wolfers’ reasoning can also be applied to child custody laws. My results display a similar pattern that state-specific trends increase the estimated coefficients on changes in custody laws in some cases. Instead of capturing omitted variables such as preexisting trends in state divorce rate, the state-specific trends may pick up the actual effect of the legal changes. If this is the case, simply estimating the contemporaneous effect of laws on divorce rate will be flawed. For this reason, additional specifications are needed to estimate the effect of divorce. I next turn to estimating the dynamic response to legal transitions.

Part 2: Dynamic response to law changes.

Regressions using only one dummy for adopting unilateral divorce laws are known to be flawed (Wolfers, 2006). Divorce rates respond to the adoption of divorce laws via a dynamic process. For the unilateral divorce law, the divorce rate increased right after the legal reform, and

increased further due to the thicker remarriage market. Eventually, the divorce rate moved to a new steady state. A single dummy for the adoption of unilateral divorced does not reflect the full adjustment path. A specification which includes dummies for the each year after the adoption of unilateral divorce laws captures the dynamic response in a non-parametric way. The same applies to child custody. The dynamic effects of child custody law changes will not be captured by the previous specifications.

Although the divorce rate may respond to the change in custody laws in a different way than to the adoption of unilateral divorce, the dynamic process could still hold for custody laws. Earlier, I showed that when estimating the contemporaneous effect of changes in custody laws, the coefficient on the custody law is not significantly different from zero in most specifications. Below, I will explore whether there is any effect of custody law changes on state divorce rates over time.

In equation (2) below, I use a specification that controls for the dynamics of the response of divorce rates to changes in unilateral divorce and child custody assignment:

$$\begin{aligned}
 (2) \quad & \textit{Divorce rate}_{st} \\
 = & \sum_{k \geq 1} \beta_k \textit{Unilateral divorce has been in effect for } k \textit{ periods}_{st} \\
 + & \sum_{k \geq 1} \beta_k \textit{Custody law has changed for } k \textit{ periods}_{st} \\
 & + \sum_s \textit{State fixed effects}_s + \sum_t \textit{Time fixed effects}_t \\
 & \left[+ \sum_s \textit{State}_s * \textit{Time}_t + \sum_s \textit{State}_s * \textit{Time}_t^2 \right] + \varepsilon_{st}
 \end{aligned}$$

This specification enables the estimation of the full adjustment path of divorce rate without imposing much structure.

Table 3 reports the results from the dynamic analysis. Similar to Table 2, panels (A), (B) and (C) report results with only state and year fixed effects, with state-specific linear trend, and with

state-specific quadratic trend. Within each panel, the first column (columns 1, 4, and 7) estimates only the dynamic effect of adoption of gender-neutral child custody laws. The second column (columns 2, 5, and 8) estimates only the effect of unilateral divorce. The last column (columns 3, 6, and 9) estimates both legal changes together.

Columns 1, 4, and 7 of Table 3 report my new results: the dynamic response to the adoption of gender-neutral custody laws. Figure 4 plots the results from columns 1, 4 and 7 of Table 3, with the 95% confidence interval displayed for the specification with state-specific quadratic trends. When only controlling for state and year fixed effect, and when controlling for state-specific linear trends, the custody law has little effect on the divorce rate for years following its change. However, when I control for state-specific quadratic trends (column 7), the positive effect of custody law changes on the divorce rates is seen seven years after the legal change, and it persists for at least the following eight years. The increase in divorce rates ranges between 0.1 and 0.2 divorced per 1,000 people. This pattern is shown in Figure 4.

The different results from three specifications can be reconciled by the divorce rate trends over the past few decades. As shown in Figure 1, national divorce rate went through a dramatic increase between the mid-1960s and 1980, but gradually went down afterwards. The divorce rate trends in most states went through the similar pattern. My sample covers the period between 1956 and 2010, which covers the complete period of divorce rates first increasing then decreasing. Therefore, controlling for the underlying quadratic pattern of divorce rate is particularly important to capture other unobserved quadratic trends that might affect divorce rates, apart from state fixed effect controls, year fixed effect controls, and state-specific linear time trend. Wolfers' analysis covers a shorter sample, 1968 to 1988, during which divorce rates were monotonically increasing most of the time. That explains why his results were not very different whether he controls for state-specific quadratic trend or not. In summary, in the longer sample I use, it is important to control for both state-specific linear and quadratic trends in the dynamic analysis. In my following analysis, I will focus on the dynamic analysis that controls for both trends.

To be positive that I am indeed picking up the effects of custody laws, and not estimating the effect of unilateral divorce laws, I add unilateral divorce controls to the regressions (column 9). The positive long-term effect of custody laws in the divorce rates remains positive and statistically significant. Similarly, the unilateral divorce law estimates are robust to controlling for child custody laws (columns 8 and 9).

My estimates on unilateral divorce laws are similar to Wolfers' results despite of the differences in sample years and legal coding used.²² Divorce rates increased immediately following the adoption of unilateral divorce laws. Figure 5 plots the effect of unilateral divorce laws from column 9, where the two laws are estimated together, and controlled for state-specific quadratic trends. The effect of unilateral divorce laws dominates in the first eight years after its adoption, but becomes small and statistically insignificant afterwards.

When putting the dynamic response to both laws together, the difference between the adjustment path following the change in custody laws and the path following the adoption of unilateral divorce laws becomes very obvious. Figure 6 below plots the dynamic responses to the two law changes from column 9 of Table 3. In this specification, I control for state-specific linear and quadratic trend to control for unobservable trends in states over years that might affect divorce rates.

The difference is quite striking: while unilateral divorce laws increase divorce rates for the first eight years following the adoption, gender-neutral custody laws' effect is delayed by nearly a decade. This provides some clues to why custody law changes appear to have insignificant effects on divorce rates earlier: the adoption of gender-neutral custody laws does not have a strong contemporaneous effect on divorce rates. In the next section, I specify a number of different specifications attempting to figure out the factors behind such a pattern.

²² Wolfers extended Friedberg's original sample from 1968-1988 to 1956-1988, in order to better control for preexisting states trends. I extend the data further to 1956-2010, to better control for the divorce trend before and after the period of legal changes. I report the regression results using Wolfers' sample in Appendix Table 2 for comparison purpose.

Part 3: Alternative specifications of the dynamic response.

A. Divorces among married population

Apart from affecting the dissolution of marriage, the change in custody laws might also influence people's decision of entering *into* marriage. For example, if gender-neutral custody laws reduce the married population, the number of annual divorces will go up even with a constant divorce rate among the *married* population. Therefore, it is meaningful to estimate the impact of the law changes on the divorce rate among those who are married, to get a picture of what contributes to the increasing divorce rate that was presented earlier. Table 4 reproduces the same specifications estimated in Table 3 with a new dependent variable, the number of new divorces per 1,000 married adults.²³

With the new dependent variable, all coefficients increase in magnitude, with almost no change in significance level. This is consistent with Wolfers' findings for unilateral divorce. Column 3 displays the p-values from the wald tests on whether the coefficients from the two regressions are equal. All the dummies for year 7 and afterwards following custody law changes are statistically different from those in the original regression. In other words, in the long term, gender-neutral custody laws cause an even larger increase in the divorces per 1000 *married* adults than the increase in the overall population divorce rate. This suggests that, with the new custody law, the married population is shrinking from a decreasing flow into marriage. Custody law changes not only induce marriages to break up, it also appears to prevent people from entering into marriage. Moreover, both effects only show up in the long run (year 7 and beyond). This further underlies the dynamic nature of the effect of custody law changes on divorce.

B. States that have reformed one or both laws.

In this section, I examine only states that have reformed both laws and at least one of the laws. It is possible that the reform states are different from the non-reform states in terms of how the divorce rate responds to changes in the two laws. Table 5 presents the results. Column 1 reprints

²³ Estimation results from other specifications and other sample are attached in the appendix.

column 9 of Table 3. Column 2, 3, and 4 reports result for states that have at least reformed the child custody laws, states that have reformed at least unilateral divorce laws, and states that have reformed both laws, respectively. For states that have at least reformed the child custody laws (column 2), there is not much difference in the response of divorce rate following the two law changes.

However, the dynamic effects of custody laws become much larger when I restrict the sample to states that have reformed unilateral divorce laws as well (columns 3 and 4). Moreover, the effects of unilateral divorce laws are less pronounced in these states. The comparisons in Table 5 provide us with important implications regarding the effect of custody law changes. The responses to custody law changes are not systematically affected if only the custody reform states are examined. However, whether states have reformed unilateral divorce laws *strongly* affect the effect of custody law changes. In states that have adopted some form of unilateral divorce by now, the increase in divorce rate following child custody law reform is much higher. As unilateral divorce laws make it easier to divorce, it also magnifies the effect of custody law reform by allowing marriage to end as one partner desires it.

V. Empirical Analysis: Stock Analysis

Apart from affecting the flow of divorce, custody law changes could also have implications for individual's marriage decisions. I now turn to analyzing micro-level data to see how people's divorce decisions are affected by custody law changes. My earlier analysis focuses on state divorce rate, which is the *flow* out of the married population each year. This section examines individual's likelihood of being divorced, separated, and married, which looks at the custody law's influence on the *stock* of people with a certain marital status.

I estimate a specification first proposed by Gruber (2004) and later replicated by Wolfers (2006). Both of them examine how the unilateral divorce law in the state affected people's marriage decisions. The data source for this analysis is the U.S. census and the American Community Surveys (ACS) data from 1960 to 2010 from the Integrated Public Use Microdata

Series (IPUMS-USA).²⁴

Following Gruber and Wolfers, I use adults of child-rearing age (25-50), as they are the population related to the child custody law. I collapse the sample into cells by state, year, age and sex, as the variation in divorce and custody laws only exist across state-year level. Summary statistics of the collapsed data are presented in Table 6.

For each gender, I estimate the following:

$$\begin{aligned} \text{Marital Status}_{sta} = & \beta_1 \text{Custody law}_{st} + \beta_2 \text{Unilateral}_{st} \\ & + \sum_r \text{Race}_{sta} + \sum_s \text{State fixed effects}_s + \sum_a \sum_t \text{Age}_a * \text{Time}_t \\ & + \sum_s \text{State}_s * \text{Time}_t + \varepsilon_{sta} \end{aligned}$$

Custody law_{st} and *Unilateral_{st}* indicate whether the state has had gender-neutral custody laws and unilateral divorce laws, respectively, in the census year before.²⁵ *Race* controls for the percentage of white and black in the cell. Other controls include state fixed effect, age fixed effect, year fixed effect and full interactions between age and year fixed effects. I also run a set of regressions that control for state-specific trends to control for possible preexisting trends in marital status. In all regressions, standard errors are clustered within state to correct for possible serial correlation within a state over time.

I run three set of the above regressions on three dependent variables: the probability of being divorced, separated and married. Table 7 reports the regression results for females and males respectively. Columns (1), (4), (7) and (10) report results from specifications that estimate only the effect of custody law changes. Columns (3), (5), (8) and (11) include only unilateral divorce

²⁴ The ACS is conducted every year since 2000, and gathers information previously contained only in the long form of the U.S. census. IPUMS-USA consists of the sample of American population drawn from federal censuses and from ACS. For years before 2000, I use the 1960 and 1970 1-percent sample census, and the 1980 to 2000 5-percent sample census. For years after 2000, I use the annual sample from the 2001 to 2010 ACS (sample percentage varied each year). In total there are 16 years of data.

²⁵ Both census and ACS are conducted in the early part of each year. Therefore, I use the law status of the previous year.

laws. The rest of the columns estimate regressions with both custody laws and unilateral divorce laws. All the coefficients and standard errors are multiplied by 100, so the coefficients can be interpreted as the change in *percentage point* of the probability of being in each marital status.

The main finding is that the gender-neutral custody law increases the likelihood of being separated for both females and males. This is true both with and without state-specific time trend controls. The effect is still positive and statistically significant when the status of the unilateral divorce law is also controlled. Females who live in a state that has transitioned to the gender-neutral custody law are more likely to be separated by about 0.4 percentage points, and males' likelihood is increased by about 0.3 percentage points. Custody law changes do not have a significant impact on individual's other marital choices.²⁶ The estimated coefficients on unilateral divorce laws are similar to those found by Gruber and Wolfers.

Discussion

The results from the stock analysis help to understand how custody law changes influence marriage. The results are consistent with the flow analysis earlier, that custody law changes increase the flow of divorce in the long term, but there is no contemporaneous effect. In this section, I find that, instead of inducing people to divorce right away, gender-neutral custody laws make individuals more likely to be separated. Overall, custody law changes have a more indirect effect on marriage in the short run, by inducing separation within marriage. In the long run, some separations lead to increased divorce rates.

VI. Conclusions

Studies have explored the link between the movement to unilateral divorce laws and the increasing divorce rates over the past few decades. However, people have overlooked another

²⁶ Appendix Table 4 reports the regression results using the same sample years (1960 to 1990) as Gruber and Wolfers. In regressions using the shorter sample, gender-neutral custody laws also have a negative impact on individual's likelihood of being married.

legal reform that is essential to people's divorce decisions: changes in child custody laws. Most states completed the transition from maternal preference to gender-neutral custody assignment between the 1970s and 1990s. How this change altered trends in divorce is unknown.

This paper showed that changes in child custody laws play an overlooked role in divorce trends. The movement from maternal preference to gender neutrality increases divorce rates in the long run and increases the likelihood of marital separation. The effects of custody law changes on both outcomes are robust to controlling for the adoption of unilateral divorce.

To empirically analyze the impact of custody law reform, I created the first comprehensive coding of when each state changed custody laws. I established that the pattern of custody law changes across states is independent of the movement towards unilateral divorce laws. The independence made it possible to estimate the two laws in one equation, so I could compare my results with previous studies that only estimated the effect of unilateral divorce laws.

My identification came from the differential timing in adopting gender-neutral child custody laws across states. I first analyzed the impact of child custody laws on state divorce rates. Following the dynamic framework proposed by Wolfers (2006), I found that the divorce rate starts to increase seven years after the adoption of the gender-neutral custody law in the state. I then studied how changes in custody laws affect individual's marital decisions. My results showed that adults living in states with gender-neutral custody laws have a higher likelihood of marital separation.

The empirical results suggest that, the response of divorce rates to changes in child custody laws is a dynamic process. Instead of divorcing immediately, couples may have responded to the custody law change by re-bargaining within marriage. The results have implications for future research. Changes in child custody laws play an important and overlooked role in trends in divorce and separation. Future analysis of trends in divorce, marriage and household economics should account for the role of changes in child custody assignment.

References

- Allen, Douglas W. (1992). Marriage and divorce: Comment. *American Economic Review*, 82(3), 679-685.
- Bailey, Martha J., Melanie Guldi, and Brad J. Hershbein. (2013). Further Evidence on the Internal Validity of the Early Legal Access Research Design. *Journal of Policy Analysis and Management*, 32(4), 899-904.
- Bianchi, Suzanne M. (1994). The Changing Demographic and Socioeconomic Characteristics of Single Parent Families, *Marriage & Family Review*, 20(1-2), 71-97.
- Brinig, Margaret F., and Frank H. Buckley. (1998a). Joint Custody: Bonding and Monitoring Theories. *Indiana Law Journal*, 73(2), 393-427.
- Brinig, Margaret F., and Frank H. Buckley. (1998b). No-Fault Laws and At-Fault People. *International Review of Law and Economics*, 18(3), 325-340.
- Buehler, Cheryl, and Jean M. Gerard. 1995. Divorce Law in the United States: A Focus on Child Custody. *Family Relations*, 44(4), 439-458.
- Ellman, Ira M. (2000). Divorce Rates, Marriage Rates, and the Problematic Persistence of Marital Roles. *Family Law Quarterly*, 34(1), 1-42.
- Elrod, Linda D., and Robert G. Spector. (2001). A Review of the Year in Family Law: Redefining Families, Reforming Custody Jurisdiction, and Refining Support Issues. *Family Law Quarterly*, 34(4), 607-657.
- Freed, Doris Jonas, and Timothy B. Walker. (1991). Family Law in the Fifty States: An Overview. *Family Law Quarterly*, 24(4), 309-405.
- Friedberg, Leora. (1998). Did Unilateral Divorce Raise Divorce Rates? Evidence from Panel Data. *American Economic Review*, 88(3), 608-627.

- Garasky, Steven, and Daniel R. Meyer. (1996). Reconsidering the Increase in Father-Only Families. *Demography*, 33(3), 385-393
- Gray, Jeffrey S. (1998). Divorce-Law Changes, Household Bargaining, and Married Women's Labor Supply. *American Economic Review*, 88(3), 628-642.
- Gruber, Jonathan. (2004). Is Making Divorce Easier Bad for Children? The Long-Run Implications of Unilateral Divorce. *Journal of Labor Economics*, 22(4), 799-833.
- Halla, Martin. (2013). The Effect of Joint Custody on Family Outcomes. *Journal of the European Economic Association*, 11(2), 278-315.
- Jacob, Herbert. (1988). *Silent Revolution: The Transformation of Divorce Law in the United States*. University of Chicago Press.
- Johnson, John, and Christopher Mazingo. (2000). The Economic Consequences of Unilateral Divorce for Children. *University of Illinois CBA Office of Research Working Paper 00-0112*.
- Jones, Cathy J. (1978). The Tender Years Doctrine: Survey and Analysis. *Journal of Family Law*, 16(4), 695-738.
- Joyce, Ted. (2013). How Important Was the Pill to Women's Economic Well-Being?. *Journal of Policy Analysis and Management*, 32(4), 879-887.
- Klaff, Ramsey L. (1982). The Tender Years Doctrine: A defense. *California Law Review*, 70(2), 335-372.
- Leo, Teng Wah. (2008). From Maternal Preference to Joint Custody: The Impact of Changes in Custody Law, *Working Paper*.
- Melli, Marygold S., and Patricia R. Brown. (1994). The Economics of Shared Custody: Developing an Equitable Formula for Dual Residence. *Houston Law Review*, 31, 543-584.
- Miller, David J. (1979). Joint Custody. *Family Law Quarterly*, 13(3), 345-412.

- Nakonezny, Paul A., Robert D. Shull, and Joseph Lee Rodgers. (1995). The Effect of No-Fault Divorce Law on the Divorce Rate across the 50 States and Its Relation to Income, Education, and Religiosity. *Journal of Marriage and the Family*, 57(2), 477-488.
- Peters, H. Elizabeth. (1986). Marriage and Divorce: Informational Constraints and Private Contracting. *American Economic Review*, 76(3), 437-454.
- Peters, H. Elizabeth. (1992). Marriage and Divorce: Reply. *American Economic Review*, 82(3), 686-693.
- Ruggles, Steven, J, Trent Alexander, Katie Genadek, Ronald Goeken, Matthew B. Schroeder, and Matthew Sobek. *Integrated Public Use Microdata Series: Version 5.0* [Machine-readable database]. Minneapolis: University of Minnesota, 2010.
- Twiford, J. Rainer. (1986). Joint Custody: A Blind Leap of Faith?. *Behavioral Sciences & the Law*, 4(2), 157-168.
- Weitzman, Lenore J., and Ruth B. Dixon. (1979). Child Custody Awards: Legal Standards and Empirical Patterns for Child Custody, Support and Visitation After Divorce. *UC Davis Law Review*, 12, 471-521.
- Wolfers, Justin. (2006). Did Unilateral Divorce Laws Raise Divorce Rates? A Reconciliation and New Results. *American Economic Review*, 96(5): 1802-1820.
- Voena, Alessandra. (2013). Yours, Mine and Ours: Do Divorce Laws Affect the Intertemporal Behavior of Married Couples? *Working Paper, Available at SSRN 2007575*.

Table 1 - States that have reformed only one law

	Year of Custody Law Reform	No. of States
	1973	1
	1976	1
	1977	2
A. States without unilateral divorce law	1978	2
	1979	2
	1982	1
	1983	1
	1985	2
	1994	1
	1995	1
	1997	1
	Year of Adopting Unilateral Divorce	No. of States
B. States without custody law changes	1971	1
	1975	1

Note: I use Gruber's (2004) coding for states' adoption of unilateral divorce laws.

Table 2 - Estimation results

Dependent variable: Annual divorces per 1,000 persons. Cell mean = 3.96.

	(A)			(B)			(C)		
	Basic Specification			State-specific linear trends			State-specific quadratic trends		
	1	2	3	4	5	6	7	8	9
Child Custody	-0.045 (0.059)		-0.005 (0.059)	0.010 (0.035)		-0.029 (0.035)	0.013 (0.030)		-0.004 (0.030)
Unilateral		-0.320** (0.060)	-0.319** (0.061)		0.350** (0.050)	0.357** (0.051)		0.192** (0.048)	0.193** (0.048)
<i>Controls</i>									
Year effects	Yes,F=64.3	Yes,F=64.6	Yes,F=59.0	Yes,F=182.3	Yes,F=135.2	Yes,F=129.1	Yes,F=62.8	Yes,F=48.3	Yes,F=47.2
State effects	Yes,F=150.9	Yes,F=131.2	Yes,F=129.0	Yes,F=406.4	Yes,F=335.1	Yes,F=332.0	Yes,F=733.8	Yes,F=597.5	Yes,F=593.6
State trend, linear	No	No	No	Yes,F=110.5	Yes,F=112.0	Yes,F=112.0	Yes,F=69.4	Yes,F=70.3	Yes,F=70.2
State trend, quadratic	No	No	No	No	No	No	Yes,F=41.8	Yes,F=40.6	Yes,F=40.6
Adjusted R ²	0.825	0.827	0.827	0.945	0.946	0.946	0.970	0.970	0.970

** p<0.01, * p<0.05, † p<0.10

Notes: Samples: 1956-2010. n = 2545. With state population weights. Robust standard errors are in parentheses.

Table 3 - Dynamic effect of two laws

Dependent variable: Annual divorces per 1,000 persons. Cell mean = 3.96.

		(A) Basic Specification			(B) State-specific linear trends			(C) State-specific quadratic trends		
		1	2	3	4	5	6	7	8	9
Child custody law	First 2 years	-0.042 (0.083)		-0.091 (0.0811)	0.003 (0.047)		-0.039 (0.048)	0.031 (0.038)		0.017 (0.038)
	Years 3-4	-0.048 (0.085)		-0.107 (0.084)	0.011 (0.049)		-0.041 (0.050)	0.048 (0.041)		0.032 (0.041)
	Years 5-6	-0.072 (0.088)		-0.122 (0.087)	0.007 (0.051)		-0.046 (0.052)	0.052 (0.044)		0.042 (0.045)
	Years 7-8	-0.060 (0.091)		-0.092 (0.090)	0.042 (0.054)		0.0051 (0.054)	0.112* (0.048)		0.124* (0.049)
	Years 9-10	-0.139 (0.093)		-0.143 (0.092)	-0.011 (0.056)		-0.034 (0.056)	0.076 (0.052)		0.104* (0.053)
	Years 11-12	-0.159† (0.096)		-0.122 (0.095)	0.005 (0.058)		-0.018 (0.059)	0.118* (0.056)		0.146* (0.057)
	Years 13-14	-0.156 (0.099)		-0.072 (0.097)	0.033 (0.061)		2.14e-05 (0.061)	0.168** (0.060)		0.183** (0.061)
	Years 15 onwards	-0.317** (0.095)		-0.191* (0.093)	0.011 (0.065)		-0.021 (0.065)	0.191** (0.068)		0.206** (0.068)
	Unilateral divorce	First 2 years		0.265* (0.115)	0.267* (0.115)		0.372** (0.070)	0.373** (0.070)		0.228** (0.057)
Years 3-4			0.176 (0.116)	0.197† (0.117)		0.340** (0.072)	0.349** (0.073)		0.160** (0.062)	0.151* (0.062)
Years 5-6			0.185 (0.114)	0.218† (0.116)		0.402** (0.074)	0.415** (0.075)		0.198** (0.066)	0.182** (0.067)
Years 7-8			0.137 (0.114)	0.171 (0.116)		0.416** (0.077)	0.426** (0.078)		0.194** (0.070)	0.171* (0.071)
Years 9-10			-0.033 (0.113)	-0.008 (0.115)		0.313** (0.079)	0.313** (0.080)		0.079 (0.074)	0.040 (0.076)
Years 11-12			-0.196† (0.112)	-0.169 (0.114)		0.231** (0.082)	0.231** (0.084)		-0.006 (0.078)	-0.052 (0.080)
Years 13-14			-0.336** (0.110)	-0.314** (0.112)		0.193** (0.086)	0.193* (0.088)		-0.034 (0.083)	-0.083 (0.084)
Years 15 onwards			-0.651** (0.065)	-0.632** (0.066)		0.310** (0.090)	0.308** (0.0907)		0.123 (0.088)	0.069 (0.089)
<i>Controls</i>										
	Year FE	Yes,F=55.1	Yes,F=62.0	Yes,F=49.1	Yes,F=135.4	Yes,F=130.0	Yes,F=99.9	Yes,F=58.4	Yes,F=45.51	Yes,F=43.2
	State FE	Yes,F=150.1	Yes,F=141.8	Yes,F=136.4	Yes,F=405.3	Yes,F=325.3	Yes,F=321.2	Yes,F=735.3	Yes,F=586.9	Yes,F=583.4
	State * time	No	No	No	Yes,F=109.4	Yes,F=102.8	Yes,F=102.2	Yes,F=69.7	Yes,F=69.7	Yes,F=70.0
	State * time ²	No	No	No	No	No	No	Yes,F=42.1	Yes,F=41.2	Yes,F=41.5
	Adjusted R ²	0.826	0.837	0.837	0.944	0.946	0.946	0.970	0.970	0.970

** p<0.01, * p<0.05, † p<0.10

Notes: Samples: 1956-2010. n = 2545. With state population weights. Robust standard errors are in parentheses.

Table 4 - Results for all population and married population

		Divorce per 1000 people	Divorces per 1000 married adults	H ₀ : two coefficients are equal
		1	2	3
		cell mean = 3.96	cell mean = 5.78	
Child custody law	First 2 years	0.017 (0.038)	0.030 (0.060)	p = 0.5647
	Years 3-4	0.032 (0.041)	0.061 (0.065)	p = 0.2203
	Years 5-6	0.042 (0.045)	0.078 (0.071)	p = 0.1700
	Years 7-8	0.124* (0.049)	0.215** (0.077)	p = 0.0016
	Years 9-10	0.104* (0.053)	0.185* (0.083)	p = 0.0103
	Years 11-12	0.146* (0.057)	0.249** (0.089)	p = 0.0022
	Years 13-14	0.183** (0.061)	0.316** (0.096)	p = 0.0002
	Years 15 onwards	0.206** (0.068)	0.341** (0.107)	p = 0.0008
Unilateral divorce	First 2 years	0.224** (0.057)	0.327** (0.089)	p = 0.0021
	Years 3-4	0.151* (0.062)	0.228* (0.098)	p = 0.0365
	Years 5-6	0.182** (0.067)	0.289** (0.105)	p = 0.0063
	Years 7-8	0.171* (0.071)	0.301** (0.112)	p = 0.0019
	Years 9-10	0.040 (0.076)	0.122 (0.118)	p = 0.0644
	Years 11-12	-0.052 (0.080)	-0.001 (0.125)	p = 0.2825
	Years 13-14	-0.083 (0.084)	-0.046 (0.132)	p = 0.4595
	Years 15 onwards	0.069 (0.089)	0.192 (0.140)	p = 0.0192
<i>Controls</i>				
	Year FE	Yes,F=43.2	Yes,F=45.3	
	State FE	Yes,F=583.4	Yes,F=452.6	
	State * time	Yes,F=70.0	Yes,F=50.1	
	State * time ²	Yes,F=41.5	Yes,F=33.5	
	Adjusted R ²	0.970	0.973	

** p<0.01, * p<0.05, † p<0.10

Notes: Samples: 1956-2010. n = 2545. With state population weights. Robust standard errors are in parentheses.

Table 5 - Results by legal reform status

		All states	States that reformed	States that reformed	States that reformed both
		1	2	3	4
		49 states	47 states	34 states	32 states
		cell mean=3.96	cell mean=3.96	cell mean=4.44	cell mean=4.44
Child custody law	First 2 years	0.017 (0.038)	0.021 (0.039)	0.092† (0.055)	0.103† (0.057)
	Years 3-4	0.032 (0.041)	0.037 (0.043)	0.243** (0.061)	0.262** (0.063)
	Years 5-6	0.042 (0.045)	0.049 (0.047)	0.283** (0.067)	0.309** (0.070)
	Years 7-8	0.124* (0.049)	0.132** (0.051)	0.349** (0.074)	0.380** (0.078)
	Years 9-10	0.104* (0.053)	0.113* (0.055)	0.388** (0.081)	0.422** (0.084)
	Years 11-12	0.146* (0.057)	0.157** (0.059)	0.464** (0.087)	0.501** (0.091)
	Years 13-14	0.183** (0.061)	0.193** (0.064)	0.478** (0.094)	0.517** (0.099)
	Years 15 onwards	0.206** (0.068)	0.221** (0.071)	0.604** (0.106)	0.649** (0.111)
Unilateral divorce	First 2 years	0.224** (0.057)	0.228** (0.059)	0.213** (0.065)	0.210** (0.068)
	Years 3-4	0.151* (0.062)	0.145* (0.065)	0.148† (0.077)	0.131 (0.081)
	Years 5-6	0.182** (0.067)	0.173* (0.070)	0.144 (0.089)	0.122 (0.093)
	Years 7-8	0.171* (0.071)	0.158* (0.074)	0.123 (0.099)	0.096 (0.103)
	Years 9-10	0.040 (0.076)	0.022 (0.079)	0.010 (0.109)	-0.023 (0.113)
	Years 11-12	-0.052 (0.080)	-0.072 (0.083)	-0.053 (0.118)	-0.087 (0.123)
	Years 13-14	-0.083 (0.084)	-0.105 (0.087)	-0.036 (0.127)	-0.068 (0.133)
	Years 15 onwards	0.069 (0.089)	0.053 (0.093)	0.178 (0.140)	0.155 (0.146)
<i>Controls</i>					
	Year FE	Yes	Yes	Yes	Yes
	State FE	Yes	Yes	Yes	Yes
	State * time	Yes	Yes	Yes	Yes
	State * time ²	Yes	Yes	Yes	Yes
	Adjusted R ²	0.970	0.970	0.966	0.966
	No. of observations	2545	2,380	1,666	1,556

** p<0.01, * p<0.05, † p<0.10

Notes: Samples: 1956-2010. With state population weights. Robust standard errors are in parentheses.

Table 6 - Sample means

	Female Adult	Male Adult
Divorced	0.128	0.102
Separated	0.035	0.024
Married (excluding separated)	0.650	0.645
No. of cells	19,110	19,110

Notes: Data collapsed into cells by state, year, age, and sex. IPUMS data from 1960 to 2010: 1960 1-percent state samples, 1970 1-percent state sample, 1980-2000.5-percent state samples, 2001-2010 ACS state samples. Restricted to population age 25-50. Excludes Maine and Washington. Sample means are weighted by number of observations in each cell.

Table 7 - Stock analysis

Adult is ...	Adult Female						Adult Male					
	No Trend			Trend			No Trend			Trend		
	1	2	3	4	5	6	7	8	9	10	11	12
<i>Divorced</i>												
Custody	0.393 (0.320)		0.357 (0.321)	0.158 (0.211)		0.047 (0.177)	0.465 (0.369)		0.436 (0.370)	0.217 (0.264)		0.121 (0.233)
Unilateral		0.987** (0.364)	0.946* (0.376)		1.204* (0.572)	1.190* (0.565)		0.814* (0.386)	0.763† (0.409)		1.046† (0.550)	1.009† (0.555)
<i>Separated</i>												
Custody	0.486* (0.222)		0.475* (0.226)	0.378** (0.109)		0.396** (0.097)	0.294† (0.154)		0.293† (0.155)	0.220* (0.103)		0.243* (0.091)
Unilateral		0.332 (0.233)	0.278 (0.234)		-0.079 (0.346)	-0.198 (0.308)		0.061 (0.126)	0.027 (0.121)		-0.169 (0.275)	-0.243 (0.247)
<i>Married (excluding separated)</i>												
Custody	-0.728 (0.441)		-0.710 (0.430)	-0.753 (0.477)		-0.617 (0.411)	-0.851 (0.536)		-0.835 (0.523)	-0.656 (0.615)		-0.522 (0.540)
Unilateral		-0.558 (0.816)	-0.477 (0.792)		-1.646 (1.341)	-1.461 (1.260)		-0.520 (0.973)	-0.423 (0.945)		-1.567 (1.596)	-1.409 (1.515)
<i>Controls</i>												
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
State FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
State * time	No	No	No	Yes	Yes	Yes	No	No	No	Yes	Yes	Yes
No. of cells	19,110	19,110	19,110	19,110	19,110	19,110	19,110	19,110	19,110	19,110	19,110	19,110

** p<0.01, * p<0.05, † p<0.10

Notes: With state population weights. Robust standard errors are in parentheses. Regressions are based on IPUMS data from 1960 to 2010: 1960 1-percent state samples, 1970 1-percent state sample, 1980-2000 5-percent state samples, 2001-2010 ACS state samples. Restricted to population age 25-50. Excludes Maine and Washington.

Appendix Table 1 - A direct comparison with Table 2, using shorter sample.

Dependent variable: Annual divorces per 1,000 persons. Cell mean = 4.59.

	(A)			(B)			(C)		
	Basic Specification			State-specific linear trends			State-specific quadratic trends		
	1	2	3	4	5	6	7	8	9
Child Custody	0.041 (0.046)		0.039 (0.046)	0.0717† (0.037)		0.046 (0.036)	0.077* (0.039)		0.065† (0.039)
Unilateral		0.024 (0.061)	0.017 (0.062)		0.309** (0.054)	0.300** (0.055)		0.332** (0.057)	0.326** (0.058)
<i>Controls</i>									
Year effects	Yes,F=72.1	Yes,F=80.2	Yes,F=59.5	Yes,F=113.8	Yes,F=88.4	Yes,F=84.4	Yes,F=10.2	Yes,F=9.5	Yes,F=9.3
State effects	Yes,F=273.3	Yes,F=212.3	Yes,F=207.0	Yes,F=206.7	Yes,F=162.3	Yes,F=162.3	Yes,F=126.5	Yes,F=116.4	Yes,F=116.5
State trend, linear	No	No	No	Yes,F=21.7	Yes,F=23.1	Yes,F=23.1	Yes,F=9.5	Yes,F=10.2	Yes,F=10.3
State trend, quadratic	No	No	No	No	No	No	Yes,F=7.3	Yes,F=7.4	Yes,F=7.4
Adjusted R ²	0.941	0.941	0.941	0.971	0.972	0.972	0.979	0.979	0.979

** p<0.01, * p<0.05, † p<0.10

Notes: Samples: 1968-1988. n = 2545. With state population weights. Robust standard errors are in parentheses.

Appendix Table 2 - A direct comparison with Table 3, using shorter samples

Dependent variable: Annual divorces per 1,000 persons. Cell mean = 3.88.

		(A) Basic Specification			(B) State-specific linear trends			(C) State-specific quadratic trends		
		1	2	3	4	5	6	7	8	9
Child custody law	First 2 years	0.001 (0.068)		-0.046 (0.067)	0.096* (0.048)		0.081† (0.048)	0.092* (0.043)		0.073† (0.043)
	Years 3-4	-0.0180 (0.070)		-0.064 (0.070)	0.102† (0.055)		0.097† (0.055)	0.117* (0.054)		0.087 (0.056)
	Years 5-6	0.002 (0.076)		-0.025 (0.076)	0.155* (0.065)		0.173** (0.066)	0.179* (0.072)		0.149* (0.075)
	Years 7-8	-0.022 (0.082)		0.0051 (0.083)	0.166* (0.077)		0.243** (0.078)	0.242* (0.095)		0.234* (0.099)
	Years 9-10	-0.109 (0.088)		-0.032 (0.088)	0.097 (0.090)		0.231* (0.091)	0.257* (0.124)		0.257* (0.130)
	Years 11-12	-0.095 (0.096)		0.032 (0.096)	0.070 (0.105)		0.241* (0.106)	0.353* (0.157)		0.327* (0.165)
	Years 13-14	-0.157 (0.112)		0.083 (0.113)	-0.027 (0.127)		0.162 (0.128)	0.462* (0.202)		0.372† (0.211)
	Years 15 onwards	-0.358** (0.125)		-0.066 (0.127)	-0.158 (0.149)		0.053 (0.150)	0.633* (0.255)		0.551* (0.261)
Unilateral divorce	First 2 years		0.213* (0.086)	0.216* (0.086)		0.262** (0.064)	0.247** (0.063)		0.282** (0.054)	0.283** (0.055)
	Years 3-4		0.116 (0.087)	0.128 (0.089)		0.191** (0.072)	0.153* (0.072)		0.260** (0.065)	0.249** (0.067)
	Years 5-6		0.120 (0.087)	0.138 (0.089)		0.213** (0.079)	0.157† (0.081)		0.358** (0.078)	0.337** (0.082)
	Years 7-8		0.066 (0.086)	0.077 (0.089)		0.182* (0.087)	0.104 (0.089)		0.428** (0.094)	0.396** (0.101)
	Years 9-10		-0.117 (0.086)	-0.119 (0.089)		0.022 (0.094)	-0.078 (0.097)		0.389** (0.113)	0.343** (0.123)
	Years 11-12		-0.294** (0.087)	-0.294** (0.090)		-0.133 (0.103)	-0.239* (0.106)		0.389** (0.136)	0.336* (0.149)
	Years 13-14		-0.437** (0.088)	-0.447** (0.091)		-0.239* (0.112)	-0.337** (0.116)		0.466** (0.162)	0.413* (0.179)
	Years 15 onwards		-0.588** (0.079)	-0.600** (0.085)		-0.244† (0.125)	-0.280* (0.128)		0.779** (0.201)	0.714** (0.219)
<i>Controls</i>										
	Year FE	Yes,F=113.0	Yes,F=137.4	Yes,F=96.7	Yes,F=54.5	Yes,F=54.1	Yes,F=42.6	Yes,F=65.0	Yes,F=71.7	Yes,F=53.9
	State FE	Yes,F=245.6	Yes,F=216.7	Yes,F=211.0	Yes,F=538.8	Yes,F=441.7	Yes,F=443.8	Yes,F=601.8	Yes,F=470.8	Yes,F=462.8
	State * time	No	No	No	Yes,F=49.2	Yes,F=48.1	Yes,F=48.9	Yes,F=52.9	Yes,F=55.0	Yes,F=54.4
	State * time ²	No	No	No	No	No	No	Yes,F=16.7	Yes,F=16.4	Yes,F=15.8
	Adjusted R ²	0.930	0.934	0.934	0.974	0.975	0.975	0.983	0.984	0.984

** p<0.01, * p<0.05, † p<0.10

Notes: Samples: 1956-1988. n = 2545. With state population weights. Robust standard errors are in parentheses.

Appendix Table 3 - Dynamic effect of two laws, on married population. Column 9 is shown in Table 4.

Dependent variable: Annual divorces per 1,000 married persons age 18 plus. Cell mean = 6.26.

		(A) Basic Specification			(B) State-specific linear trends			(C) State-specific quadratic trends		
		1	2	3	4	5	6	7	8	9
Child custody law	First 2 years	-0.031 (0.114)		-0.097 (0.113)	0.036 (0.071)		-0.024 (0.071)	0.050 (0.059)		0.030 (0.060)
	Years 3-4	-0.016 (0.118)		-0.099 (0.116)	0.071 (0.074)		-0.008 (0.0742)	0.088 (0.064)		0.061 (0.065)
	Years 5-6	-0.036 (0.121)		-0.110 (0.120)	0.081 (0.077)		-0.002 (0.077)	0.100 (0.069)		0.078 (0.071)
	Years 7-8	0.015 (0.126)		-0.036 (0.125)	0.162* (0.080)		0.100 (0.081)	0.207** (0.076)		0.215** (0.077)
	Years 9-10	-0.095 (0.129)		-0.106 (0.128)	0.090 (0.083)		0.047 (0.084)	0.153† (0.082)		0.185* (0.083)
	Years 11-12	-0.110 (0.133)		-0.069 (0.132)	0.125 (0.087)		0.081 (0.088)	0.220* (0.088)		0.249** (0.089)
	Years 13-14	-0.088 (0.137)		0.014 (0.135)	0.181* (0.091)		0.122 (0.091)	0.308** (0.094)		0.316** (0.096)
	Years 15 onwards	-0.349** (0.131)		-0.196 (0.129)	0.149 (0.098)		0.090 (0.098)	0.335** (0.106)		0.341** (0.107)
	Unilateral divorce	First 2 years		0.363* (0.160)	0.367* (0.160)		0.556** (0.104)	0.556** (0.104)		0.334** (0.089)
Years 3-4			0.246 (0.161)	0.270† (0.163)		0.529** (0.108)	0.533** (0.109)		0.244* (0.097)	0.228* (0.098)
Years 5-6			0.284† (0.159)	0.316† (0.161)		0.646** (0.111)	0.647** (0.113)		0.319** (0.103)	0.289** (0.105)
Years 7-8			0.252 (0.158)	0.281† (0.161)		0.700** (0.114)	0.693** (0.116)		0.344** (0.110)	0.301** (0.112)
Years 9-10			0.025 (0.157)	0.037 (0.160)		0.568** (0.118)	0.541** (0.120)		0.190 (0.116)	0.122 (0.118)
Years 11-12			-0.195 (0.155)	-0.182 (0.158)		0.460** (0.123)	0.431** (0.125)		0.078 (0.123)	-0.001 (0.125)
Years 13-14			-0.390* (0.153)	-0.381* (0.156)		0.406** (0.129)	0.379** (0.131)		0.038 (0.129)	-0.046 (0.132)
Years 15 onwards			-0.809** (0.090)	-0.788** (0.091)		0.581** (0.134)	0.557** (0.136)		0.283* (0.137)	0.192 (0.140)
<i>Controls</i>										
	Year FE	Yes,F=70.6	Yes,F=92.3	Yes,F=62.2	Yes,F=133.0	Yes,F=125.1	Yes,F=96.5	Yes,F=61.1	Yes,F=47.6	Yes,F=45.3
	State FE	Yes,F=171.2	Yes,F=160.0	Yes,F=155.0	Yes,F=346.5	Yes,F=278.3	Yes,F=276.2	Yes,F=568.8	Yes,F=453.4	Yes,F=452.6
	State * time	No	No		Yes,F=86.0	Yes,F=81.6	Yes,F=81.3	Yes,F=49.7	Yes,F=49.8	Yes,F=50.1
	State * time ²	No	No	No	No	No	No	Yes,F=34.5	Yes,F=33.2	Yes,F=33.5
	Adjusted R ²	0.870	0.877	0.877	0.952	0.953	0.954	0.972	0.972	0.973

** p<0.01, * p<0.05, † p<0.10

Notes: Samples: 1956-2010. n = 2545. With state population weights. Robust standard errors are in parentheses.

Appendix Table 4 - A direct comparison with Table 7, using shorter sample

Adult is ...	Adult Female						Adult Male					
	No Trend			Trend			No Trend			Trend		
	1	2	3	4	5	6	7	8	9	10	11	12
<i>Divorced</i>												
Custody	0.103 (0.221)		-0.025 (0.197)	0.203 (0.181)		0.138 (0.176)	0.237 (0.253)		0.135 (0.236)	0.327* (0.135)		0.291* (0.139)
Unilateral		1.073** (0.32)	1.078** (0.324)		0.583 (0.387)	0.533 (0.376)		0.895** (0.332)	0.870* (0.347)		0.398 (0.357)	0.287 (0.351)
<i>Separated</i>												
Custody	0.508** (0.121)		0.497** (0.115)	0.515** (0.151)		0.559** (0.144)	0.287** (0.106)		0.299** (0.104)	0.310† (0.157)		0.348* (0.154)
Unilateral		0.183 (0.179)	0.087 (0.169)		-0.152 (0.331)	-0.357 (0.266)		-0.047 (0.130)	-0.103 (0.117)		-0.167 (0.267)	-0.300 (0.231)
<i>Married (excluding separated)</i>												
Custody	-0.679 (0.449)		-0.587 (0.395)	-1.196** (0.427)		-1.137** (0.395)	-0.529 (0.546)		-0.444 (0.495)	-1.261* (0.522)		-1.204* (0.489)
Unilateral		-0.881 (0.955)	-0.768 (0.916)		-0.902 (1.075)	-0.484 (0.967)		-0.811 (1.136)	-0.727 (1.105)		-0.908 (1.250)	-0.449 (1.151)
<i>Controls</i>												
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
State FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
State * time	No	No	No	Yes	Yes	Yes	No	No	No	Yes	Yes	Yes
No. of cells	5,096	5,096	5,096	5,096	5,096	5,096	5,096	5,096	5,096	5,096	5,096	5,096

** p<0.01, * p<0.05, † p<0.10

Notes: With state population weights. Robust standard errors are in parentheses. Regressions are based on IPUMS data from 1960 to 1990: 1960 1-percent state samples, 1970 1-percent state sample, 1980-1990 5-percent state samples. Restricted to population age 25-50. Excludes Maine and Washington.

Figure 1 – National divorce rate and the adoption of unilateral divorce law

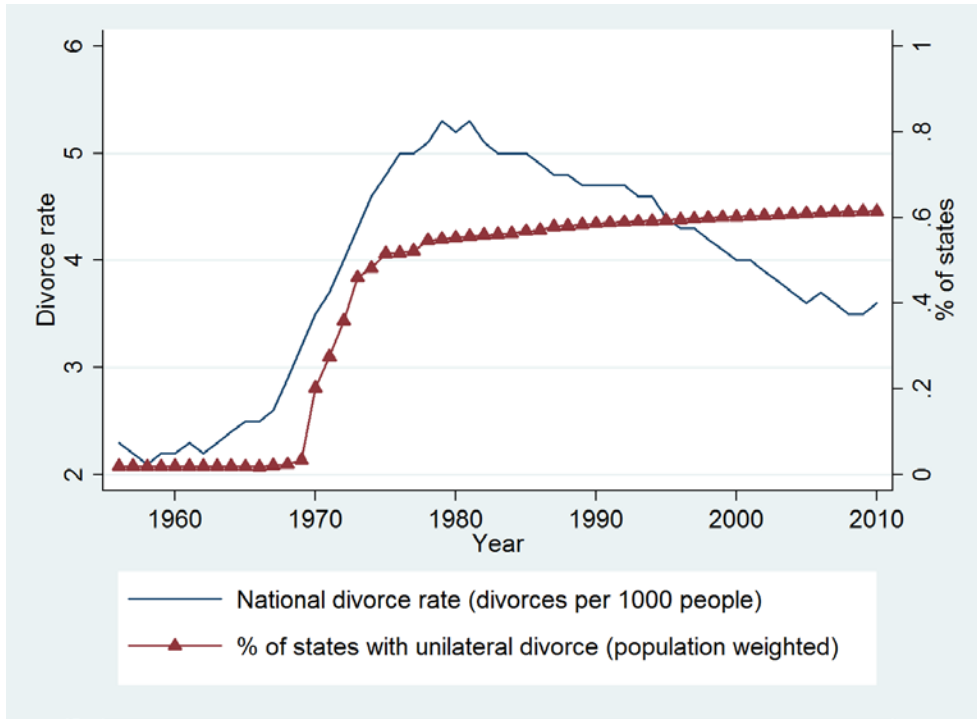


Figure 2 – National divorce rate, divorce laws, and custody laws

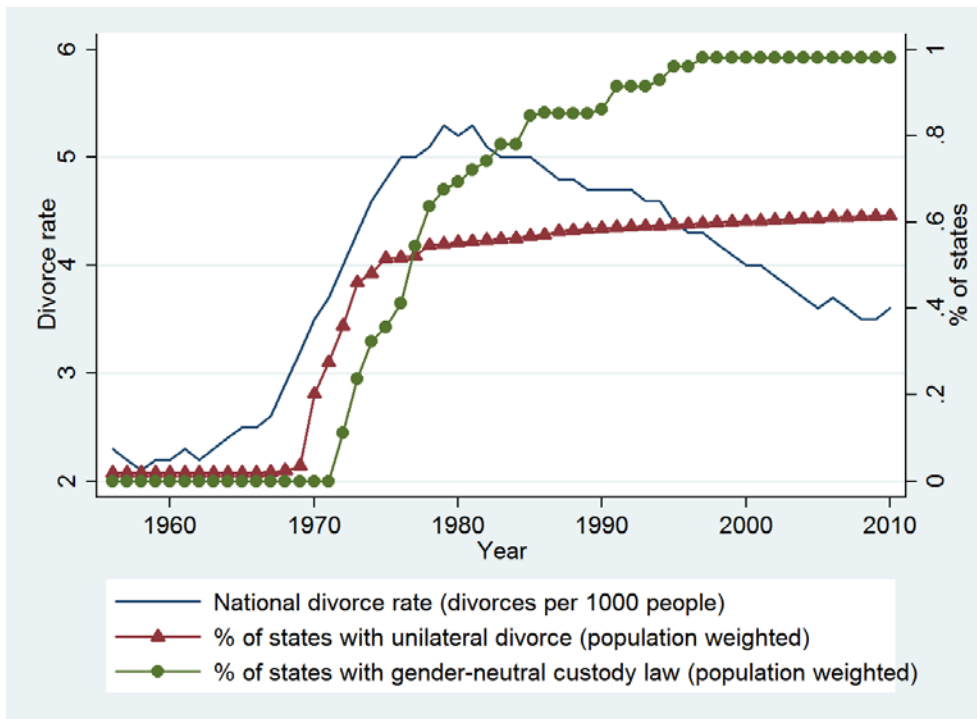


Figure 3 - Years when states changed their laws

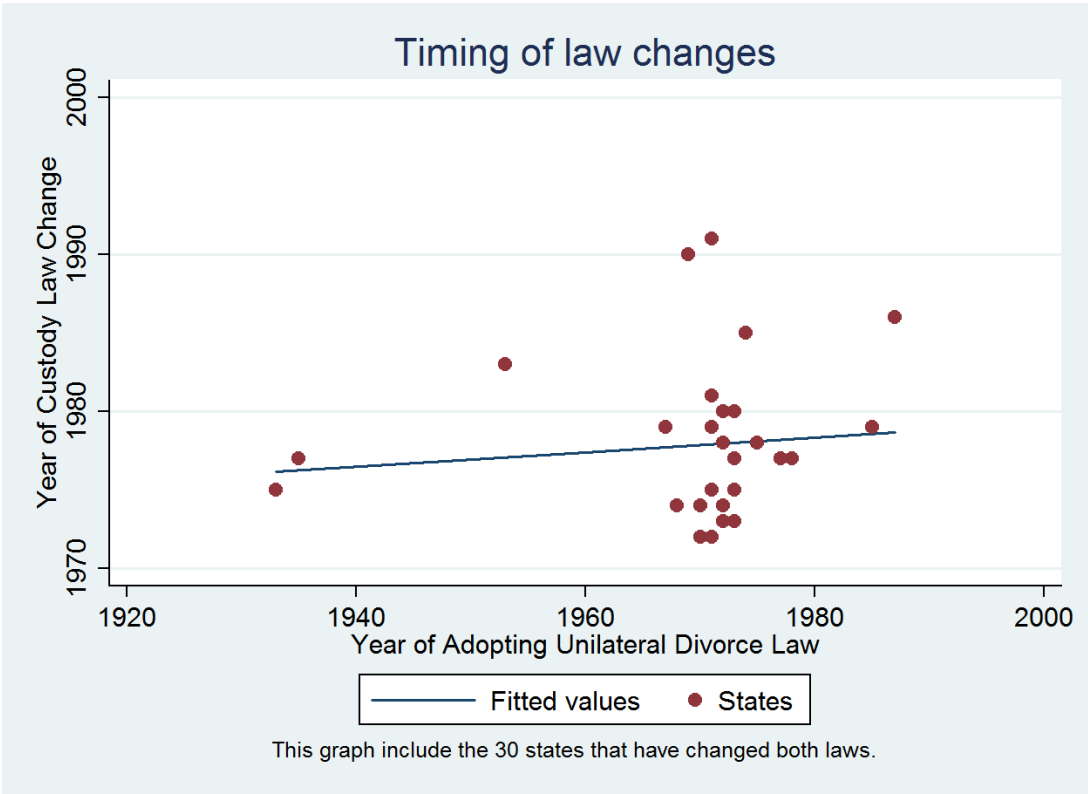


Figure 4 - Response of divorce rate to custody law changes, 1956-2010

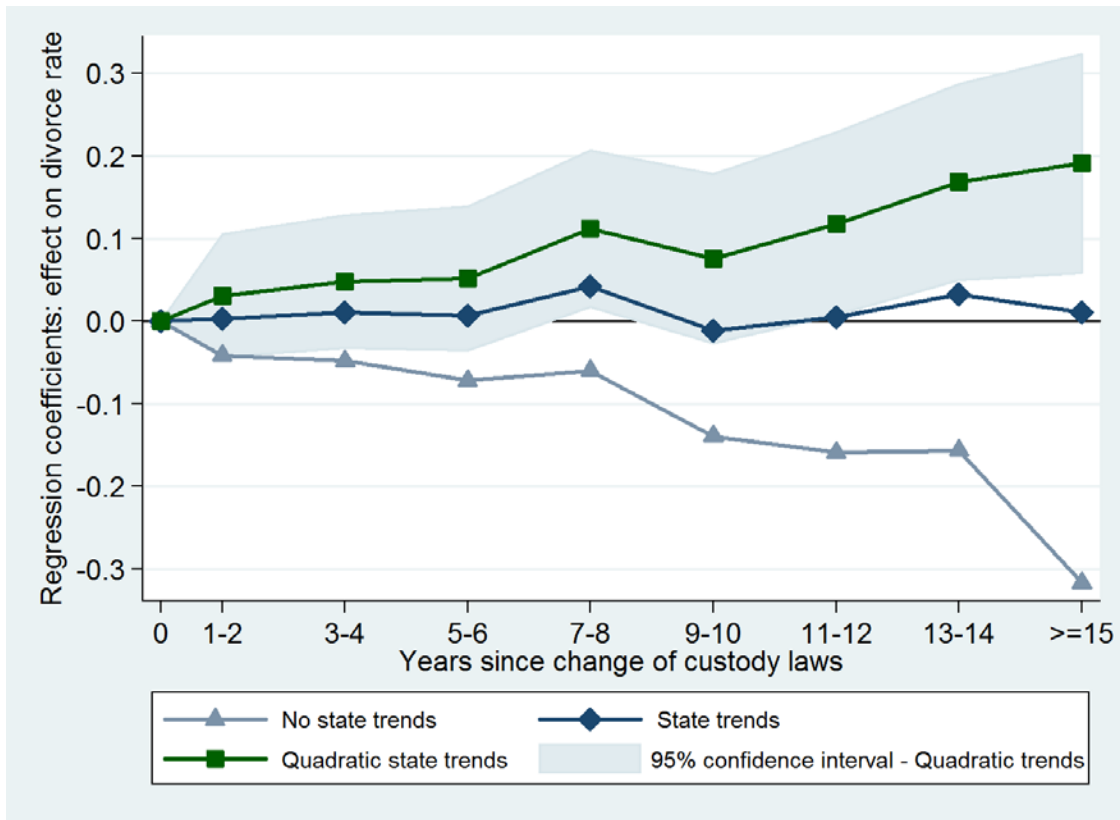


Figure 5 - Response of divorce rate to unilateral divorce law

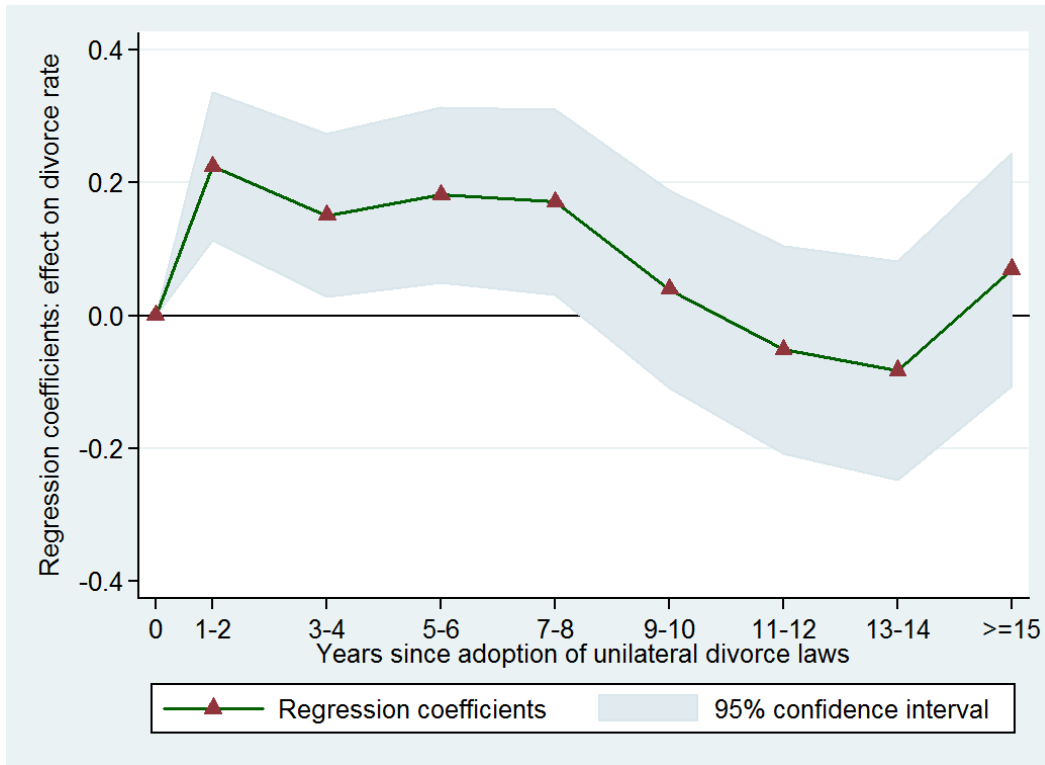


Figure 6 - Response of divorce rate to unilateral divorce law and child custody law

