

Will you marry me, later?

Age-of-marriage laws and child marriage in Mexico*

Cristina Bellés-Obrero[†]
University of Mannheim

María Lombardi[‡]
Universidad Torcuato Di Tella

December 2019

Abstract

We provide empirical evidence on the impact of raising the minimum age of marriage to 18 years old on child marriage, early motherhood, and school enrollment in Mexico. Using a difference-in-differences model that takes advantage of the staggered adoption of this reform across states, we show that banning child marriage leads to a large and statistically significant reduction in the number of registered child marriages. However, we find no effect on school enrollment or early fertility rates. We also find that for girls who give birth before the age of 18, the reduction in the share that are formally married is offset by an increase in the share in informal unions. These findings suggest that when informal unions are a viable option for young couples, raising the minimum age of marriage is not enough to prevent early unions and their negative consequences.

JEL Classifications: J12, J13, K36, I20

Keywords: child marriage, marriage laws, fertility, schooling

*This paper previously circulated under the title “Can an Increase in the Minimum Age of Marriage Reduce Child Marriage Rates? Evidence from Mexico.” This research is funded by the CAF Development Bank research grant on human capital formation and youth access to high-quality employment in Latin America. We are grateful for comments from Cristian Crespo, Emma Duchini, Andrés Gago, Aixa Garca Ramos, Andrea Ichino, Ricardo Maertens, Rodrigo Soares, Joe Vecchi, and seminar and conference participants at Universidad Torcuato Di Tella, Universidad Nacional de la Plata, the Center for Evaluation and Development, the LACEA Annual Conference, the Symposium of the Spanish Economic Association, and the Eighth Development Workshop in Chile. Bellés-Obrero acknowledges support from the German Research Foundation (DFG) through CRC TR 224 (Project A02), and the project ECO2017-82350-R.

[†]University of Mannheim, Department of Economics, Office 326, L7, 3-5, 68161, Mannheim, Germany & CRES (Universitat Pompeu Fabra). *Email:* cbelleso@mail.uni-mannheim.de

[‡]Universidad Torcuato Di Tella, School of Government, Av. Figueroa Alcorta 7350, C1428BCW Buenos Aires, Argentina. *Email:* mlombardi@utdt.edu

1 Introduction

Approximately 650 million girls and women alive today were married before the age of 18, where marriage includes both formal marriages and informal unions in which partners cohabit as if married (UNICEF, 2018). Eradicating this practice is key in the fight to reduce global poverty, as child marriage leads to lower educational attainment, earlier age at first childbirth, higher fertility, and worse health and educational outcomes for the children born into child marriages (Field and Ambrus, 2008; Sekhri and Debnath, 2014; Chari et al., 2017). Although most countries' laws set the minimum age of marriage at 18, they typically provide exceptions upon parental consent, pregnancy, authorization from the courts, or due to religious or customary laws, making child marriage legal in practice (Arthur et al., 2018).¹

A common proposal for ending child marriage is to eliminate all exceptions to the minimum age of marriage. Several countries have recently set the minimum age of marriage at 18, without exception.² As long as there is adequate enforcement, these reforms should reduce or even eradicate formal child marriages. But the enforcement of minimum-age-of-marriage laws may be weak if these laws are incompatible with prevailing social norms and practices (Acemoglu and Jackson, 2017).³ Perhaps more importantly, the impact of minimum-age-of-marriage laws on overall child marriage rates is likely to depend on the incidence of informal child marriages. Raising the minimum age of marriage may not be effective in societies where most child marriages are not legally registered. Even in places where it is common for young couples to get legally married, the effect of age-of-marriage reforms could depend on the alternatives faced by these couples. If informal unions are a viable option for young couples, a drop in the number of formal marriages may be offset by an equal rise in the number of informal unions, leaving child marriage

¹A survey of marriage laws in 193 countries conducted by the World Policy Center in 2013 revealed that when all exceptions were considered, 87% of these countries had a minimum age of marriage lower than 18.

²Some recent examples include Chad, Costa Rica, Ecuador, Guatemala, Honduras, Malawi, Nepal, Panama, Turkmenistan, and Zimbabwe (Girls Not Brides, 2017).

³Enforcement may even be unfeasible in contexts where lack of widespread birth registration prevents age verification at marriage (Jensen and Thornton, 2003). Lack of birth registration does not impede the enforcement of minimum-age-of-marriage laws in Mexico, the country we study in this paper, as birth registration is almost universal. A comparison of the number of registered births in 1999 according to vital statistics data and the number of newborn babies in the 2000 census shows that over 96% of births were registered (Péres Paredes and Meneses Mendoza, 2008).

rates unchanged. As individuals in informal unions may not have the same legal benefits or social recognition as those that are formally married, banning child marriage could have negative welfare effects. Alternatively, if laws banning child marriage have an expressive function (Benabou and Tirole, 2011), they may change social norms, reducing the incidence of both formal and informal child marriages.⁴

This paper provides empirical evidence on the impact of raising the minimum age of marriage using a natural experiment in Mexico. Researching the impact of changes in minimum-age-of-marriage laws is challenging, as these policies are commonly set at the national level, providing no counterfactual for credibly identifying their causal impact. Mexico provides a compelling case study for various reasons. Towards the end of 2014, the Federal Congress of Mexico enacted a law setting the minimum age of marriage at 18, without exception, and urged states to incorporate this change into their legislation. The gradual adoption of this reform by Mexican states allows us to exploit variation across states and over time using a two-way fixed effects difference-in-differences model. Another advantage of the Mexican context is the availability of highly granular data on marriages, births, and school enrollment. Finally, Mexico ranks seventh in terms of the number of women who were child brides, and so studying the impact of changes in age-of-marriage laws in this context is important in and of itself.⁵

We first examine the extent to which the reform was enforced. Using microdata from marriage certificates, we find that banning child marriage leads to a 48% reduction in the rates of formal child marriage.⁶ This reduction is concentrated among 16 and 17 year olds, the age groups with the highest rate of child marriages before the onset of the prohibition. Importantly, we show that these estimates are not biased by different pre-trends in states that enacted the ban on child marriage, by couples marrying in states in which child marriage was still legal, or by misreporting

⁴As laws signal what is right and wrong, they can affect individuals' preferences over the regulated behavior, and lead to higher compliance by changing social norms. The impact of laws beyond deterrence has been empirically corroborated in the case of compulsory voting laws with symbolic fines for abstention in Switzerland and Austria (Funk, 2007; Hoffman et al., 2017), and seat belt laws with low enforcement in the U.S. (Cohen and Einav, 2003).

⁵For further details see <https://www.girlsnotbrides.org/where-does-it-happen> (last accessed December 17, 2019).

⁶The reform only led to a 48% reduction in registered child marriages because formal child marriage rates were decreasing in the entire country in our period of analysis for reasons unrelated to the reform. Our estimates capture the impact of the law change, above and beyond the countrywide drop in formal child marriage rates.

of age in marriage certificates.

After establishing that the reform led to a large and statistically significant reduction in formal child marriage rates, we study whether banning child marriage reduces school dropout and early motherhood, two important and detrimental consequences of early unions (Field and Ambrus, 2008; Chari et al., 2017). Since the impact of the reform could change over time, biasing our difference-in-difference estimates, we perform this analysis using an event-study specification (Goodman-Bacon, 2018; de Chaisemartin and D’Haultfoeuille, 2019). Using data on school attendance from the Mexican labor force survey and birth registry microdata, we find that the reform had no effect on school enrollment and early motherhood.^{7,8} We also find that for births where the mother is younger than 18, banning child marriage leads to a drop in the share of married mothers and an equivalent rise in the share of mothers in an informal union.⁹ This change in civil status could potentially have negative effects for young mothers and their children if girls in informal unions do not have the same legal benefits or social recognition as those that are married. We examine whether the reform has an impact on prenatal investments and newborn health outcomes, and find no effects. All in all, these findings suggest that in places where cohabitation is socially acceptable, minimum-age-of-marriage laws are ineffective at avoiding the detrimental consequences of early unions.

This paper is related to the literature studying the determinants of early marriage and the impact of policies aimed at reducing this practice. Corno et al. (2017) study how aggregate economic conditions affect child marriage rates in Sub-Saharan Africa and India, where marriage is regulated by traditional norms of either bride price or dowry. Given that marriage payments are a source of consumption smoothing, the authors find that negative shocks increase the probability that a girl

⁷In a contemporaneous working paper, Au Yong Lyn (2019) studies a similar question as this paper and reaches different results. The fertility analysis in Au Yong Lyn (2019) uses a dataset derived from birth certificates that has coverage issues towards the end of the sample, as discussed in footnote 18. Her results differ from ours perhaps in part due to these data differences.

⁸A possible explanation for the null impacts on fertility is that early unions are the consequence and not the cause of pregnancies. It turns out, however, that around half of the women who give birth before the age of 18 and were married or in an informal union at the time of delivery had entered the marriage or union before conception. We discuss this issue in detail in Section 2.1.

⁹Importantly, the sample of young mothers makes up for a big portion of the girls who were affected by the reform, as discussed in detail in Section 5.3.

is married before the age of 18 in societies with bride price, but decrease it in places with norms of dowry. [Baird et al. \(2011\)](#) study the impact of a program granting cash transfers in Malawi, and find that after two years, unconditional cash transfers reduce child marriage and delay fertility, whereas cash transfers conditional on attending secondary school have no impact. [Jensen \(2012\)](#) examines a randomized controlled trial providing three years of job recruitment services to 15-21 year old women in rural India, and finds that the treatment raises the probability of working, leads to higher investments in schooling or training, and reduces the likelihood of getting married over the three year period. [Buchmann et al. \(2018\)](#) study the impact of a randomized controlled trial in Bangladesh that provided girls with a six-month empowerment program, in-kind transfers in exchange for delaying marriage until the age of 18, or both. The authors find that financial incentives lead to a sizable reduction in the probability of being married before the age of 18, increase school enrollment, and reduce teenage childbearing. However, there is no impact of the empowerment treatment on child marriage, and no complementarities between the two treatments. Finally, [Bandiera et al. \(Forthcoming\)](#) evaluate the effects of a comprehensive two-year program providing vocational and empowerment training to adolescent girls in Uganda. The treatment increases the probability of working, and reduces the likelihood of marriage or cohabitation and teenage pregnancy.

There are two studies in this literature focusing on age-of-marriage laws. Using data from 60 countries, [Collin and Talbot \(2017\)](#) test whether there is a discontinuity in the age-of-marriage distribution at the legal minimum age, where marriage includes formal or informal unions. They find a statistically significant discontinuity at the legal age-of-marriage in around half of the cases, indicating a weak enforcement of age-of-marriage laws.¹⁰ The closest paper to ours, [Bharadwaj \(2015\)](#), studies the impact of a 1957 reform in Mississippi that increased the minimum age of marriage from 12 to 15 for women and from 14 to 17 for men, introduced parental consent requirements for individuals below the age of 18, and implemented a compulsory three-day waiting period and blood tests. Using a difference-in-differences strategy, the author compares counties

¹⁰The authors do not consider exceptions to the minimum age of marriage based on religion, customs, pregnancy, or judicial authorization, and so it is unclear whether enforcement is also low when all exceptions are considered.

in Mississippi to those in neighboring states, and finds that three years after the law change, there was a large decrease in the overall marriage rate, a drop in overall birth rates, and a rise in school enrollment rates. While cohabitation was extremely rare in the U.S. at the end of the 1950s (Lundberg et al., 2016), informal unions and unregistered marriages are relatively common nowadays.¹¹ The question of how increases in the minimum age of marriage affect child marriage rates should be revisited in a context where informal unions are common, as these could undermine the effectiveness of legal prohibitions. The main contribution of our study is that it provides evidence on the impact of banning child marriage in a setting where formal marriage is not the only option for young couples. Ours is also the first study examining the issue of child marriage in Latin America, a developing region that is currently home to almost 10% of the world's child brides (UNICEF, 2018). Reducing the incidence of child marriage in this region is especially important because despite the rapid worldwide decrease in child marriages, child marriage rates have remained constant over the last 25 years in Latin America.

The paper is organized as follows. Section 2 provides background on child marriage in Mexico, and Section 3 describes the data and provides summary statistics. Section 4 discusses our estimation strategy, and Section 5 presents our results. Section 6 discusses the implications our results, Section 7 provides evidence from several validity and robustness checks, and Section 8 concludes.

2 Child Marriage in Mexico

Child marriage is commonly defined as a union in which at least one of the parties is below the age of 18 (UNICEF, 2018), and includes formal marriage and cohabitation as if married. Throughout the paper, we will refer to formal marriages as formal or registered marriages, and to cohabitation

¹¹In the 61 developing countries that participated in the Demographic Health Survey (DHS) in 2008-2017, a third of the 15-19 year old girls who lived with their partners were not formally married. The share of girls who cohabit without being legally married is probably higher, as DHS statistics do not distinguish between registered and unregistered marriages, and marriage registration is low in many developing countries (Center for Reproductive Rights, 2013; Center for Human Rights, 2018).

as if married as informal unions. Before 2014, individuals younger than 18 could formally get married in all 32 Mexican states, albeit with some restrictions. Minors needed to be a certain age, and could only get married with the consent of their parents or guardians. The minimum age of marriage with parental consent varied across states, and by gender. For example, the threshold was set at 14 for girls and 16 for boys in the state of Aguascalientes, 16 for both sexes in Morelos, and 16 for girls and 18 for boys in Baja California Sur. Individuals who were younger than the cutoff age or those without parental consent could only get married with the authorization of a judge or the municipal mayor. A few states also allowed girls who were younger than the minimum age to get married if they were pregnant.

In December of 2014, the Federal Congress sanctioned a law defining the rights of children and adolescents. This law set the minimum age for marriage for both women and men at 18, without exception, and urged all federal entities to reform their legislation to incorporate this change. Since marriage laws are a competency of the states, it is the prerogative of state Congresses whether to adopt the reform or not.¹² As summarized in Figure 1, the adoption of the reform was gradual. By the end of 2015, only 7 states had changed their marriage laws in accordance to federal legislation. By December of 2018, the reform was adopted by 31 of the 32 Mexican states, as shown in Appendix Figure A.1.

To understand the scope of the change in legislation and its potential to reduce child marriage rates, it is important to analyze the prevalence of this practice before the reform was introduced. Figure 2 show the evolution in the incidence of child marriage for the cohorts who turned 18 before the reform was enacted. We obtained these data from the *Encuesta Nacional de la Dinámica Demográfica* (ENADID), a nationally representative demographic survey conducted in 2014 that has detailed information on individuals' relationship, schooling and fertility history. Our sample includes almost 84,000 women who were 20 to 54 years old at the time of the survey. Around 23% of respondents were formally married or in an informal union before turning 18, and this

¹²The states of Baja California Sur and Veracruz had already modified their legislation to ban child marriage earlier in 2014.

percentage is relatively constant across cohorts.¹³ Although overall child marriage rates in Mexico have not varied over the last decades, there has been a significant change in the type of union. While formal marriages accounted for approximately 75% of all child marriages in the older cohorts, as seen in Figure 2, less than a third of the child marriages of women born in the early 1990s were formal unions. Right before the minimum age of marriage was increased, approximately 7% of Mexican women got formally married before turning 18.

Despite the declining trend in formal child marriages, this practice was far from being eradicated by 2014. Using microdata from marriage certificates, Figure 3 shows the number of registered marriages in 2013 by the age of the bride, for every 1,000 girls and women of each age. Formal marriage rates were highest for women in their 20s, although child marriage was relatively frequent as well. Most child marriages had a bride aged 14-17, with the largest share going to 16 and 17 year olds, who got formally married at a rate similar to that of women in their early 30s. For every 1,000 girls ages 14 to 17, 9.19 got formally married in 2013. This amounts to 40,298 marriages in total, and accounts for almost 7% of total marriages. Since brides ages 14 to 17 had a groom that was 4.62 years older on average, there were very few marriages with a groom below the age of 18, as shown in Appendix Figure A.2.

2.1 Comparing Child Brides to Non-Child Brides

Having established that child marriage was relatively common before the reform, we now provide some descriptive statistics on the baseline characteristics of women who were child brides and women who were not. To the best of our knowledge, there is no longitudinal survey in Mexico that follows women from childhood to marriage. We rely on the *Encuesta Demográfica Retrospectiva* (EDER), a nationally representative demographic survey conducted in 2017. This survey was designed to collect retrospective information on a wide array of characteristics related to education, civil status, childhood household characteristics, and parents' education and occupation, among

¹³The survey defines an informal union (*unión libre*) as a relationship in which the couple cohabitates without having legally formalized the union.

others. To minimize measurement error from long-term recall, we limit our sample to the 4,438 women who were 20-30 in 2013 (i.e., 24-34 at the time of the survey). We then divide them into three groups according to their civil status in the period before age 18. We compare women who were formally married, in an informal union without getting married, and single before the age of 18. We then compute the average characteristics of each group using the appropriate sampling weights.

Table 1 shows that on average, women who were formally married or in an informal union before the age of 18 come from families of a lower socioeconomic status than women who were single. For instance, 16% of formally married women and 18% of those in an informal union belong to an indigenous group, as opposed to only 9% of single women. The parents of child brides had a substantially lower educational attainment than the parents of those who were single. The parents of both types of child brides were 14 percentage points less likely to have more than a primary school education than the parents of women who were single, and were substantially more likely to work in agriculture. The gap in the baseline socioeconomic status of these groups of women is particularly evident in terms of the ownership of durable assets and housing quality at the time the women were 14 years old. Importantly, 87% of the formal child marriages and informal unions in the sample started at age 15 or higher, and so these characteristics are mostly measured before the child marriage. By the time they were 14, the educational trajectories of these women had already started to diverge. In particular, 74% and 71% of those who eventually got formally married or entered an informal union were attending school, whereas 90% of the women who remained single before age 18 attended school. The girls who subsequently became child brides were significantly less likely to be attending middle school (the appropriate level for their age), and had a higher likelihood to be working and performing domestic work at home when they were 14.

While the aforementioned statistics show some baseline differences between women who were child brides and those who were not, these differences are amplified with time. Appendix Figure A.3 shows the maximum educational attainment for women of different cohorts, splitting

the sample by whether they were child brides or not. We obtained these data from the ENADID survey, and use the same sample as the one used to analyze the evolution of child marriage.¹⁴ In the cohorts born in the early 1990s, only 15% of the women who had been child brides (either through a formal marriage or informal union) have a secondary school degree or more, compared to 65% of the women who were not child brides.¹⁵ There are stark differences in the rates of early motherhood in both groups as well. As shown in Appendix Figure A.4, 88% of the women who were married or in an informal union before the age of 18 gave birth before turning 20, whereas only 16% of the women who were not child brides had a child before this age. This does not necessarily imply that child marriage leads to early childbearing. For women who got pregnant at a very young age (i.e., before 18), child marriage could be the consequence of early motherhood. If girls get married or form an informal union *after* getting pregnant, policies that prevent early unions may not reduce early fertility. It turns out, however, that more than half of the women who gave birth before the age of 18 were already cohabitating with their partner before the conception of their first child.

3 Data

To calculate the number of formal marriages with a bride below the age of 18, we relied on marriage certificate microdata from 2007-2018 provided by INEGI, the Mexican statistical institute. This database contains all the legally registered marriages conducted in Mexico, and specifies the date and state in which the marriage took place, the age of the bride and groom, their state of residence, level of education, and occupation. During this period there were almost 7 million marriages, of

¹⁴Although some of this data is also available in EDER, we use ENADID data due to its larger sample size. While EDER has information on 4,438 women ages 20-30 in 2013, there are almost 27 thousand women of these ages in ENADID. We do not use the ENADID survey to analyze baseline differences between these two groups, as it does not have retrospective information on life conditions during childhood.

¹⁵Compulsory schooling in Mexico is composed of six years of primary school and three years of middle school, known as *secundaria*. Secondary school (*bachillerato* or *preparatoria*) is not mandatory, and lasts for three years. The women born in the early 1990s were 20-24 at the time of the interview. Although some of them might still finish secondary school, it is worth noting that only 6% of those who had not finished high school were still studying at the time of the survey.

which 6.4% had a bride younger than 18 years old.¹⁶ Since most registered child marriages in Mexico have a bride that is younger than 18 years old but a groom that is 18 or older, we focus on girls.¹⁷ Using these data, we constructed a monthly panel for every state with the number of formal marriages with a bride ages 14-17. Even though there are marriages in which the bride is 12 or 13, they account for less than 0.6% of the child marriages in our sample. To abstract from potential spillovers to states in which child marriage was still legal, we use the brides' state of residence. In Section 7.1 we show that our results are not sensitive to this choice.

We obtained data on live births in 2008-2017 from the birth registry microdata published by the Ministry of Health. These data are derived from SINAC, a system created at the end of 2007 to obtain timely and detailed birth data. Hospital staff input information on the mother and newborn into the system on the day of the birth, and provide the parents with a document generated by SINAC that is required for obtaining their child's birth certificate later on.¹⁸ This dataset reports the date and state in which the birth occurred, the length of gestation, the child's birth order, the number and timing of prenatal care visits, the newborn's birthweight, and the mother's birth date, state of residence, and civil status. There were almost 22 million live births in 2008-2017, of which 7.5% had a mother below the age of 18. Using these data, we constructed a monthly panel for every state with the number of live births, using the mothers' state of residence. Since the database has information on the date of birth and the length of gestation, we use the date of conception, when fertility decisions are made, and restrict our sample to women who were 14 to 17 years old at the

¹⁶The age of the bride is missing in 0.28% of observations, which we drop from our sample.

¹⁷Almost 94% of the registered child marriages in 2007-2018 had a bride below the age of 18, whereas only 19% had an underage groom.

¹⁸For births taking place outside of a medical unit, the mother is required to attend a health institution shortly after the birth in order to obtain this documentation. These account for a small share of births, since the vast majority of births are overseen by a doctor. While coverage is not universal, SINAC registered approximately 90% of births in its first years, and has a 95% coverage since 2013. Another database that could be used in this analysis is the one compiled by INEGI using microdata from birth certificates. However, these data are not suitable to calculate birth rates in recent years, because a sizable share of parents take some time to obtain their child's birth certificate. As only 80% of children obtain their birth certificate before their first birthday, the recommendation is to wait 4 years in order to have sufficiently high coverage. Further details on the coverage of both databases can be found in [Hernández et al. \(2015\)](#).

moment of conception.¹⁹ We drop 0.34% of observations, for which the mother's age is missing. Since we have information on births that occurred in 2008-2017, but we conduct our analysis at the moment of conception, our sample is composed of all births conceived between January 2008 and March of 2017 by women who were 14 to 17 years old at the moment of conception.

To calculate the formal child marriage rate and the fertility rate of young mothers we also need information on the population of each state, by age and gender. We obtained biannual population data for 2007-2018 from the *Consejo Nacional de Poblacin* (CONAPO).²⁰ Following standard definitions, we define the monthly child marriage rate of each state as the number of formal marriages with a bride ages 14-17, for every 1,000 girls of this age group living in this state. Similarly, we define the monthly rate of early motherhood as the number of live births conceived in that month by a mother ages 14-17, for every 1,000 girls of this age living in that state.

To analyze school enrollment, we relied on the 2007-2018 waves of the *Encuesta Nacional de Ocupacin y Empleo* (ENOE), a quarterly labor force survey with self-reported information on educational attainment and school attendance. We limit our sample to girls who were 14-17 years old at the moment of the survey. On average, each survey round interviews around 15 thousand girls in this age group. We also obtain time-varying control variables from several sources. We created a panel with the political party of the governor in all states from 2007 to 2018 using data from miscellaneous sources, to account for the fact that the enactment of the child marriage prohibition might depend on the party in power. We also put together a monthly panel with several economic indicators at the state level. The unemployment rate was obtained from INEGI, the poverty rate and average income of employed individuals from CONEVAL, and the female labor

¹⁹Another advantage of the SINAC database is that unlike the data from birth certificates, it reports gestation length, allowing us to precisely pin down the month of conception. The length of gestation is missing in 0.4% of births, for which we assume a gestation of 40 weeks. The SINAC dataset also has detailed information on prenatal investments and health outcomes which are absent from the dataset derived from birth certificates.

²⁰CONAPO compiles population counts for each state at the start and middle of each year, by gender and age. These statistics are derived from the decennial censuses and population counts taking place between censuses. Statistics for 2016 onwards are projected. We calculated the monthly population for each age group and gender using linear interpolation.

force participation of women ages 20 and over from ENOE, the Mexican labor force survey.²¹ We also obtained the total population from CONAPO.

Our main independent variable throughout the analysis is a dummy for whether formal child marriage was prohibited in a given state, month and year.²² We went through the civil and family codes of each state to examine whether individuals below the age of 18 could get legally married by December 2018, the end of our study period. We only consider that child marriage is banned if the legislation allows no exceptions. For the 31 federal entities that banned child marriage, we obtained the date in which the articles that establish the minimum age for marriage were modified. A list of these dates and the corresponding legislation is provided in Appendix Table A.1.

4 Estimation Strategy

We use a two-way fixed effects difference in differences model, which exploits variation in the enactment of laws banning child marriage across states and over time. To estimate the impact of the reform on registered child marriages, we use the following specification:

$$Y_{st} = \beta_0 + \beta_1 \text{Child Marriage Banned}_{st} + X_{st}\rho + \gamma_s + \gamma_t + U_{st}, \quad (1)$$

where Y_{st} is the number of marriages in month-year t with a bride ages 14 to 17 living in state s , for every 1,000 girls of this age. We also estimate separate regressions for each age between 14 and 17. Our main explanatory variable, $\text{Child Marriage Banned}_{st}$, is a dummy variable equal to 1 if individuals below the age of 18 were not allowed to get married in state s in month-year t , and 0 if they were. X_{st} is a set of state-specific controls measured in period t , namely the unemployment rate, poverty rate, labor force participation of females ages 20 and above, average income of employed individuals, population (in ln), and dummy variables for whether the state

²¹The unemployment rate, poverty rate and average income of employed individuals were also calculated by INEGI and CONEVAL using data from ENOE. Since ENOE is a quarterly survey, we assume the same value within the months of each quarter.

²²In the case of our school enrollment regressions, this regressor varies at the quarterly level.

governor belongs to PRI, PAN, PRD or another political party. We include state fixed effects (γ_s) to control for the time-invariant characteristics of states that affect marriage decisions and may also be correlated with the occurrence and timing of the child marriage prohibition. The month-year fixed effects (γ_t) control for the trend and seasonality in child marriages common to all states. Finally, U_{st} are the unobserved factors affecting child marriage rates in state s and period t , such as religious preferences and social attitudes. We allow for arbitrary within-state correlation of the errors by clustering our standard errors at the state level (Bertrand et al., 2004). Since we only have 32 clusters, we report wild-bootstrap p-values following Cameron et al. (2008).

As depicted in Figure 4, there was substantial heterogeneity in the formal child marriage rate across states before the national push towards banning this practice. Importantly, our state fixed effects γ_s control for these and any other time-invariant differences across states. Our assumption for identifying the causal effect of banning child marriage is that conditional on state fixed effects, time fixed effects, and controls, the timing of the child marriage ban is uncorrelated with the error term. This assumption would be violated if the first states to ban child marriage were those in which child marriage rates were declining at a lower or higher rate. This could occur, for instance, if the prohibition of child marriage was driven by changes in religious preferences or social attitudes. We report the results of several tests validating our identification strategy in Sections 5 and 7. Another validity threat is the possibility that the impact of banning child marriage changes with time. The effect of the reform on formal child marriage rates could vary over time if there is a lag between the enactment of the law and its implementation. Perhaps more importantly, the impact of the reform on early motherhood and school enrollment may take some time to materialize. Goodman-Bacon (2018) and de Chaisemartin and D'Haultfoeuille (2019) show that when treatment effects are dynamic, two-way fixed effects models lead to biased estimates, and event-study specifications are preferred instead. For this reason, most of our estimations are conducted using the following two-way fixed effects event-study specification, which also allows to test for differential pre-trends:

$$\begin{aligned}
Y_{st} = & \alpha + \sum_{j=-K}^{-2} \beta_j \textit{Child Marriage Banned}_{s(t+j)} + \\
& + \sum_{j=0}^L \beta_j \textit{Child Marriage Banned}_{s(t+j)} + X_{st}\rho + \gamma_s + \gamma_t + U_{st}
\end{aligned} \tag{2}$$

, where $\textit{Child Marriage Banned}_{s(t+j)}$ is a dummy variable taking the value of 1 j months relative to the month in which the reform was enacted in state s , in states that banned child marriage, and 0 in all other months and states. Following common practice, we exclude $\textit{Child Marriage Banned}_{s(t-1)}$, thus normalizing relative to the month before the reform was put in place. Since some states implemented the reform towards the end of our sample window, as can be seen in Appendix Figure A.1, the estimates of the longer lags are only estimated using early-adopters, and could be contaminated by sample composition changes. We discuss this issue when interpreting the results from these estimations in Section 5. The dependent variable in our fertility regressions is the number of first live births conceived in month-year t by a mother ages 14-17 living in state s , for every 1,000 girls of this age. In our main specification we focus on first births instead of all births because if any, the reform should have an impact on the extensive margin. Approximately 82% of the births in our sample with a mother younger than 18 at the time of conception are first births. We also report results using all births. Taking advantage of the fact that the birth registration data reports the length of gestation, we conduct our analysis at the moment of conception, when fertility decisions are taken, rather than the moment of birth.

We also study the impact of the reform on school enrollment rates using a similar event-study specification. Unlike our analysis for registered marriages and fertility, we have a repeated (quarterly) cross-section of individual observations. We thus run the following regression:

$$\begin{aligned}
Y_{ist} = & \alpha + \sum_{j=-K}^{-2} \beta_i \textit{Child Marriage Banned}_{s(t+j)} + \\
& + \sum_{j=0}^L \beta_j \textit{Child Marriage Banned}_{s(t+j)} + X_{ist}\rho + \gamma_s + \gamma_t + U_{ist}
\end{aligned} \tag{3}$$

, where Y_{ist} is a dummy variable equal to 1 if individual i living in state s is enrolled in school or finished high school by quarter-year t . We perform this analysis for girls who are 14 to 17 years old at the time of the survey. Our main regressors, $Child\ Marriage\ Banned_{s(t+j)}$, are dummy variables equal to 1 j quarters relative to the quarter in which child marriage was banned in state s . Our vector of controls X_{ist} includes the standard controls, as well as dummies for age and town size.

5 Results

5.1 Formal Child Marriages

As shown in Table 2, raising the minimum age of marriage leads to a large and statistically significant reduction in the incidence of formal child marriages. In our preferred specification displayed in column 4, we control for month-year fixed effects, state fixed effects, and time-varying state characteristics, and find that outlawing child marriage results in 0.344 less formal marriages per month per 1,000 girls of ages 14-17, a 48% reduction over the mean. The estimate is significant at the 1% based on standard errors clustered by state (in parentheses) and wild bootstrap p-values (in brackets). Column 5 reports the results of a regression weighting by the female population ages 14 to 17, and the results are almost unchanged. As child marriage rates were dropping in all states before the reform, the legislation change does not eliminate child marriages.²³ Back of the envelope calculations reveal that approximately 51 thousand formal child marriages were averted due to the law change. We also find that the reduction in registered child marriages is entirely driven by marriages with brides ages 16 and 17, as can be seen in Table 3. This is consistent with the much lower rate of child marriage for 14 and 15 year olds in the pre-treatment period, partly because many states required the authorization of a judge or mayor to get married at this age.

To understand the timing of the effects we use the event-study specification in equation (2).

²³Furthermore, some couples residing in states that banned child marriages took the matter to the courts, and were allowed to get married with the ruling of the judge (García Sánchez, 2019).

We focus on the formal child marriage rate of 16-17 year olds, the age groups for which the reform had an impact.²⁴ Figure 5 plots the estimated coefficients and their 95% confidence intervals based on wild-bootstrap clustered standard errors for each month in the year before child marriage was banned, and 24 months after. We only report the estimates for 24 lags because at the end of our sample period there were few states for which more than 24 months had passed since the reform.²⁵ Even with this restriction, the coefficient for the longest lag is estimated using only 21 of the 31 states that enacted the reform, and so the estimates for the longest lags must be taken with caution. Figure 5 points to the absence of an implementation lag, as the drop in child marriage rates is realized right when the ban occurs, and persists at similar levels for the following two years. The impact in month 0 (i.e., the month in which the law was changed) is lower than in following months because the law changes were often conducted towards the end of the month, as can be seen in Appendix Table A.1. Importantly, the states that banned child marriage do not exhibit differential pre-trends in formal child marriage rates up to twelve months before the prohibition, as the lead coefficients are small and statistically indistinguishable from zero. We also report the results of these estimates in Table 4. For ease of interpretation, we grouped the estimates into 4-month periods.

After establishing that banning child marriage leads to a reduction in the rate of registered marriages with 16 and 17 year old brides, we examine if the affected cohorts get formally married once they turn 18, or delay marriage even longer. If the 16 and 17 year old girls who would have gotten married in the absence of the prohibition get married once they turn 18, we should see an increase in the marriage rate of 18 year olds shortly after the ban (i.e., once the affected cohorts started turning 18). Given the dynamic nature of these potential effects, the most appropriate specification is an event-study. As can be seen in Appendix Figure A.6, the marriage rate of 18 year olds does not increase after the reform, indicating that most couples postpone marriage even longer, or dissolve before they reach the minimum age of marriage.

²⁴We also report the event-study estimates with the formal child marriage rate of 14-17 year olds as the dependent variable in Appendix Figure A.5.

²⁵We bin longer lags together, and estimate them using a single dummy variable which is not reported in the plot.

5.2 School Enrollment and Early Motherhood

Figure 6 presents the event-study estimates of the impact of banning child marriage on school enrollment for 14 to 17 year-old girls. We only report the estimates for the first 7 quarters after the reform, because there are few states with longer lags. While one could expect the reduction in formal child marriages to translate into an increase in school enrollment rates, we find negative but small and mostly insignificant impacts of banning child marriage on school attendance. These null results persist seven quarters after the reform. In particular, we can reject an increase in enrollment rates larger than 1 percentage point. We observe similar impacts if we focus on 16 to 17 year-olds, as shown in Figure A.7, or if we separately analyze girls in each age group, as shown in Table 5. It should be noted, however, that the coefficient for the longest lag is estimated using 24 of the 31 states that enacted the reform, and so these estimates must be taken with caution due to differences in sample composition. Importantly, there are no differential trends.

The impact of banning child marriage on fertility is *a priori* unclear. If social norms discourage some girls who are not legally married from having children, the prohibition of child marriage could lead to a reduction in birth rates. However, girls affected by the ban could conceive out of wedlock or in an informal union, thus reducing or even eliminating the effect of the reform on early fertility. Consistent with the latter, Figure 7 shows that the reform did not reduce the fertility rate of 16-17 year old girls, the age group for which the reform had an impact on formal marriage rates. In particular, we can reject a reduction larger than 0.2 births per 1,000 girls, a 4% reduction over the mean. We also report the results of these estimates in Table 6, with estimates grouped into 4-month periods for ease of interpretation. We report the estimates for 11 lags because by March of 2017 (the end of our sample period), there were few states for which more than 11 months had passed since the reform. Even with this restriction, the coefficient for the longest lag is estimated using only 17 of the 24 states that enacted the reform before March 2017. Importantly, there are no differential pre-trends in fertility rates. The estimates for the longest lags must therefore be taken with caution. If we focus on 14-17 year olds (Appendix Figure A.8) or on all births instead of just first births (Appendix Table A.2), we do not find an effect either.

5.3 Informal Unions

A possible reason for why the reform has no impact on school attendance and early motherhood is that the decrease in formal marriages is offset by an increase in informal unions. This is hard to examine empirically as there is no register of informal unions, and young girls have incentives to underreport being married or in an informal union when they are surveyed. We take advantage of the fact that the birth registration microdata has information on the self-reported civil status of the mother at the moment of birth, and that women who are already having a child at a young age have less incentives to lie about their civil status. Importantly, 62% of women who were child brides prior to the reform had their first child before the age of 18 (Appendix Figure A.4), and so the sample of young mothers makes up for a big portion of the women who were affected by the reform. Since the increase in the minimum-age-of-marriage has no impact on early motherhood rates, we can explore whether the reform led to an increase in informal unions using the sample of girls who were mothers prior to the age of 18.

Using an event-study estimation, we examine the impact of banning child marriage on the share of 16-17 year old mothers who were formally married or in an informal union. Since civil status is measured at the moment of birth, we perform this analysis using the month of birth instead of the month of conception. Our analysis therefore includes all births that took place between January 2008 and December of 2017. Given that our sample is extended by 9 months, we report the estimates for 20 lags (instead of 11 lags as in the fertility estimations). By December of 2017, there were few states for which more than 20 months had passed since the reform. In fact, the coefficient for the longest lag is estimated using only 20 of the 26 states that enacted the reform by December of 2017, so still the estimates for the longest lags must be taken with caution. The results are presented in Figure 8 and Table 7.

Consistent with our results on formal child marriage rates, we find that eliminating all exceptions to the minimum age of marriage gradually reduces the share of 16-17 year old mothers

who are formally married.²⁶ This reduction in the share of married mothers is completely counteracted by an increase in the share of mothers who are in an informal union.²⁷ Importantly, there are no differential pre-trends in the civil status of mothers, substantiating the causal interpretation of our estimates. Taken together, these results suggest that the null impacts on early fertility can be explained by girls substituting formal marriages for informal unions after the prohibition.

6 Implications

The change in civil status that we observe for young mothers could potentially have negative effects for them and their children. One way to explore this hypothesis is to examine whether the increase in the minimum age of marriage has an impact on prenatal investments and newborn health outcomes. There are several reasons why pregnant women in informal unions may adopt less healthy behaviors than married women, translating into worse health outcomes for their children at birth. Informal unions in Mexico are only protected by law when a man and a woman, without legal impediments to get married, cohabit for at least two years or have a child together.²⁸ Since informal unions are only protected by law when there is no legal impediment for marriage, the rise in the minimum age of marriage prevents couples with underage individuals from being legally recognized. This lack of legal recognition may discourage fathers from being involved during pregnancy, and thereby promote and monitor the engagement in healthy behaviors by the mother. A lower involvement by fathers could result in women investing less in prenatal care. Even if informal unions were legally recognized, women who are cohabitating may not have the same levels of social support as married women, potentially affecting their perception about the wantedness of the pregnancy (Kane, 2016). These perceptions could influence birth outcomes either directly or

²⁶We find similar results if we focus on girls who were 14-17 at the time of birth (Appendix Figure A.9), or if we examine all births instead of first births (Appendix Table A.3).

²⁷We also find a small decrease in the share of single mothers one year after the reform. We believe this could be driven by a destigmatization of informal unions.

²⁸Informal unions (legally known as *concubinato*) are defined by the civil and family codes of the different Mexican states. For instance, in article 313 bis of the Civil Code of the state of Aguascalientes or article 297 of the Civil Code of the state of Puebla.

indirectly via other protective behaviors (Weller et al., 1987; Kroelinger and Oths, 2000; Shah et al., 2011, 2014).

Appendix Table A.4 shows that prior to the reform, young mothers who were formally married invested more in prenatal care, on average, than mothers of the same age with a different civil status. For instance, 74% of the girls that had their first child at ages 14-17 and were married received their first prenatal visit during the first trimester of pregnancy, as opposed to only 70% and 61% of the mothers that were in informal unions and single. Married mothers attended 7.1 prenatal visits on average during their pregnancy, compared with 6.5 and 6.2 visits by mothers that remained in informal unions or single. Importantly, these disparities are not driven by age differences, as very similar gaps emerge when we restrict the sample to mothers that had their first child between the ages of 16 and 17. It should be noted, however, that there is less of a gap in infant health for children from married and cohabitant mothers. As these differences (or lack thereof) could be driven by selection factors, a more rigorous analysis is needed.

Using an event-study specification, we estimate the impact of banning child marriage on the investments in prenatal care of 16-17 year old mothers and the health outcomes of their offspring at birth. We consider that a girl can be affected by the reform up until the moment of conception, since the potential protection effect of marriage most likely occurs during pregnancy (Kane, 2016). We present the results in Table 8, where the estimates are grouped into 4-month periods for ease of interpretation. We find that the reform did not modify the prenatal investment of mothers that had their first child at ages 16-17. In particular, we do not find an increase in the probability of receiving prenatal care or attending their first prenatal visit during the first trimester of pregnancy. There is no impact either on the number of prenatal visits, or on the likelihood of having a cesarean delivery. Consistent with the null impacts on prenatal investments, we find no effect either on newborn health. We can reject an increase larger than 0.49 percentage points in the probability of having a first birth with low birth weight, and an increase larger than 0.69 percentage points in the probability of having a premature baby. Importantly, there are no differential trends. We do not find an effect either if we focus on 14-17 year olds (Appendix Table A.5) or allow for the reform

to have an impact up until the moment of birth, instead of conception (Appendix Table A.6).

Although we do not observe any short-term impacts on newborn health, this shift in civil status may have medium and long-term effects. As we show in Section 5.1, the girls who were affected by the reform do not get legally married once they turn 18. This could be a result of the dissolution of these unions, as informal unions are easier to terminate than marriages. This hypothesis is supported by the findings of a previous literature that shows that when marriages are easier to terminate, through unilateral divorce, there is an increase in the likelihood that a relationship with domestic violence ends (Stevenson and Wolfers, 2006). The dissolution of early unions could potentially have positive effects on women's welfare, particularly when the quality of the match is not high. Alternatively, couples could decide to postpone marriage even longer, or not get married at all. Substituting marriage for informal unions could be beneficial if it increases the bargaining power of women and decreases spousal violence within couples that stay together (Brassiolo, 2016), or detrimental if domestic violence is used to prevent women from exiting the relationship (Garcia-Ramos, 2019). On the other hand, unions that are easier to dissolve could lead to lower incentives for couples to invest in the marriage-specific capital (Stevenson, 2007).²⁹ Furthermore, individuals in informal unions do not have the same rights as those that are formally married. From a legal standpoint, marriage and informal unions are similar but not equivalent institutions. Informal unions generate obligations and rights for the individuals only while the union lasts. Similarly to married couples, partners under informal unions are entitled to life insurance, inheritance, social security coverage, or maternal benefits.³⁰ Marriage, on the other hand, generates obligations and rights even after the divorce, for example allowing one of the spouses to claim a pension from the other spouse, something that does not happen in the case of an informal union. As the recent enactment of the laws raising the minimum age of marriage do not allow us to explore this further, we leave this for future research.

²⁹Stevenson (2007) shows that couples that could potentially have access to unilateral divorce are 10% less likely to support a spouse through school, 5% more likely to have a wife in the labor force and 6% less likely to have a child.

³⁰More information about the different rights and obligations that spouses and partners under informal unions have can be found in the Mexican Social Security Law, and the civil and family codes of the different Mexican states.

7 Validity Checks

7.1 Accuracy of Marriage Certificate Data

[Blank et al. \(2009\)](#) show that using marriage certificate data to study the impact of age-of-marriage laws can lead to biased estimates for two reasons. First, underage individuals could potentially travel to states where child marriage is permitted and get married there. Since our marriage certificate data has information on the state of occurrence of the marriage and the state of residence of the bride and groom, we can examine whether this issue is likely to bias our estimates. Only 2% of the child marriages in our period of analysis took place in a state that does not coincide with the bride’s or groom’s state of residence, leaving little room for bias from spillovers. As shown in Panel A of Appendix Table [A.7](#), the magnitude and statistical significance of our estimates is almost unaffected if we conduct our analysis using the state in which the marriage took place instead of the bride’s state of residence.³¹ The second concern raised by the findings of [Blank et al. \(2009\)](#) is that underage individuals can still marry in their state of residence by lying about their age. The possibility that young people lie about their age to get around the child marriage prohibition is less of a concern in our setting, as state laws require individuals to present their birth certificates to get married.³² If underage brides were lying about their age as a response to the ban in child marriages, we should see a rise in the marriage rate for 18 year olds immediately after the reform. As we show in Appendix Figure [A.6](#), this is not the case.

7.2 Unobservable Confounders

As discussed in Section [4](#), our assumption for identifying the causal effect of banning child marriage is that conditional on state fixed effects, month-year fixed effects, and controls, there are no time-varying state-specific factors correlated with the ban in child marriage and our outcome

³¹We also redo this analysis focusing on the groom’s state of residence, as the bride and groom reside in different states in 5% of the child marriages in our sample. As can be seen in Panel B of Appendix Table [A.7](#), our coefficients are almost identical to our baseline specification which uses the state of residence of the bride.

³²The evidence from [Blank et al. \(2009\)](#) is from the U.S. in the 1950s, when documentary evidence of proof of age was not generally required to get married.

variables. One potential source of bias is that child marriage prohibitions could be driven by a state-specific decline in the value placed on marriage. If that were the case, we should also observe a drop in the marriage rates of older women not affected by the ban. However, as can be seen in Appendix Table A.8 and Appendix Figures A.10-A.11, banning child marriage has no impact on the marriage rates and share of married mothers for women of other ages. In the case of fertility, our null impacts could be driven by unobservable determinants of fertility that correlate with the timing of the child marriage ban. For example, states might have decreased the funding for contraception programs, leading to higher childbearing rates that counteract a reduction in fertility resulting from the reform. However, as shown in Appendix Figures A.12-A.13, the ban in child marriage is not correlated with changes in the fertility rates of women in other age groups, further corroborating our findings.

8 Conclusions

We examine the impact of increasing the minimum age of marriage on child marriage rates, school enrollment, and early fertility in Mexico. Using microdata derived from marriage certificates, we find that banning child marriage leads to a large and statistically significant reduction in the number of registered child marriages. However, the reform does not reduce the dropout or fertility rates of the affected cohorts. Using data on the civil status of mothers reported in birth registration data, we find that the reduction in the share of married mothers caused by the child marriage ban is counteracted by an equivalent rise in the share of young mothers in an informal union. This change in civil status could potentially have negative effects if girls in informal unions do not have the same legal benefits or social recognition as those that are married. However, we do not find any effects on prenatal investments or newborn health. Even though we do not find negative short-run consequences, the medium to long-term impacts are unclear. As the reform was recently enacted, we will explore this in future research. These results suggest that in places where cohabitation is a socially acceptable alternative to formal marriage, raising the minimum age of marriage is not

enough to reduce child marriage rates, or prevent its detrimental consequences.

The findings of this paper are especially relevant for other countries in Latin America and the Caribbean, where patterns of cohabitation are similar (Esteve et al., 2016), and child marriage and early fertility rates are comparable to those in Mexico, as shown in Appendix Figure A.14. One option for policymakers in these contexts is to modify age-of-consent laws to make informal child marriages illegal as well. Alternatively, recent findings from Malawi (Baird et al., 2011), India (Jensen, 2012), Bangladesh (Buchmann et al., 2018), and Uganda (Bandiera et al., Forthcoming) show that policies providing young girls with economic opportunities or direct incentives to delay marriage may be effective at reducing child marriage rates. Future research should corroborate whether these findings also generalize to other regions, where the drivers of child marriage may differ.

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Figure 1: Timing of Adoption of the Child Marriage Ban

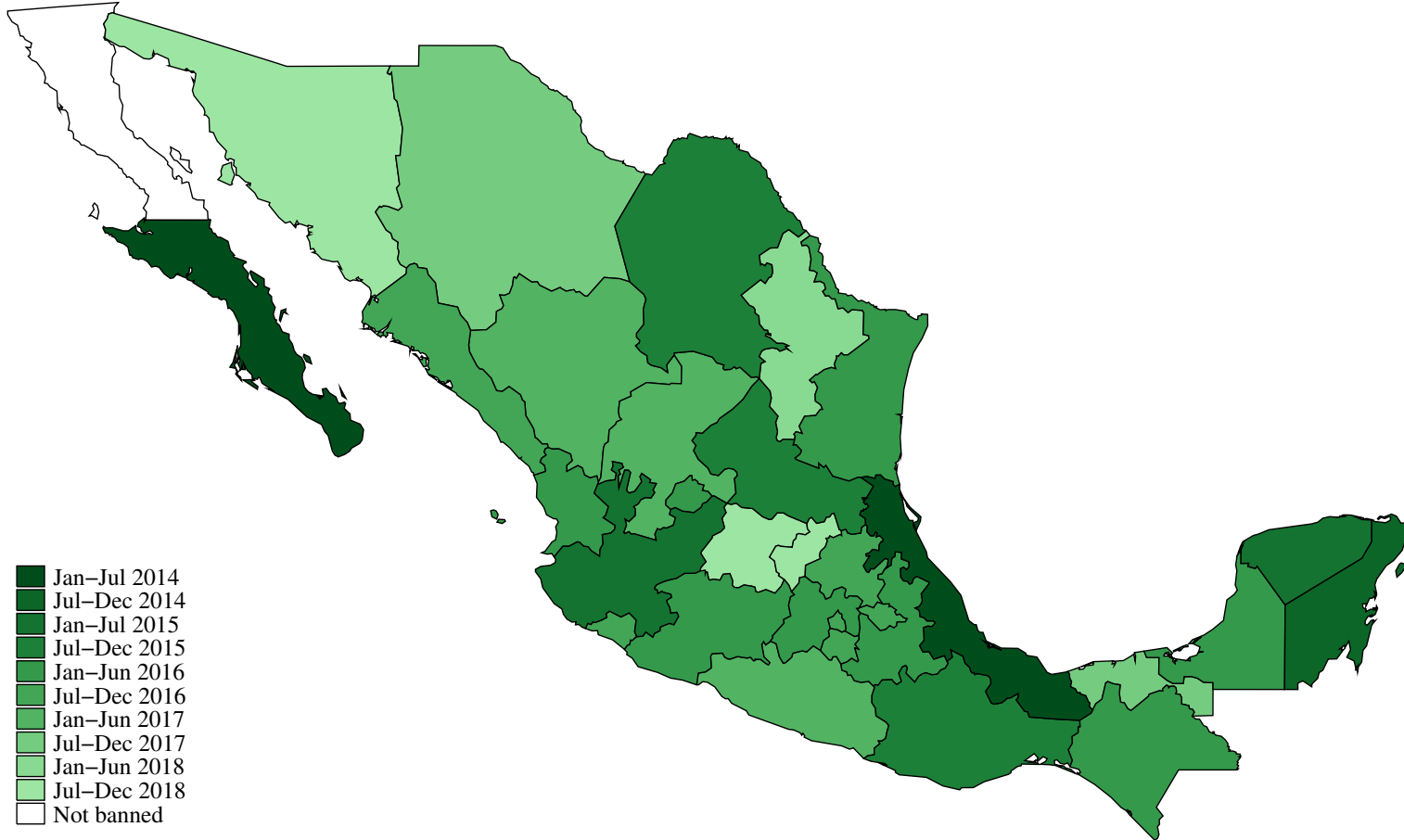
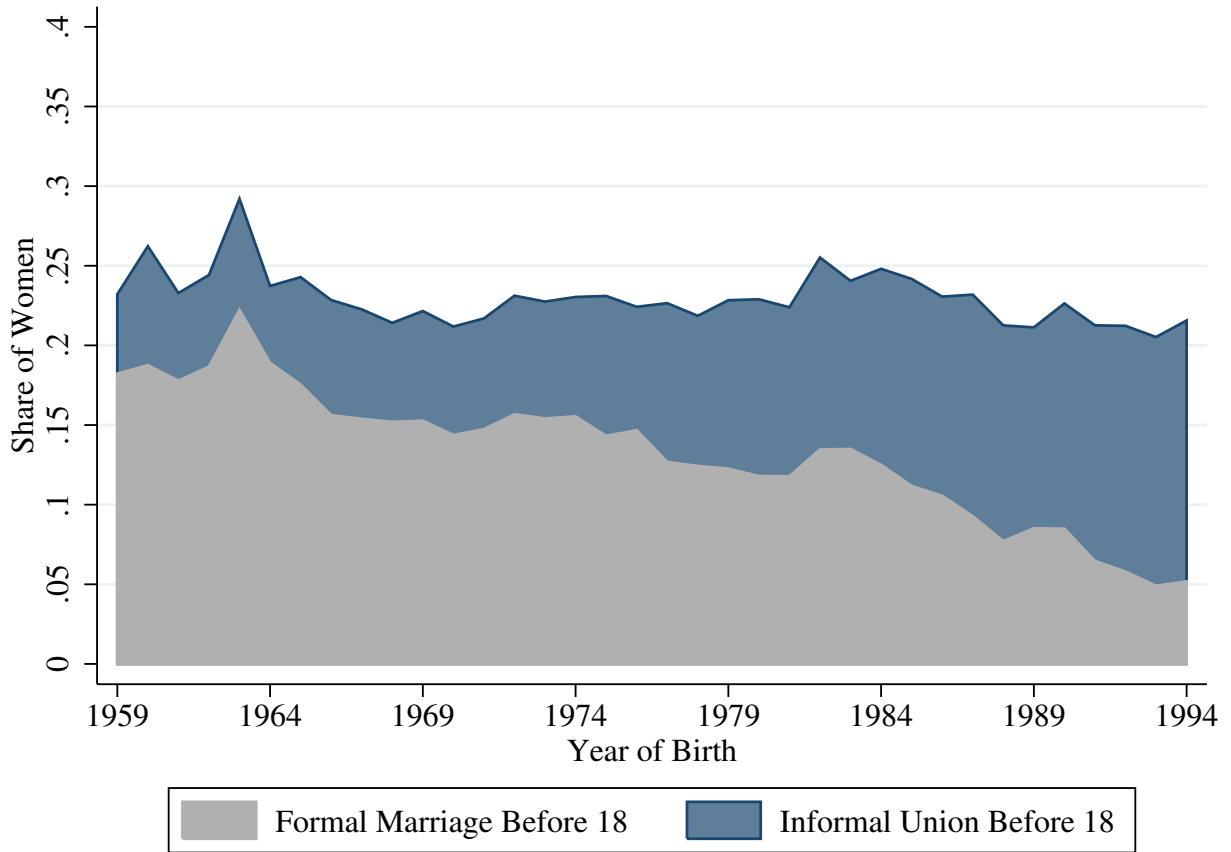
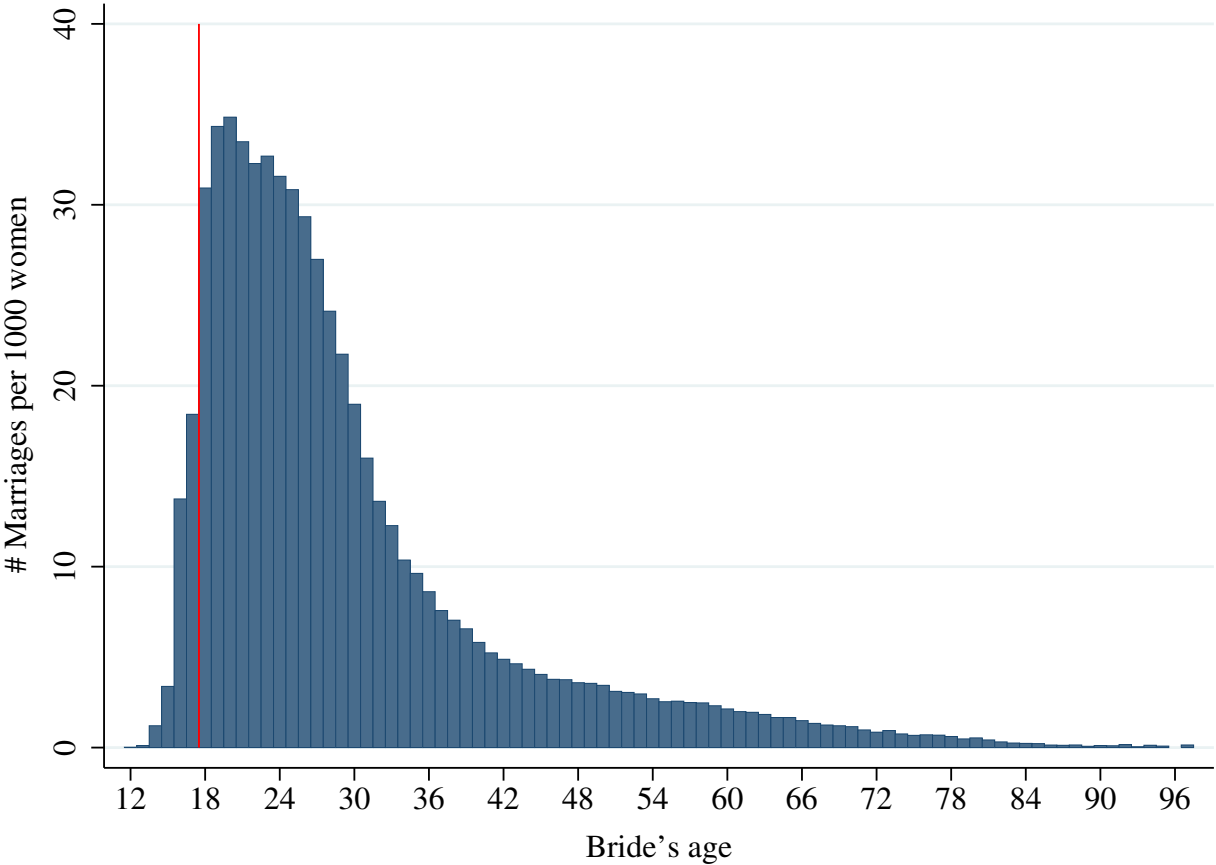


Figure 2: Evolution in the Share of Women who were Child Brides



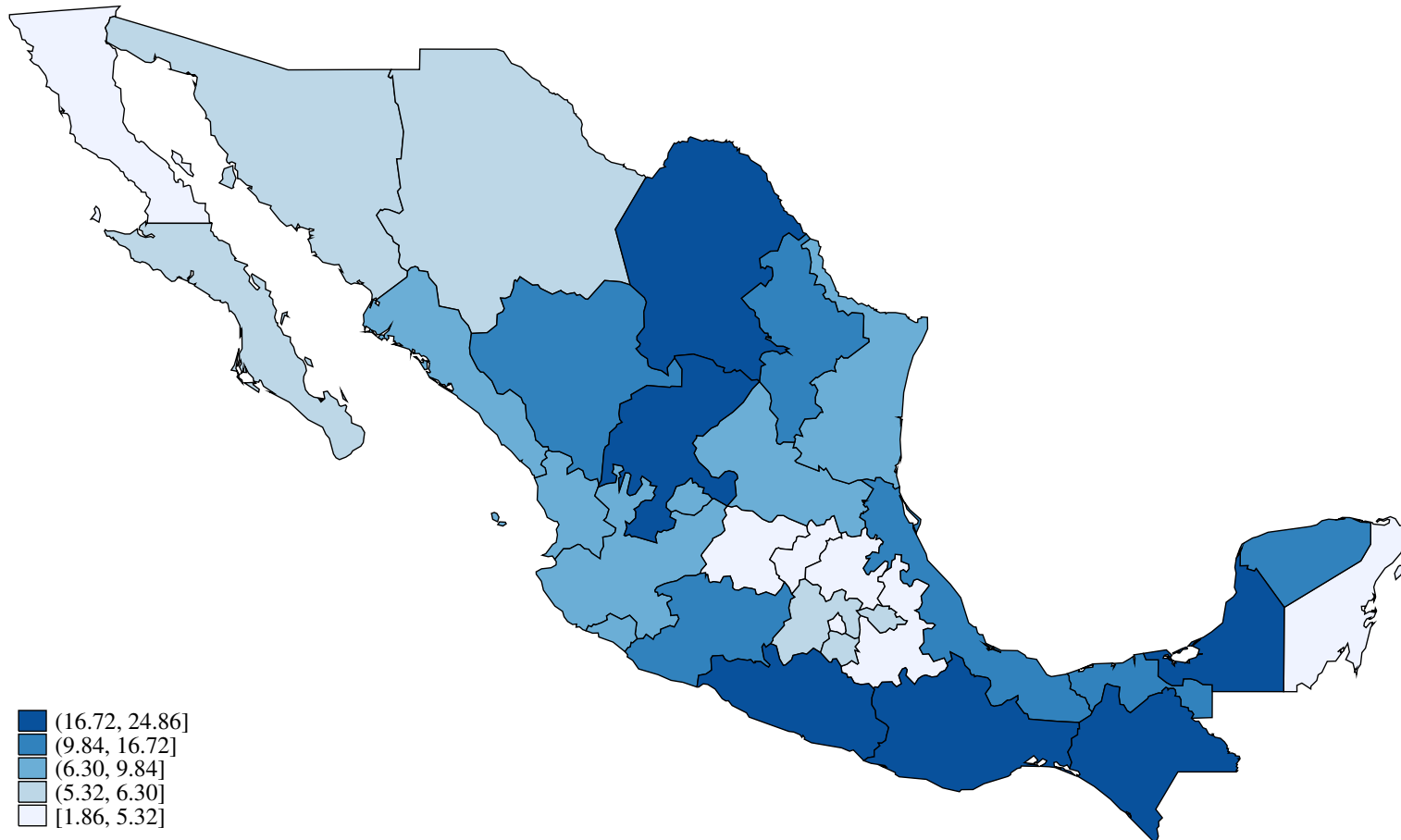
Notes: This graph depicts the share of women who were formally married and in an informal union before the age of 18, by their birth year. These two categories are mutually exclusive. Women in an informal union are those who had an informal union before the age of 18 but did not get formally married by this age. The source of these data is the *Encuesta Nacional de la Dinámica Demográfica* (ENADID), a demographic survey conducted in 2014. We took the sample of 83,554 women who were 20-54 at the time of the survey, and computed the share of women in each category using sampling weights.

Figure 3: Number of Registered Marriages per 1,000 Girls and Women of Each Age in 2013



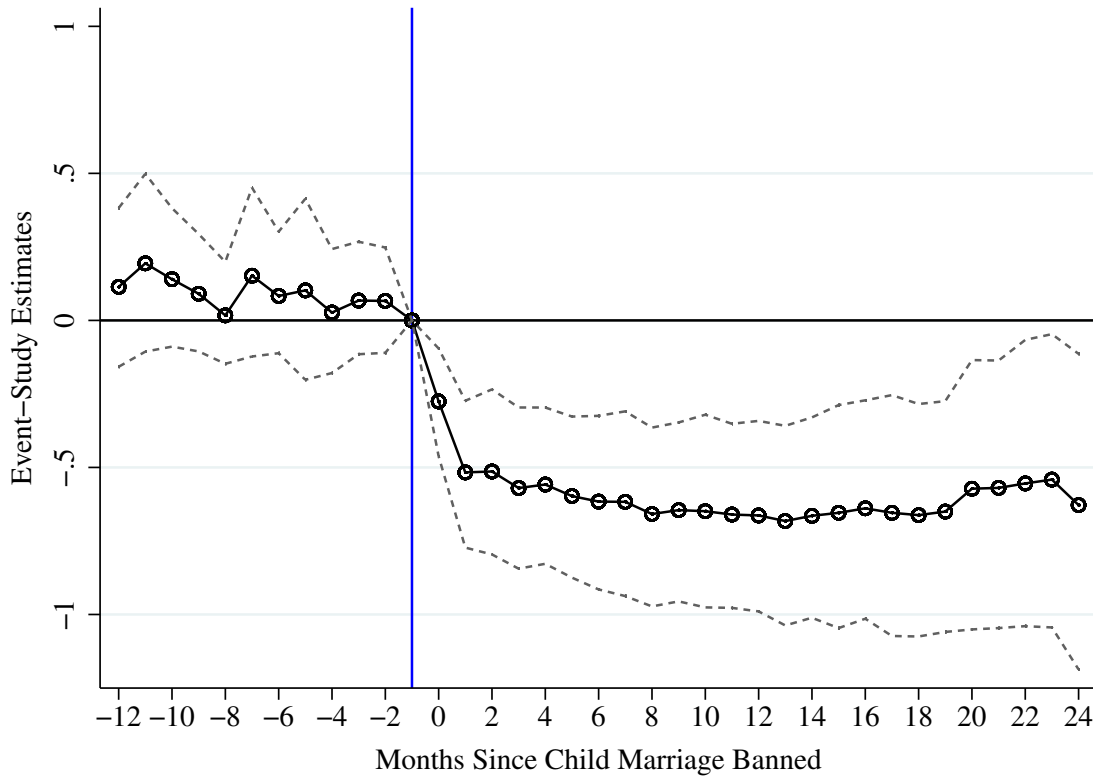
Notes: This figure depicts the number of legally registered marriages by the age of the bride, per 1,000 women and girls of each age in 2013. The number of marriages was obtained from marriage certificate microdata, and the population from CONAPO.

Figure 4: Number of Registered Marriages in 2013 per 1,000 Girls Ages 14-17



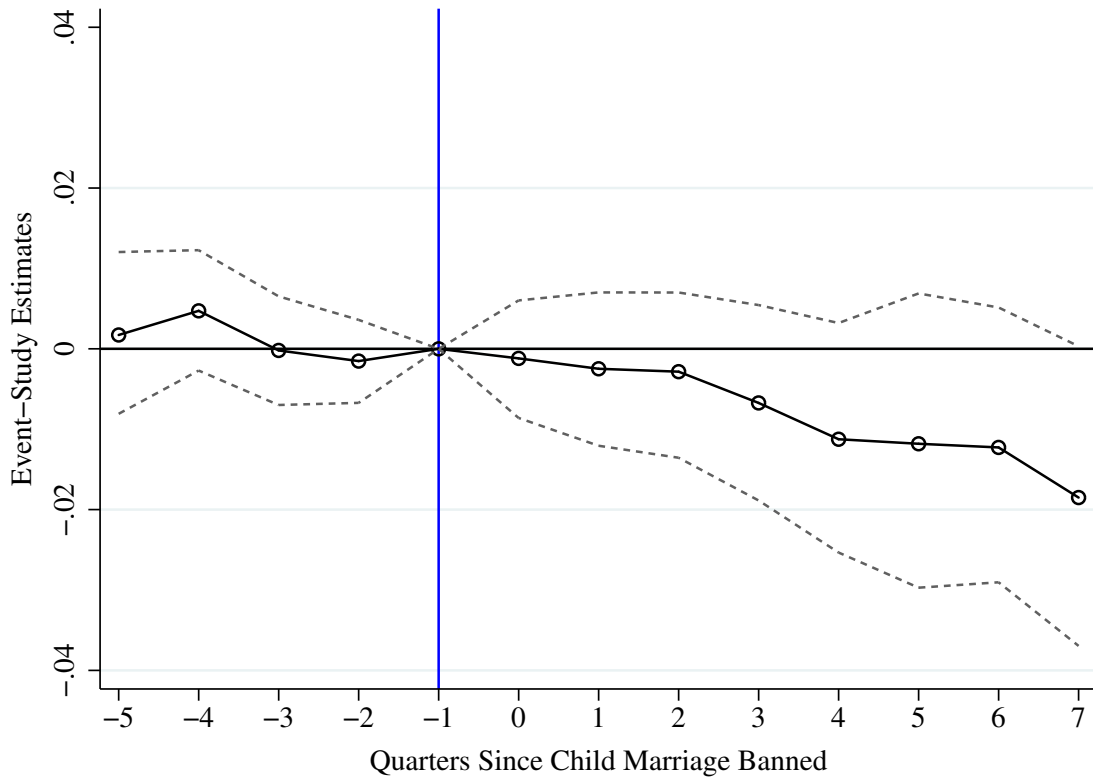
Notes: This figure depicts the number of legally registered marriages with a bride aged 14-17, per 1,000 girls of this age in 2013. The number of marriages was obtained from marriage certificate microdata, and the population from CONAPO.

Figure 5: Event-Study Estimates of the Effect of Banning Child Marriage on Formal Marriage Rates – 16 and 17-Year-Old Girls



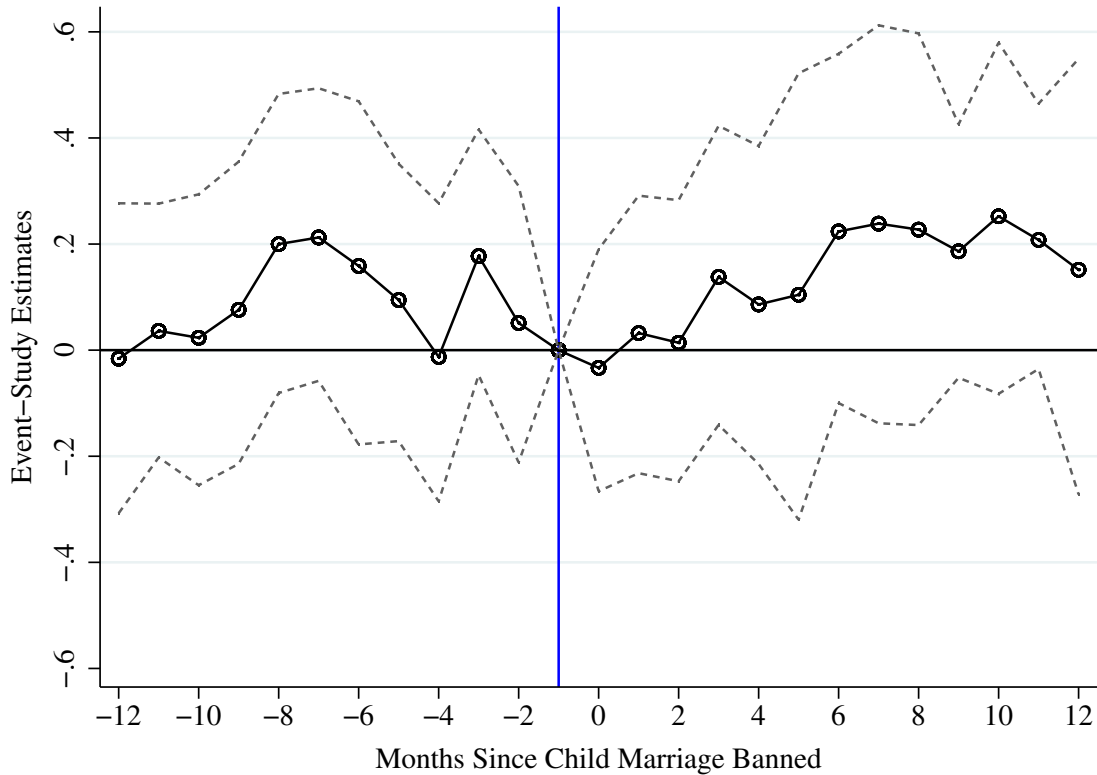
Notes: The sample includes all Mexican states in 2007-2018, and the unit of observation is a month-state. The figure plots the coefficients and 95% confidence intervals based on wild-bootstrap clustered standard errors of a regression in which the dependent variable is the monthly number of marriages per 1,000 girls ages 16-17 who reside in a state s in month-year t . The regressors of interest are dummy variables for each month relative to the period in which child marriage was banned in state s , with the month before the reform being the omitted category. We only report 12 lead coefficients for ease of interpretation, and 24 lag coefficients because there are few states for which more than 24 months have passed since the reform was enacted. The regression also includes state fixed effects, month-year fixed effects, states' unemployment rate, poverty rate, female labor force participation, average income of employed individuals, population (in ln), and dummy variables for whether the state governor belongs to PRI, PAN, PRD or another political party. Standard errors are clustered at the state level.

Figure 6: Event-Study Estimates of the Effect of Banning Child Marriage on School Enrollment – 14 to 17-Year-Old Girls



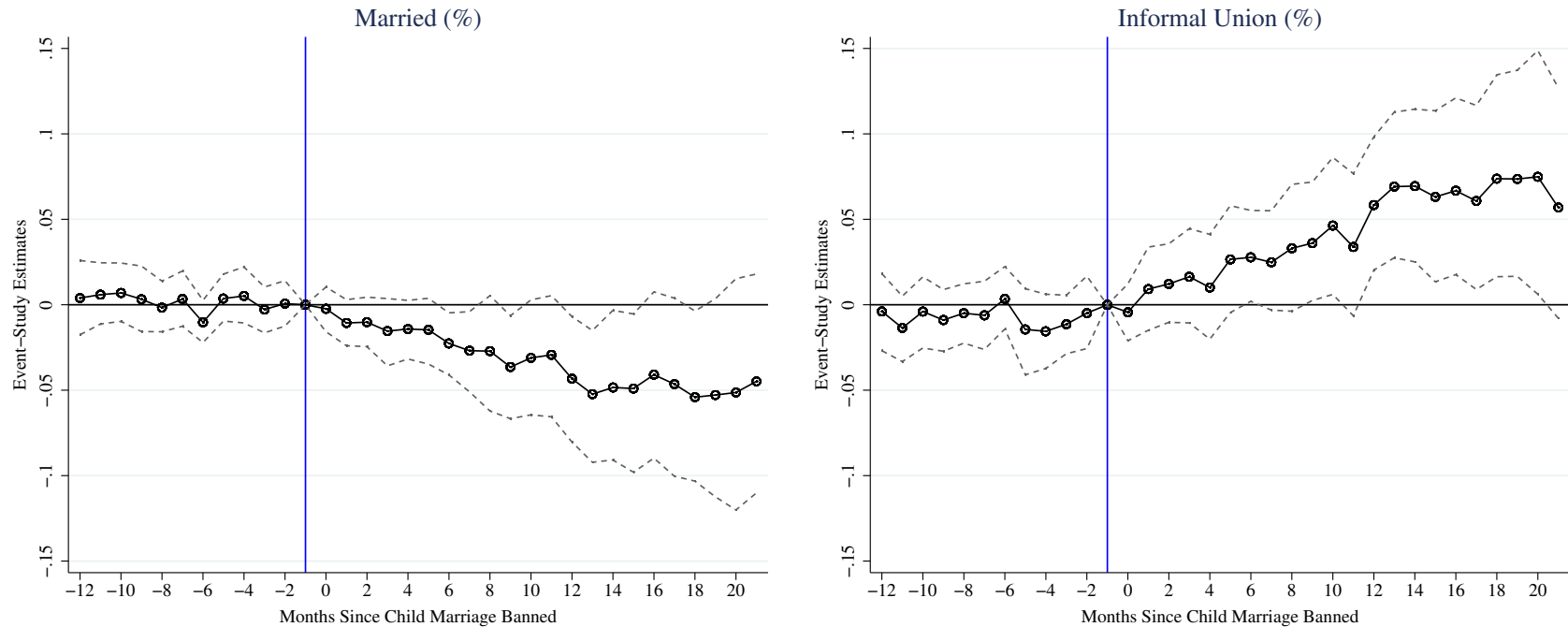
Notes: The sample is composed of all 14 to 17 year-old girls interviewed in ENOE in 2007-2018. This figure plots the coefficients and 95% confidence intervals based on wild-bootstrap clustered standard errors of a regression in which the dependent variable is a dummy for whether the individual attended school or completed high school at the moment of the survey. The regressors of interest are dummy variables for each quarter relative to the period in which child marriage was banned in the girl's state of residence, with the quarter before the reform being the omitted category. We only report 5 lead coefficients for ease of interpretation, and 7 lag coefficients because there are few states for which more than 7 quarters have passed since the reform was enacted. The regression also includes state fixed effects, quarter-year fixed effects, states' unemployment rate, poverty rate, female labor force participation, average income of employed individuals, population (in ln), dummy variables for whether the state governor belongs to PRI, PAN, PRD or another political party, age dummies, and town-size dummies. Standard errors are clustered at the state level.

Figure 7: Event-Study Estimates of the Effect of Banning Child Marriage on Early Motherhood – 16 and 17-Year-Old Girls



Notes: The sample includes all Mexican states from January 2008 to March 2017, and the unit of observation is a month-state. This figure plots the coefficients and 95% confidence intervals based on wild-bootstrap clustered standard errors of a regression in which the dependent variable is the monthly number of (live) first births conceived in that month by 16 and 17-year-old girls, per 1,000 girls of this age who reside in that state. The regressors of interest are dummy variables for each month relative to the period in which child marriage was banned in state s , with the month before the reform being the omitted category. We only report 12 lead coefficients for ease of interpretation, and 12 lag coefficients because there are few states for which more than 12 months have passed since the reform was enacted. The regression also includes state fixed effects, month-year fixed effects, states' unemployment rate, poverty rate, female labor force participation, average income of employed individuals, population (in ln), and dummy variables for whether the state governor belongs to PRI, PAN, PRD or another political party. Standard errors are clustered at the state level.

Figure 8: Event-Study Estimates of the Effect of Banning Child Marriage on Civil Status of 16-17-Year Old Mothers



Notes: The sample includes all Mexican states in 2008-2017, and the unit of observation is a month-state. These figures plot the coefficients and 95% confidence intervals based on wild-bootstrap clustered standard errors of a regression in which the dependent variable is the percentage of first births delivered by girls ages 16-17 that are in a marriage and informal union at the moment of birth, respectively. The regressors of interest are dummy variables for each month relative to the period in which child marriage was banned in state s , with the month before the reform being the omitted category. We only report 12 lead coefficients for ease of interpretation, and 21 lag coefficients because there are few states for which more than 21 months have passed since the reform was enacted. The regression also includes state fixed effects, month-year fixed effects, states' unemployment rate, poverty rate, female labor force participation, average income of employed individuals, population (in ln), and dummy variables for whether the state governor belongs to PRI, PAN, PRD or another political party. Standard errors are clustered at the state level.

Table 1: Background Characteristics of Women Aged 20-30 in 2013 by their Civil Status as Children

	Civil Status Before Age 18		
	Formally Married	Informal Union	Single
<i>Indigenous Group</i>			
Belongs to indigenous group	0.157	0.176	0.092
Speaks indigenous language	0.093	0.087	0.051
Father speaks indigenous language	0.146	0.141	0.095
Mother speaks indigenous language	0.123	0.127	0.092
<i>Father's Educational Attainment</i>			
Less than primary school	0.242	0.202	0.099
Primary school	0.384	0.364	0.396
Middle school	0.114	0.112	0.171
Secondary school	0.183	0.149	0.256
Tertiary/University	0.059	0.090	0.157
Missing	0.132	0.196	0.092
<i>Mother's Educational Attainment</i>			
Less than primary school	0.185	0.242	0.134
Primary school	0.508	0.454	0.422
Middle school	0.153	0.142	0.196
Secondary school	0.202	0.186	0.318
Tertiary/University	0.019	0.034	0.089
Missing	0.083	0.081	0.027
<i>Household Assets and Housing Quality at Age 14</i>			
Durable asset index (0-1)	0.393	0.372	0.554
Housing quality index (0-1)	0.436	0.424	0.615
Agricultural asset index (0-1)	0.122	0.109	0.097
Had a domestic worker	0.011	0.017	0.075
<i>Other Characteristics</i>			
Attended school at age 14	0.735	0.710	0.903
Attended middle school at age 14	0.624	0.596	0.851
Went to a private primary school	0.007	0.002	0.068
Worked at age 14	0.127	0.168	0.080
Domestic work at home age 14	0.563	0.483	0.365
At least one parent worked in agriculture	0.356	0.279	0.171
Number of siblings (by mother)	5.234	5.526	4.591
Observations	357	570	3,511

Notes: These data were taken from the *Encuesta Demográfica Retrospectiva* (EDER), a nationally representative demographic survey conducted in 2017. We took the sample of 4,438 women who were 24-34 at the time of the survey (i.e., 20-30 in 2013), divided them into three groups according to their civil status before the age of 18, and computed averages for each group using sampling weights. Column 1 includes all women who were formally married before the age of 18, and column 2 includes those that were in an informal union (but not formally married). Column 3 includes women who were not formally married or in an informal union at any point before the age of 18. We computed the *Durable asset index* variable for whether the household in which the woman lived at the age of 14 had a television, car, stove, refrigerator, washing machine, blender, record player, phone, computer, camera, and encyclopedia. *HH quality index* is an index we constructed for whether the house in which the respondent lived at age 18 had piped water, a ceiling made of tiles, an interior bathroom, and was located in a paved street. *Agricultural asset index* is an index for whether the house in which the woman lived at age 14 had livestock used for traction, cattle, and a tractor.

Table 2: Effect of Banning Child Marriage on Formal Child Marriage Rates

	(1)	(2)	(3)	(4)	(5)
Child Marriage Banned	-0.262*** (0.080) [0.000]	-0.244*** (0.080) [0.000]	-0.380*** (0.102) [0.001]	-0.344*** (0.101) [0.002]	-0.321*** (0.090) [0.004]
Year FE	✓				
Month-year FE		✓	✓	✓	✓
State FE			✓	✓	✓
Controls				✓	✓
Population Weights					✓
Observations	4,608	4,608	4,608	4,608	4,608
R ²	0.373	0.406	0.755	0.768	0.761
Dependent Variable Mean	0.717	0.717	0.717	0.717	0.678

Notes: The sample includes all Mexican states in 2007-2018, and the unit of observation is a month-state. The dependent variable is the monthly number of marriages per 1,000 girls ages 14-17 who reside in that state, and the regressor of interest is a dummy for whether child marriage was not allowed in that given state and month. Controls include states' unemployment rate, poverty rate, labor force participation of females ages 20 and above, average income of employed individuals, population (in ln), and dummy variables for whether the state governor belongs to PRI, PAN, PRD or another political party. Standard errors clustered by state are in parentheses, and cluster-robust wild-bootstrap p-values in square brackets. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table 3: Effect of Banning Child Marriage on Formal Child Marriage Rates by Age Group

	# Marriages per 1000 girls of age			
	14	15	16	17
Child Marriage Banned	-0.004 (0.041) [0.949]	-0.031 (0.083) [0.772]	-0.600*** (0.173) [0.005]	-0.745*** (0.191) [0.002]
Month-year FE	✓	✓	✓	✓
State FE	✓	✓	✓	✓
Controls	✓	✓	✓	✓
Observations	4,608	4,608	4,608	4,608
R ²	0.573	0.628	0.749	0.745
Dependent Variable Mean	0.117	0.329	1.047	1.384

Notes: The sample includes all Mexican states in 2007-2018, and the unit of observation is a month-state. The dependent variable is the monthly number of marriages per 1,000 girls from the age group specified in the column header who reside in that state. The regressor of interest is a dummy for whether child marriage was not allowed in that given state and month. Controls include states' unemployment rate, poverty rate, labor force participation of females ages 20 and above, average income of employed individuals, population (in ln), and dummy variables for whether the state governor belongs to PRI, PAN, PRD or another political party. Standard errors clustered by state are in parentheses, and cluster-robust wild-bootstrap p-values in square brackets. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table 4: Event-Study Estimates of the Effect of Banning Child Marriage on Formal Child Marriage Rates

	# Marriages per 1000 girls of age				
	14-17	14	15	16	17
Child Marriage Banned - Months [-12, -9]	0.045 (0.043) [0.298]	0.002 (0.016) [0.916]	-0.009 (0.035) [0.797]	0.093 (0.070) [0.207]	0.094 (0.082) [0.252]
Child Marriage Banned - Months [-8, -5]	0.022 (0.029) [0.440]	0.001 (0.008) [0.912]	-0.007 (0.017) [0.671]	0.063 (0.041) [0.108]	0.030 (0.069) [0.679]
Child Marriage Banned - Months [0, 3]	-0.270*** (0.070) [0.000]	-0.016 (0.015) [0.276]	-0.056 (0.032) [0.109]	-0.434*** (0.135) [0.000]	-0.577*** (0.142) [0.000]
Child Marriage Banned - Months [4, 7]	-0.338*** (0.082) [0.000]	-0.015 (0.020) [0.512]	-0.068 (0.044) [0.174]	-0.560*** (0.153) [0.000]	-0.712*** (0.167) [0.000]
Child Marriage Banned - Months [8, 11]	-0.366*** (0.090) [0.000]	-0.016 (0.027) [0.619]	-0.068 (0.059) [0.305]	-0.609*** (0.162) [0.000]	-0.774*** (0.178) [0.000]
Child Marriage Banned - Months [12, 15]	-0.365*** (0.102) [0.002]	-0.008 (0.038) [0.863]	-0.047 (0.079) [0.633]	-0.629*** (0.171) [0.000]	-0.777*** (0.195) [0.000]
Child Marriage Banned - Months [16, 19]	-0.356*** (0.113) [0.003]	-0.009 (0.041) [0.874]	-0.042 (0.086) [0.665]	-0.616*** (0.184) [0.000]	-0.761*** (0.211) [0.000]
Month-year FE	✓	✓	✓	✓	✓
State FE	✓	✓	✓	✓	✓
Controls	✓	✓	✓	✓	✓
Observations	4,608	4,608	4,608	4,608	4,608
R ²	0.769	0.575	0.630	0.751	0.746
Dependent Variable Mean	0.717	0.117	0.329	1.047	1.384

Notes: The sample includes all Mexican states in 2007-2018, and the unit of observation is a month-state. The dependent variable is the monthly number of marriages per 1,000 girls from the age group specified in the column header who reside in that state. The regressors of interest are dummy variables for each 4-month period relative to the period in which child marriage was banned in state s , with the period before the reform being the omitted category. We only report lead coefficients for up to 12 months before the reform for ease of interpretation, and lag coefficients for 19 months after the reform for simplicity, and because there are few states for which more than 24 months have passed since the reform was enacted. Controls include states' unemployment rate, poverty rate, labor force participation of females ages 20 and above, average income of employed individuals, population (in ln), and dummy variables for whether the state governor belongs to PRI, PAN, PRD or another political party. Standard errors clustered by state are in parentheses, and cluster-robust wild-bootstrap p-values in square brackets. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table 5: Event-Study Estimates of the Effect of Banning Child Marriage on School Enrollment

	Girls of age				
	14-17	14	15	16	17
Child Marriage Banned in 5 Quarter	0.002 (0.005) [0.717]	-0.000 (0.007) [0.972]	0.005 (0.008) [0.504]	-0.007 (0.012) [0.575]	0.009 (0.010) [0.385]
Child Marriage Banned in 4 Quarters	0.005 (0.004) [0.228]	0.007 (0.005) [0.147]	-0.004 (0.007) [0.572]	0.007 (0.009) [0.489]	0.010 (0.008) [0.265]
Child Marriage Banned in 3 Quarters	-0.000 (0.003) [0.956]	0.003 (0.004) [0.411]	-0.008 (0.007) [0.329]	-0.002 (0.010) [0.836]	0.006 (0.009) [0.554]
Child Marriage Banned in 2 Quarters	-0.002 (0.002) [0.522]	0.000 (0.003) [0.975]	-0.006 (0.006) [0.281]	-0.002 (0.007) [0.764]	0.003 (0.008) [0.680]
Child Marriage Banned this Quarter	-0.001 (0.003) [0.723]	-0.003 (0.004) [0.542]	-0.002 (0.006) [0.778]	-0.002 (0.009) [0.848]	0.002 (0.008) [0.853]
Child Marriage Banned 1 Quarter Ago	-0.002 (0.004) [0.614]	-0.001 (0.006) [0.897]	-0.007 (0.008) [0.450]	-0.010 (0.009) [0.252]	0.009 (0.009) [0.325]
Child Marriage Banned 2 Quarters Ago	-0.003 (0.005) [0.584]	-0.002 (0.006) [0.754]	-0.003 (0.007) [0.731]	-0.010 (0.012) [0.431]	0.005 (0.007) [0.458]
Child Marriage Banned 3 Quarters Ago	-0.007 (0.005) [0.237]	-0.008 (0.007) [0.217]	0.002 (0.008) [0.800]	-0.009 (0.010) [0.405]	-0.012 (0.009) [0.246]
Child Marriage Banned 4 Quarters Ago	-0.011 (0.006) [0.123]	-0.014 (0.008) [0.108]	0.001 (0.010) [0.954]	-0.014 (0.013) [0.298]	-0.018** (0.008) [0.037]
Child Marriage Banned 5 Quarters Ago	-0.012 (0.008) [0.197]	-0.012 (0.009) [0.231]	-0.017 (0.013) [0.242]	-0.008 (0.015) [0.632]	-0.009 (0.011) [0.450]
Child Marriage Banned 6 Quarters Ago	-0.012 (0.008) [0.149]	-0.010 (0.008) [0.243]	-0.013 (0.011) [0.329]	-0.010 (0.014) [0.551]	-0.016 (0.011) [0.163]
Child Marriage Banned 7 Quarters Ago	-0.019* (0.008) [0.056]	-0.017* (0.009) [0.066]	-0.018 (0.012) [0.180]	-0.020 (0.014) [0.201]	-0.019 (0.015) [0.211]
Quarter-year FE	✓	✓	✓	✓	✓
State FE	✓	✓	✓	✓	✓
Controls	✓	✓	✓	✓	✓
Observations	713,451	175,375	182,177	178,717	177,182
R ²	0.082	0.025	0.039	0.051	0.053
Dependent Variable Mean	0.813	0.927	0.850	0.768	0.711

Notes: The sample is composed of girls of the age specified in the column header interviewed in ENOE between 2007 and 2018. The dependent variable is a dummy for whether the girl attended school or completed high school at the moment of the survey. The regressors of interest are dummy variables for each quarter relative to the period in which child marriage was banned in the girl's state of residence, with the quarter before the reform being the omitted category. We only report 5 lead coefficients for ease of interpretation, and 7 lag coefficients because there are few states for which more than 7 quarters have passed since the reform was enacted. The regression also includes state fixed effects, quarter-year fixed effects, states' unemployment rate, poverty rate, female labor force participation, average income of employed individuals, population (in ln), dummy variables for whether the state governor belongs to PRI, PAN, PRD or another political party, age dummies, and town-size dummies. Standard errors clustered by state are in parentheses, and cluster-robust wild-bootstrap p-values in square brackets. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table 6: Event-Study Estimates of the Effect of Banning Child Marriage on Early Motherhood (First Births)

	# First births per 1000 girls of age					
	14-17	16-17	14	15	16	17
Child Marriage Banned - Months [-12, -9]	-0.034 (0.052) [0.515]	-0.024 (0.079) [0.773]	0.003 (0.042) [0.941]	-0.096 (0.076) [0.225]	-0.096 (0.097) [0.332]	0.047 (0.099) [0.638]
Child Marriage Banned - Months [-8, -5]	0.087 (0.060) [0.155]	0.111 (0.079) [0.182]	0.088* (0.050) [0.084]	0.035 (0.091) [0.692]	0.073 (0.089) [0.393]	0.149 (0.092) [0.121]
Child Marriage Banned - Months [0, 3]	-0.023 (0.054) [0.678]	-0.020 (0.077) [0.803]	0.045 (0.047) [0.326]	-0.097 (0.083) [0.242]	-0.136 (0.095) [0.174]	0.097 (0.088) [0.263]
Child Marriage Banned - Months [4, 7]	0.050 (0.085) [0.576]	0.110 (0.117) [0.377]	0.028 (0.055) [0.626]	-0.048 (0.109) [0.679]	0.030 (0.125) [0.810]	0.191 (0.134) [0.154]
Child Marriage Banned - Months [8, 11]	0.089 (0.067) [0.207]	0.166* (0.089) [0.094]	0.070 (0.063) [0.269]	-0.042 (0.111) [0.714]	0.106 (0.118) [0.378]	0.226** (0.100) [0.049]
Month-year FE	✓	✓	✓	✓	✓	✓
State FE	✓	✓	✓	✓	✓	✓
Controls	✓	✓	✓	✓	✓	✓
Observations	3,552	3,552	3,552	3,552	3,552	3,552
R ²	0.705	0.676	0.467	0.524	0.568	0.599
Dependent Variable Mean	4.117	5.593	1.682	3.612	5.218	5.968

Notes: The sample includes all Mexican states from January 2008 to March 2017, and the unit of observation is a month-state. The dependent variable is the monthly number of (live) first births conceived in that month, per 1,000 girls from the age group specified in the column header who reside in that state. The regressors of interest are dummy variables for each 4-month period relative to the period in which child marriage was banned in state s , with the period before the reform being the omitted category. We only report lead coefficients for up to 12 months before the reform for ease of interpretation, and lag coefficients for 11 months after the reform, as there are few states for which more than 11 months have passed since the reform was enacted. Controls include states' unemployment rate, poverty rate, labor force participation of females ages 20 and above, average income of employed individuals, population (in ln), and dummy variables for whether the state governor belongs to PRI, PAN, PRD or another political party. Standard errors clustered by state are in parentheses, and cluster-robust wild-bootstrap p-values in square brackets. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table 7: Event-Study Estimates of the Effect of Banning Child Marriage on Civil Status of 16-17-Year Old Mothers (First Births)

	Share of first births by civil status			
	Married	Union	Single	Missing
Child Marriage Banned - Months [-12, -9]	0.004 (0.006) [0.494]	0.000 (0.007) [0.938]	0.004 (0.006) [0.583]	-0.008*** (0.002) [0.000]
Child Marriage Banned - Months [-8, -5]	-0.002 (0.004) [0.520]	0.003 (0.005) [0.613]	0.004 (0.005) [0.426]	-0.005*** (0.001) [0.000]
Child Marriage Banned - Months [0, 3]	-0.010 (0.007) [0.164]	0.016* (0.008) [0.071]	-0.009 (0.006) [0.156]	0.003 (0.002) [0.150]
Child Marriage Banned - Months [4, 7]	-0.020* (0.010) [0.067]	0.030** (0.012) [0.020]	-0.012 (0.009) [0.212]	0.002 (0.003) [0.498]
Child Marriage Banned - Months [8, 11]	-0.032* (0.017) [0.082]	0.045** (0.017) [0.021]	-0.015 (0.010) [0.170]	0.002 (0.003) [0.577]
Child Marriage Banned - Months [12, 15]	-0.048** (0.021) [0.025]	0.072*** (0.021) [0.000]	-0.027** (0.011) [0.026]	0.003 (0.004) [0.555]
Child Marriage Banned - Months [16, 20]	-0.048* (0.025) [0.066]	0.076*** (0.026) [0.005]	-0.028** (0.014) [0.047]	0.001 (0.003) [0.782]
Month-year FE	✓	✓	✓	✓
State FE	✓	✓	✓	✓
Controls	✓	✓	✓	✓
Observations	3,840	3,840	3,840	3,840
R ²	0.842	0.765	0.736	0.460
Dependent Variable Mean	0.158	0.615	0.207	0.019

Notes: The sample includes all Mexican states in 2007-2017, and the unit of observation is a month-state. The dependent variable is the share of 16-17 year old mothers residing in a given state and who gave birth in a given month that had the civil status in the column header at the moment of delivery. The regressors of interest are dummy variables for each 4-month period relative to the period in which child marriage was banned in state s , with the period before the reform being the omitted category. We only report lead coefficients for up to 12 months before the reform for ease of interpretation, and lag coefficients for 20 months after the reform, as there are few states for which more than 20 months have passed since the reform was enacted. Controls include states' unemployment rate, poverty rate, labor force participation of females ages 20 and above, average income of employed individuals, population (in ln), and dummy variables for whether the state governor belongs to PRI, PAN, PRD or another political party. Standard errors clustered by state are in parentheses, and cluster-robust wild-bootstrap p-values in square brackets. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table 8: Event-Study Estimates of the Effect of Banning Child Marriage on Prenatal Investment of 16-17-Year Old Mothers and Newborn Health

	Prenatal investments				Newborn health		
	Prenatal care	First visit 1T	# Prenatal visits	Caesarean	Premature	Low birthweight	Apgar < 7
Child Marriage Banned - Months [-12, -9]	-0.003 (0.002) [0.166]	-0.000 (0.006) [0.963]	-0.037 (0.040) [0.396]	-0.003 (0.004) [0.433]	0.003 (0.002) [0.217]	0.001 (0.002) [0.578]	0.001 (0.001) [0.547]
Child Marriage Banned - Months [-8, -5]	-0.002 (0.001) [0.123]	0.001 (0.006) [0.855]	-0.032 (0.024) [0.193]	-0.005 (0.004) [0.195]	0.001 (0.002) [0.523]	0.001 (0.002) [0.708]	0.002** (0.001) [0.044]
Child Marriage Banned - Months [0, 3]	-0.001 (0.001) [0.443]	0.003 (0.004) [0.535]	-0.005 (0.026) [0.845]	0.004 (0.005) [0.370]	-0.001 (0.002) [0.607]	-0.002 (0.002) [0.375]	-0.000 (0.001) [0.836]
Child Marriage Banned - Months [4, 7]	0.001 (0.002) [0.502]	0.006 (0.005) [0.207]	0.037 (0.040) [0.391]	-0.006 (0.006) [0.377]	-0.001 (0.002) [0.490]	-0.001 (0.002) [0.728]	-0.000 (0.001) [0.969]
Child Marriage Banned - Months [8, 11]	0.002 (0.002) [0.316]	0.008 (0.006) [0.173]	0.031 (0.057) [0.616]	0.011 (0.006) [0.131]	0.003 (0.002) [0.330]	0.000 (0.002) [0.928]	-0.000 (0.001) [0.943]
Month-year FE	✓	✓	✓	✓	✓	✓	✓
State FE	✓	✓	✓	✓	✓	✓	✓
Controls	✓	✓	✓	✓	✓	✓	✓
Observations	1,327,987	1,278,681	1,297,854	1,337,236	1,339,298	1,265,046	1,326,803
R ²	0.007	0.010	0.022	0.011	0.001	0.004	0.003
Dependent Variable Mean	0.972	0.711	6.708	0.369	0.055	0.059	0.012

Notes: The sample includes all women who had their first child in 2008-2017 and were 16 to 17 years old at the moment of conception. The dependent variables are specified in the column header. In the regressions in columns 1 and 2, the dependent variables are dummies for whether the mother had any prenatal cares and had her first prenatal visit in the first trimester, respectively. The regressors of interest are dummy variables for each 4-month period relative to the period in which child marriage was banned in the state of residence of the mother, with the period before the reform being the omitted category. We only report lead coefficients for up to 12 months before the reform for ease of interpretation, and lag coefficients for 11 months after the reform, as there are few states for which more than 11 months have passed since the reform was enacted. Controls include states' unemployment rate, poverty rate, labor force participation of females ages 20 and above, average income of employed individuals, population (in ln), and dummy variables for whether the state governor belongs to PRI, PAN, PRD or another political party. Standard errors clustered by state are in parentheses, and cluster-robust wild-bootstrap p-values in square brackets. * significant at 10%; ** significant at 5%; *** significant at 1%.

9 Appendix Figures and Tables

Figure A.1: Progressive Adoption of Child Marriage Ban

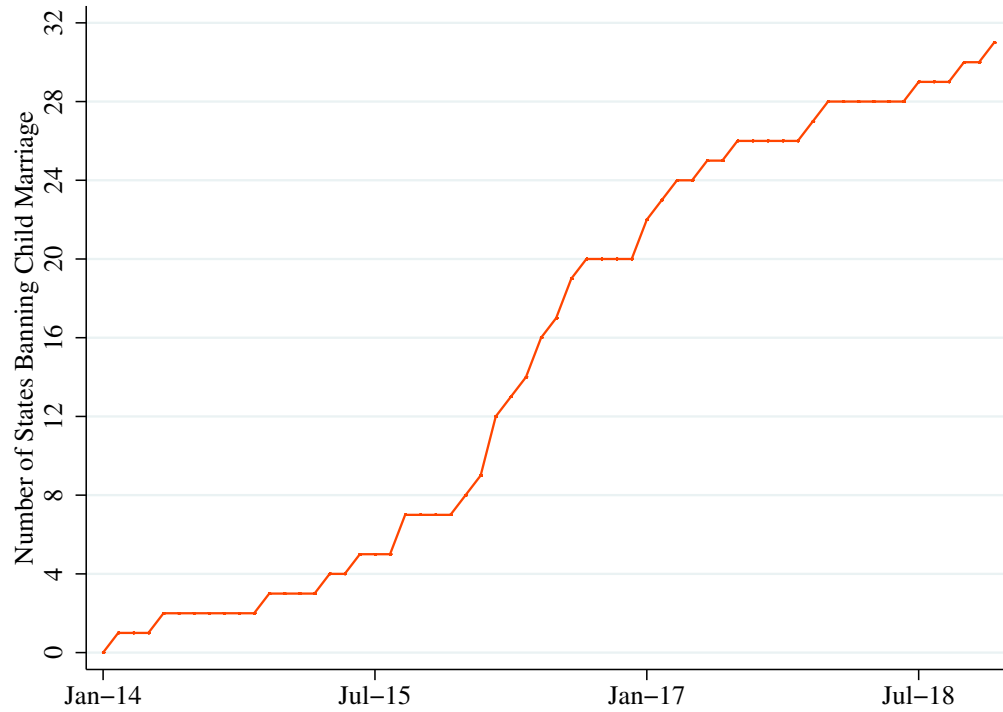
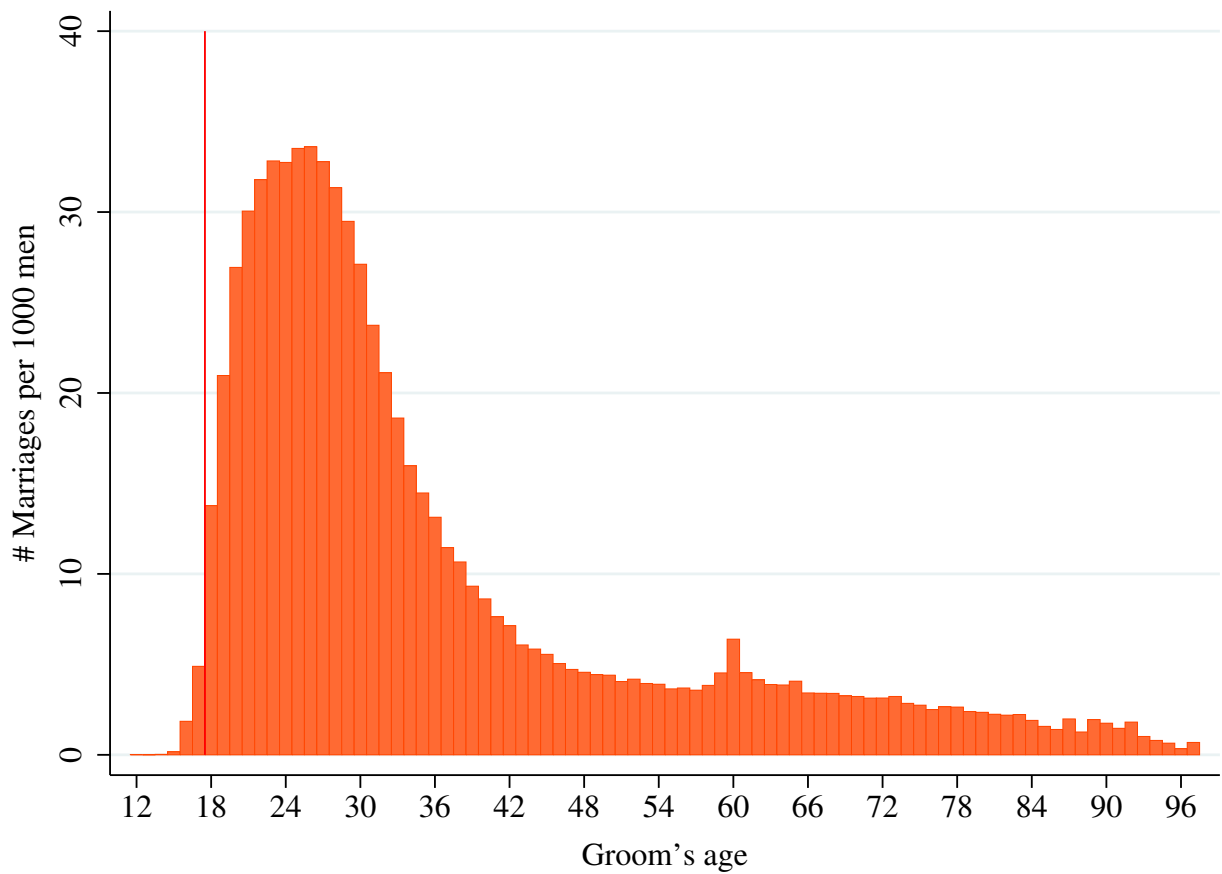
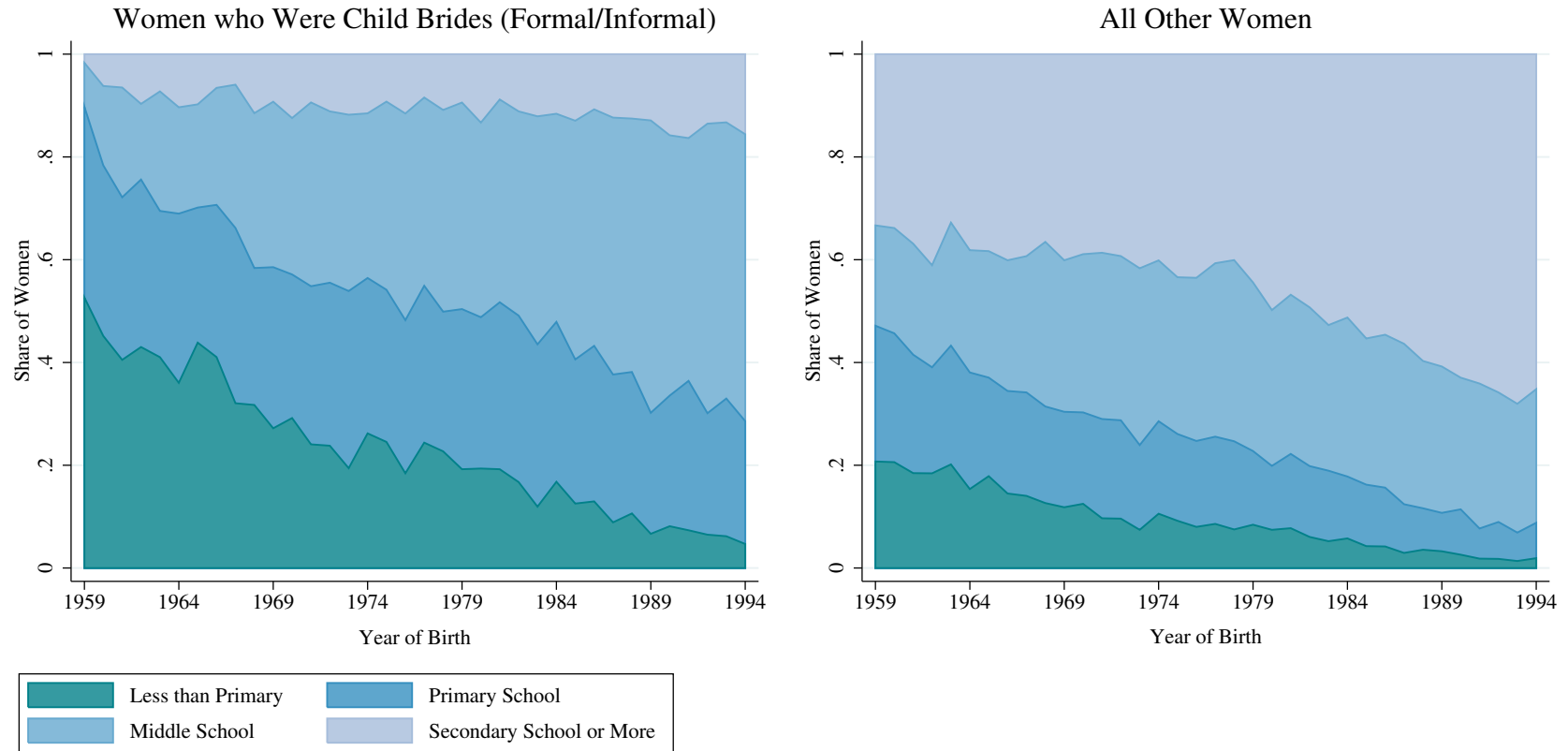


Figure A.2: Number of Registered Marriages per 1,000 Boys and Men in 2013, by the Groom's Age



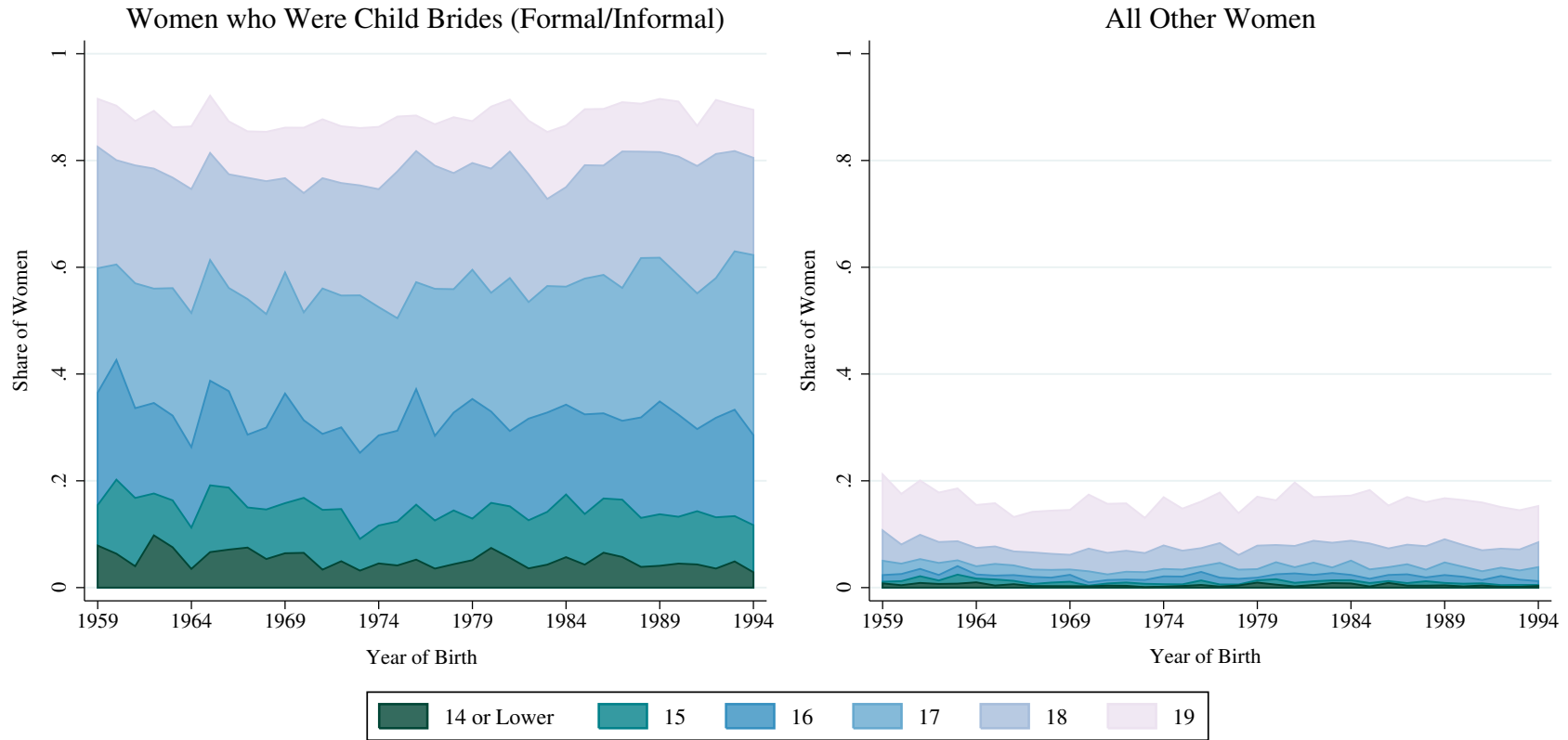
Notes: This figure depicts the number of legally registered marriages by the age of the groom, per 1,000 boys and men of each age in 2013. The number of marriages was obtained from marriage certificate microdata, and the population from CONAPO.

Figure A.3: Comparison of Schooling Attainment for Child Brides and Non-Child Brides



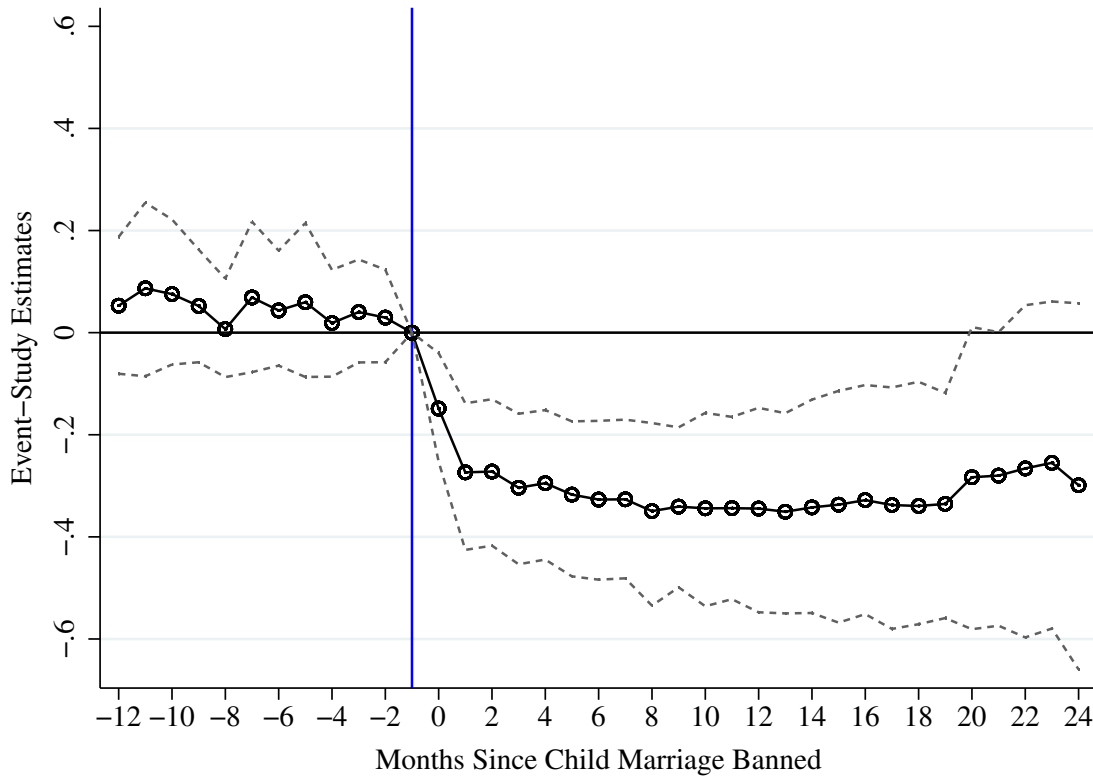
Notes: The graphs show the share of women according to their maximum educational attainment, by birth year. The sample in the first graph is limited to women who were in a formal marriage or informal union before the age of 18, whereas the sample in the second graph contains the remaining women (i.e., those who were not in a formal marriage or informal union before turning 18). The source of these data is the *Encuesta Nacional de la Dinámica Demográfica* (ENADID), a demographic survey conducted in 2014. We took the sample of 83,554 women who were 20-54 at the time of the survey, and computed the share of women in each category using sampling weights.

Figure A.4: Comparison of Age at First Birth for Child Brides and Non-Child Brides



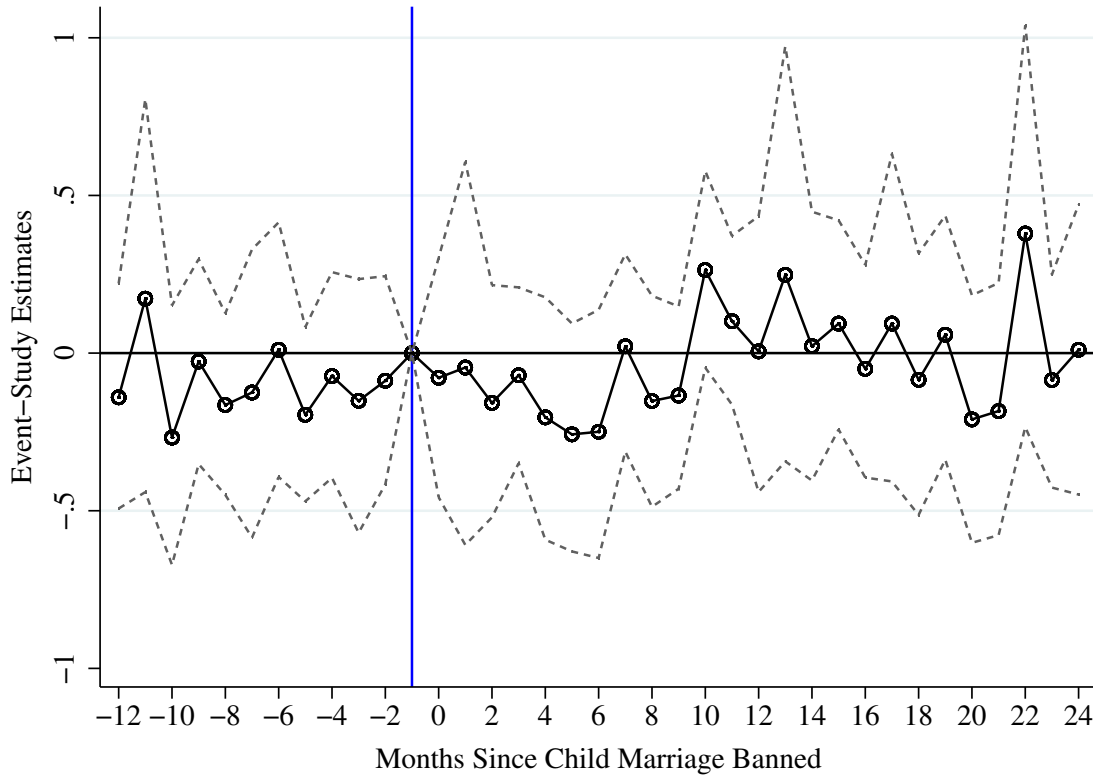
Notes: The graphs show the share of women who had their first birth at different ages, by cohort. The sample in the first graph is limited to women who were in a formal marriage or informal union before the age of 18, whereas the sample in the second graph contains the remaining women (i.e., those who were not in a formal marriage or informal union before turning 18). The source of these data is the *Encuesta Nacional de la Dinámica Demográfica* (ENADID), a demographic survey conducted in 2014. We took the sample of 83,554 women who were 20-54 at the time of the survey, and computed the share of women in each category using sampling weights.

Figure A.5: Event-Study Estimates of the Effect of Banning Child Marriage on Formal Marriage Rates – 14 to 17-Year-Old Girls



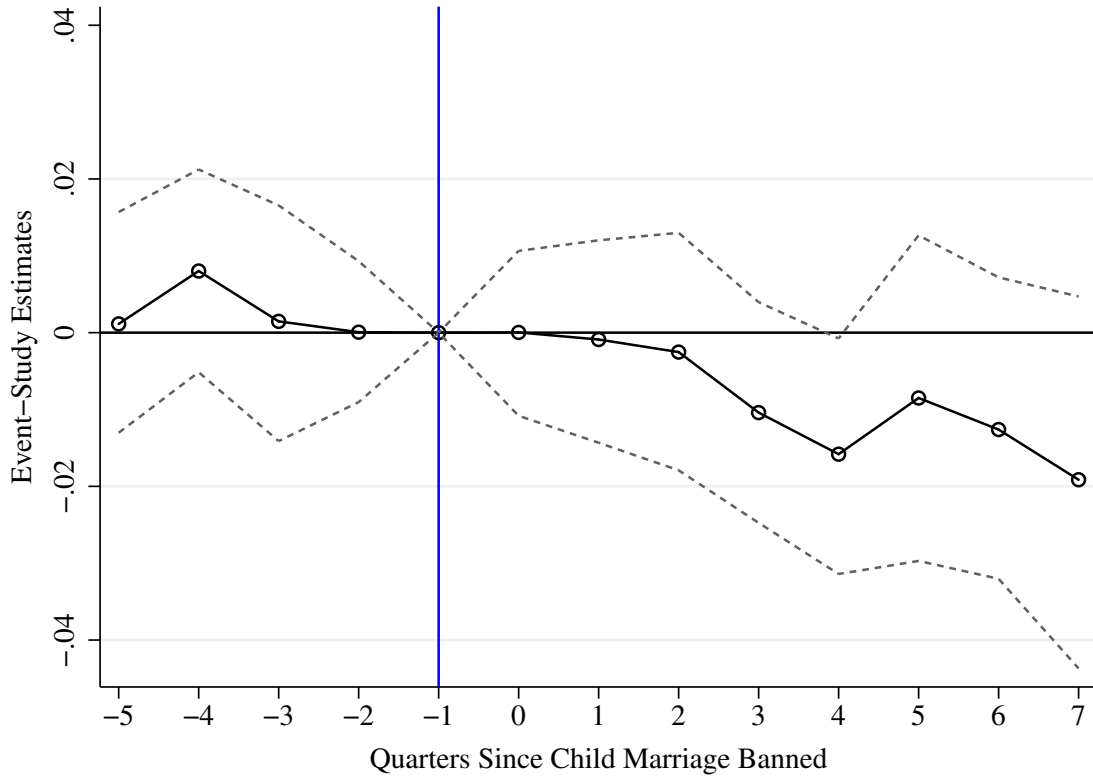
Notes: The sample includes all Mexican states in 2007-2018, and the unit of observation is a month-state. The figure plots the coefficients and 95% confidence intervals based on wild-bootstrap clustered standard errors of a regression in which the dependent variable is the monthly number of marriages per 1,000 girls ages 14-17 who reside in a state s in month-year t . The regressors of interest are dummy variables for each month relative to the period in which child marriage was banned in state s , with the month before the reform being the omitted category. We only report 12 lead coefficients for ease of interpretation, and 24 lag coefficients because there are few states for which more than 24 months have passed since the reform was enacted. The regression also includes state fixed effects, month-year fixed effects, states' unemployment rate, poverty rate, labor force participation of females ages 20 and above, average income of employed individuals, population (in ln), and dummy variables for whether the state governor belongs to PRI, PAN, PRD or another political party. Standard errors are clustered at the state level.

Figure A.6: Event-Study Estimates of the Effect of Banning Child Marriage on Formal Marriage Rates – 18-Year-Old Girls



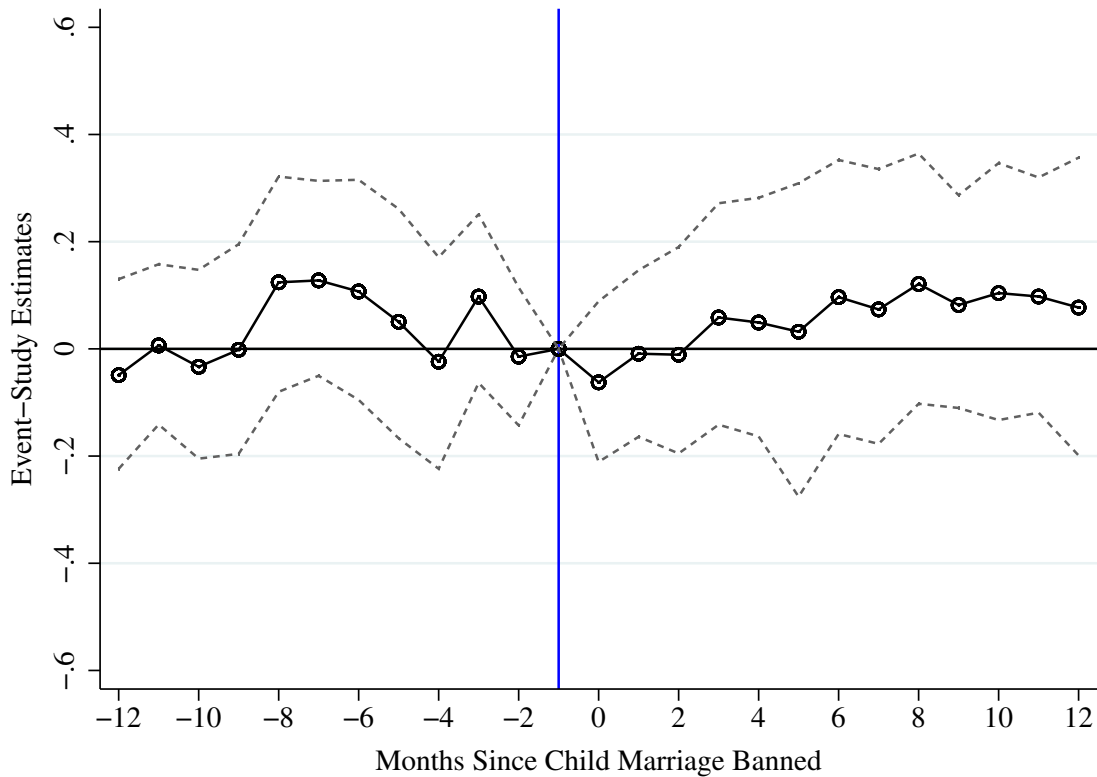
Notes: The sample includes all Mexican states in 2007-2018, and the unit of observation is a month-state. The figure plots the coefficients and 95% confidence intervals based on wild-bootstrap clustered standard errors of a regression in which the dependent variable is the monthly number of marriages per 1,000 girls of age 18 who reside in a state s in month-year t . The regressors of interest are dummy variables for each month relative to the period in which child marriage was banned in state s , with the month before the reform being the omitted category. We only report 12 lead coefficients for ease of interpretation, and 24 lag coefficients because there are few states for which more than 24 months have passed since the reform was enacted. The regression also includes state fixed effects, month-year fixed effects, states' unemployment rate, poverty rate, labor force participation of females ages 20 and above, average income of employed individuals, population (in ln), and dummy variables for whether the state governor belongs to PRI, PAN, PRD or another political party. Standard errors are clustered at the state level.

Figure A.7: Event-Study Estimates of the Effect of Banning Child Marriage on School Enrollment – 16 to 17-Year-Old Girls



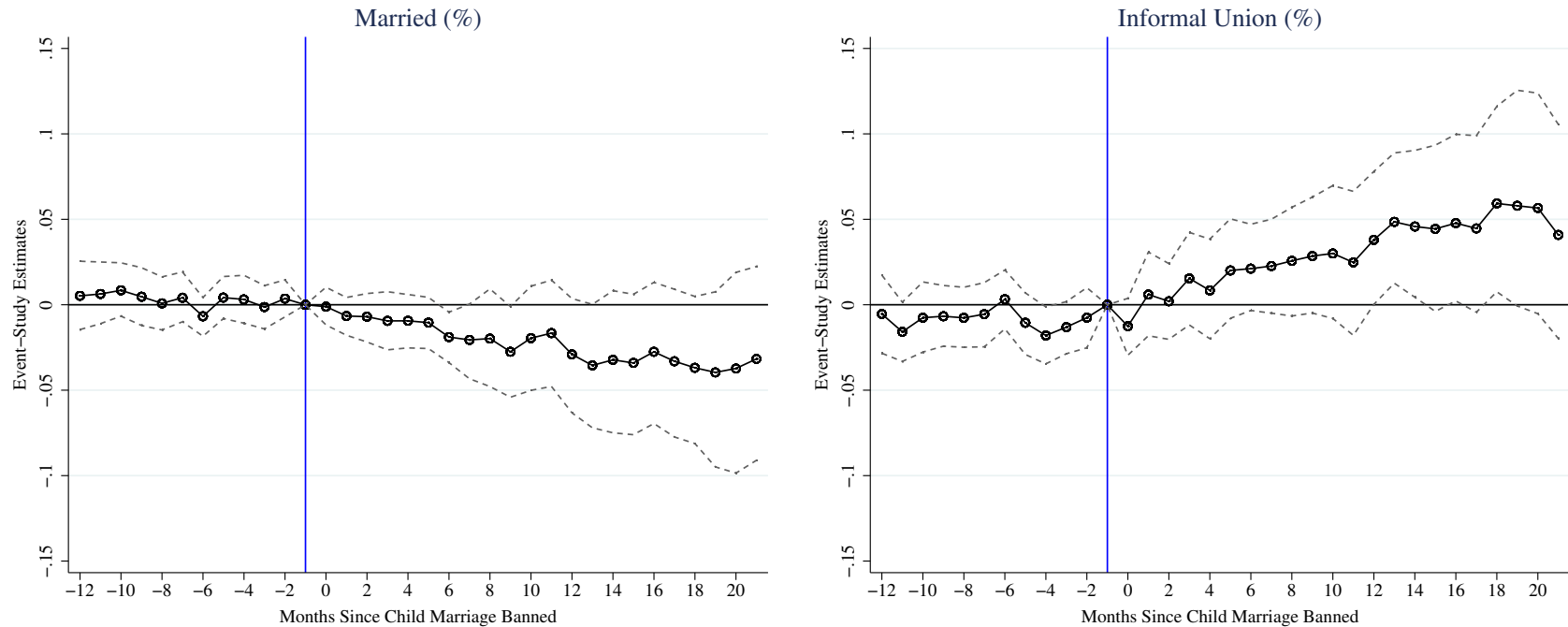
Notes: The sample is composed of all 16 to 17 year-old girls interviewed in ENOE in 2007-2018. This figure plots the coefficients and 95% confidence intervals based on wild-bootstrap clustered standard errors of a regression in which the dependent variable is a dummy for whether the individual attended school or completed high school at the moment of the survey. The regressors of interest are dummy variables for each quarter relative to the period in which child marriage was banned in the girl's state of residence, with the quarter before the reform being the omitted category. We only report 5 lead coefficients for ease of interpretation, and 7 lag coefficients because there are few states for which more than 7 quarters have passed since the reform was enacted. The regression also includes state fixed effects, quarter-year fixed effects, states' unemployment rate, poverty rate, female labor force participation, average income of employed individuals, population (in ln), dummy variables for whether the state governor belongs to PRI, PAN, PRD or another political party, age dummies, and town-size dummies. Standard errors are clustered at the state level.

Figure A.8: Event-Study Estimates of the Effect of Banning Child Marriage on Early Motherhood – 14 to 17-Year-Old Girls



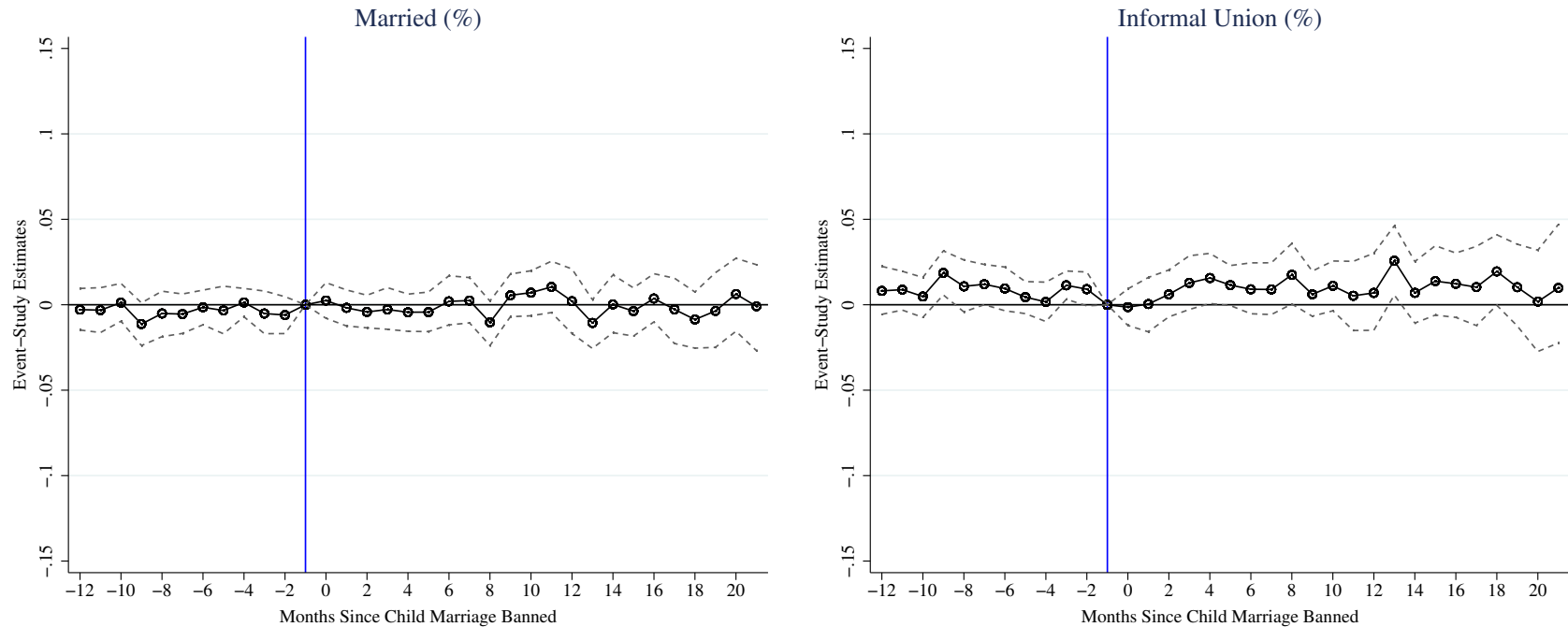
Notes: The sample includes all Mexican states from January 2008 to March 2017, and the unit of observation is a month-state. This figure plots the coefficients and 95% confidence intervals based on wild-bootstrap clustered standard errors of a regression in which the dependent variable is the monthly number of (live) first births conceived in that month by 14 to 17-year-old girls, per 1,000 girls of this age who reside in that state. The regressors of interest are dummy variables for each month relative to the period in which child marriage was banned in state s , with the month before the reform being the omitted category. We only report 12 lead coefficients for ease of interpretation, and 12 lag coefficients because there are few states for which more than 12 months have passed since the reform was enacted. The regression also includes state fixed effects, month-year fixed effects, states' unemployment rate, poverty rate, female labor force participation, average income of employed individuals, population (in ln), and dummy variables for whether the state governor belongs to PRI, PAN, PRD or another political party. Standard errors are clustered at the state level.

Figure A.9: Event-Study Estimates of the Effect of Banning Child Marriage on Civil Status of 14-17-Year Old Mothers



Notes: The sample includes all Mexican states in 2008-2017, and the unit of observation is a month-state. These figures plot the coefficients and 95% confidence intervals based on wild-bootstrap clustered standard errors of a regression in which the dependent variable is the percentage of first births delivered by girls ages 14-17 that are in a marriage and informal union at the moment of birth, respectively. The regressors of interest are dummy variables for each month relative to the period in which child marriage was banned in state s , with the month before the reform being the omitted category. We only report 12 lead coefficients for ease of interpretation, and 21 lag coefficients because there are few states for which more than 21 months have passed since the reform was enacted. The regression also includes state fixed effects, month-year fixed effects, states' unemployment rate, poverty rate, female labor force participation, average income of employed individuals, population (in ln), and dummy variables for whether the state governor belongs to PRI, PAN, PRD or another political party. Standard errors are clustered at the state level.

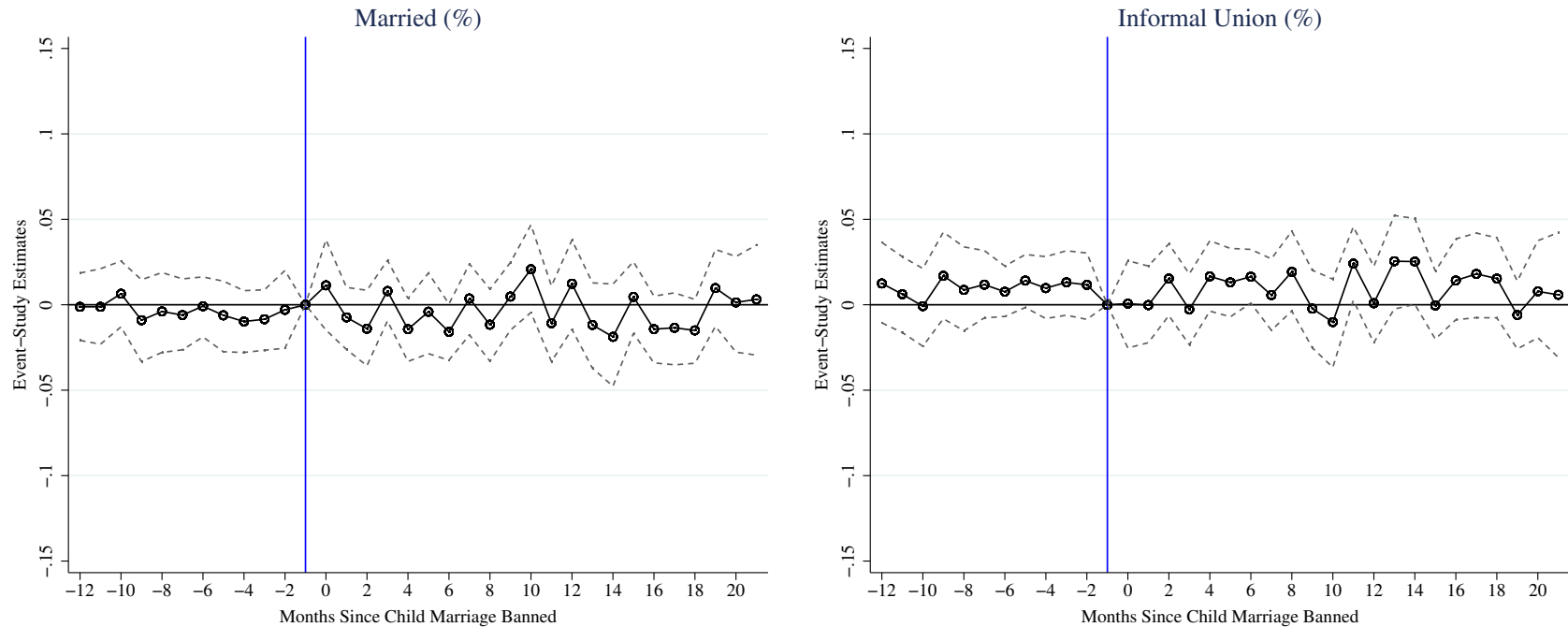
Figure A.10: Event-Study Estimates of the Effect of Banning Child Marriage on Civil Status of 19-24-Year Old Mothers



55

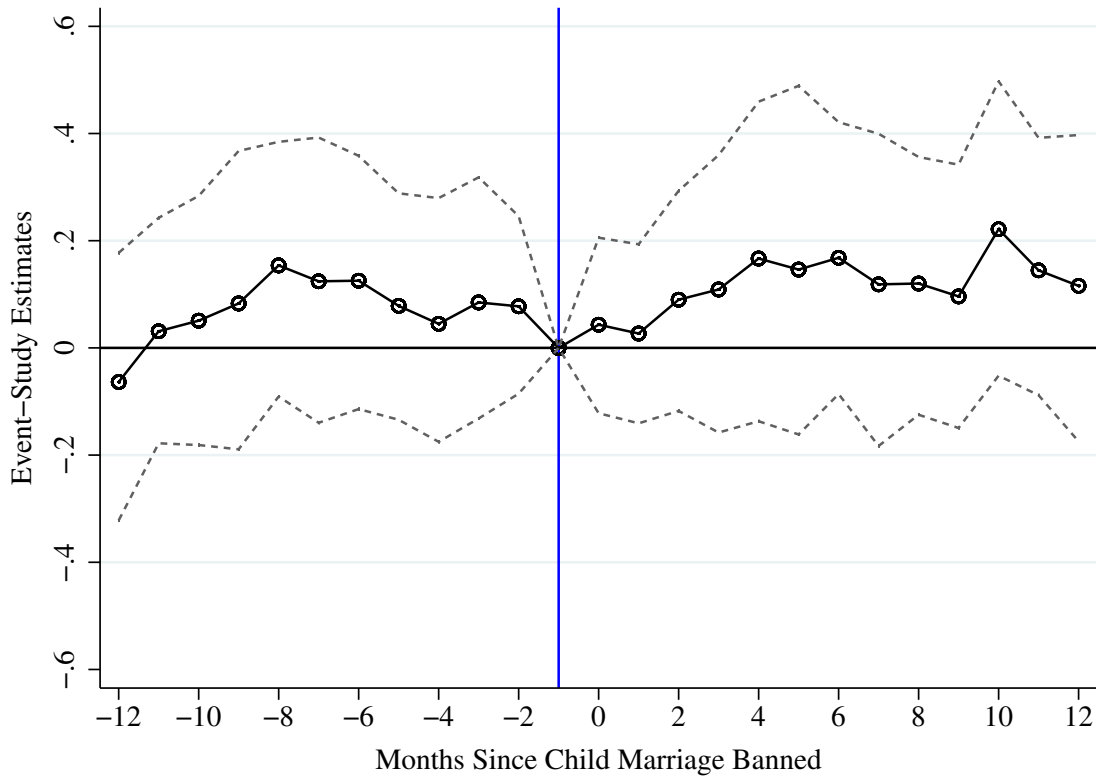
Notes: The sample includes all Mexican states in 2008-2017, and the unit of observation is a month-state. These figures plot the coefficients and 95% confidence intervals based on wild-bootstrap clustered standard errors of a regression in which the dependent variable is the percentage of deliveries from women ages 19-24 that are in a marriage and informal union at the moment of birth, respectively. The regressors of interest are dummy variables for each month relative to the period in which child marriage was banned in state s , with the month before the reform being the omitted category. We only report 12 lead coefficients for ease of interpretation, and 21 lag coefficients because there are few states for which more than 21 months have passed since the reform was enacted. The regression also includes state fixed effects, month-year fixed effects, states' unemployment rate, poverty rate, female labor force participation, average income of employed individuals, population (in ln), and dummy variables for whether the state governor belongs to PRI, PAN, PRD or another political party. Standard errors are clustered at the state level.

Figure A.11: Event-Study Estimates of the Effect of Banning Child Marriage on Civil Status of 25-29-Year Old Mothers



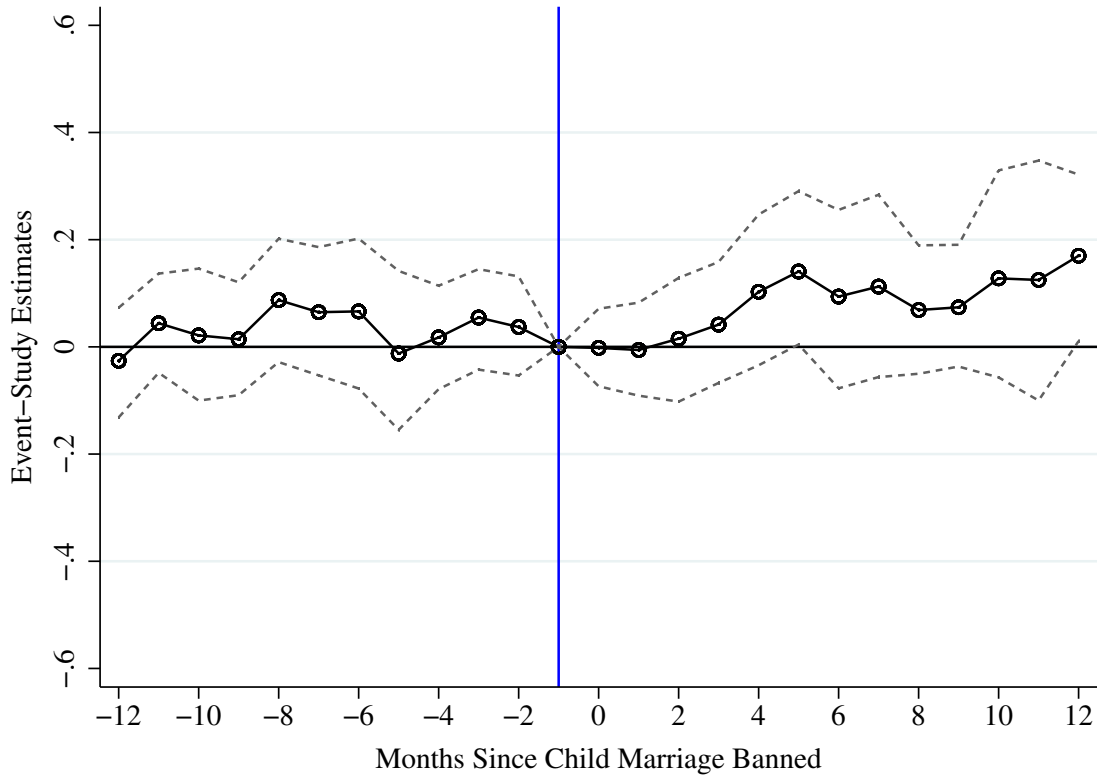
Notes: The sample includes all Mexican states in 2008-2017, and the unit of observation is a month-state. These figures plot the coefficients and 95% confidence intervals based on wild-bootstrap clustered standard errors of a regression in which the dependent variable is the percentage of deliveries from women ages 25-29 that are in a marriage and informal union at the moment of birth, respectively. The regressors of interest are dummy variables for each month relative to the period in which child marriage was banned in state s , with the month before the reform being the omitted category. We only report 12 lead coefficients for ease of interpretation, and 21 lag coefficients because there are few states for which more than 21 months have passed since the reform was enacted. The regression also includes state fixed effects, month-year fixed effects, states' unemployment rate, poverty rate, female labor force participation, average income of employed individuals, population (in ln), and dummy variables for whether the state governor belongs to PRI, PAN, PRD or another political party. Standard errors are clustered at the state level.

Figure A.12: Event-Study Estimates of the Effect of Banning Child Marriage on Fertility Rates of 19-24-Year Old Women



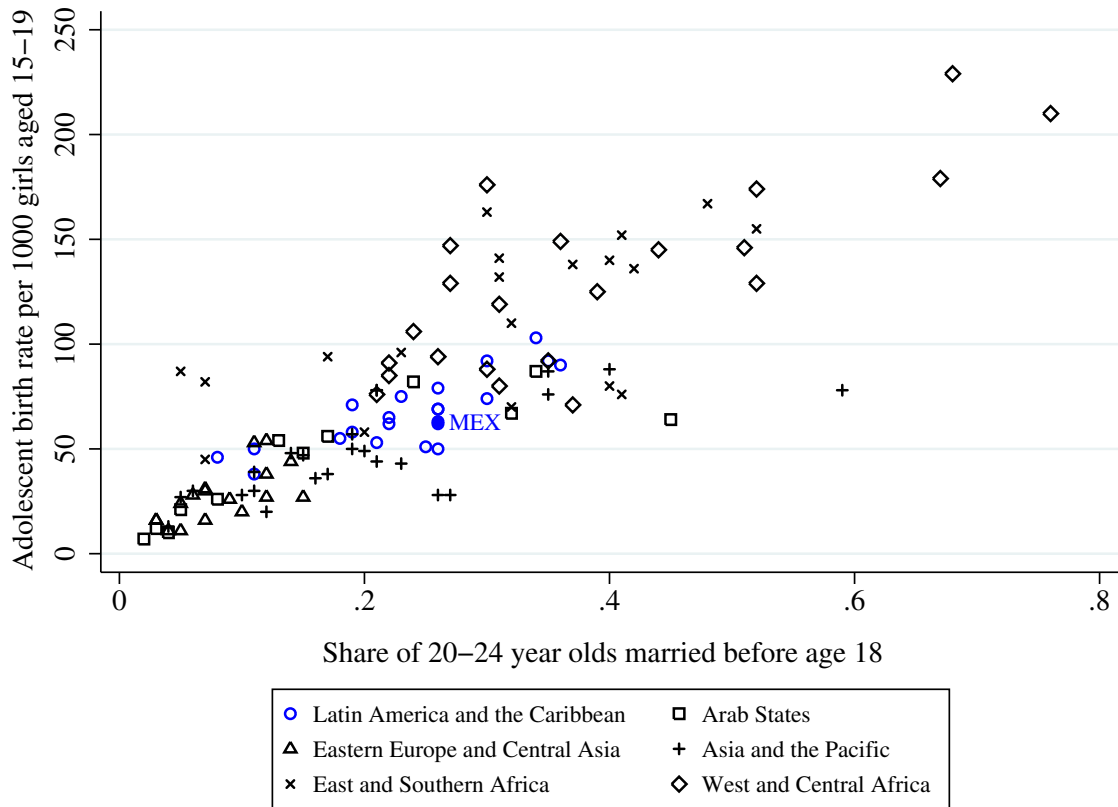
Notes: The sample includes all Mexican states from January 2008 to March 2017, and the unit of observation is a month-state. This figure plots the coefficients and 95% confidence intervals based on wild-bootstrap clustered standard errors of a regression in which the dependent variable is the monthly number of (live) first births conceived in that month by 19 to 24-year-old women, per 1,000 women of this age who reside in that state. The regressors of interest are dummy variables for each month relative to the period in which child marriage was banned in state s , with the month before the reform being the omitted category. We only report 12 lead coefficients for ease of interpretation, and 12 lag coefficients because there are few states for which more than 12 months have passed since the reform was enacted. The regression also includes state fixed effects, month-year fixed effects, states' unemployment rate, poverty rate, female labor force participation, average income of employed individuals, population (in ln), and dummy variables for whether the state governor belongs to PRI, PAN, PRD or another political party. Standard errors are clustered at the state level.

Figure A.13: Event-Study Estimates of the Effect of Banning Child Marriage on Fertility Rates of 25-29-Year Old Women



Notes: The sample includes all Mexican states from January 2008 to March 2017, and the unit of observation is a month-state. This figure plots the coefficients and 95% confidence intervals based on wild-bootstrap clustered standard errors of a regression in which the dependent variable is the monthly number of (live) first births conceived in that month by 25 to 29-year-old women, per 1,000 women of this age who reside in that state. The regressors of interest are dummy variables for each month relative to the period in which child marriage was banned in state s , with the month before the reform being the omitted category. We only report 12 lead coefficients for ease of interpretation, and 12 lag coefficients because there are few states for which more than 12 months have passed since the reform was enacted. The regression also includes state fixed effects, month-year fixed effects, states' unemployment rate, poverty rate, female labor force participation, average income of employed individuals, population (in ln), and dummy variables for whether the state governor belongs to PRI, PAN, PRD or another political party. Standard errors are clustered at the state level.

Figure A.14: Cross-Country Comparison of Child Marriage and Adolescent Fertility Rates



Notes: This figure depicts the relationship between the percentage of women ages 20-24 who were married before the age of 18 and the adolescent fertility rate for 116 countries. Marriage is defined as formal marriage or cohabitation as if married, and the adolescent fertility rate is the number of births per 1,000 girls ages 15-19. The marker shape identifies the region each country belongs to. The data was compiled by the United Nations Population Fund from the Sustainable Development Goals database, and includes 116 countries in Africa, Asia and the Pacific (except Japan), Eastern Europe, and Latin America and the Caribbean. Only countries with statistics in 2006-2017 are included.

Table A.1: Dates and Relevant Legislation for Child Marriage Ban

State	Date of Child Marriage Ban	Source
Aguascalientes	February 22, 2016	Civil code: articles 145 and 153
Baja California		
Baja California Sur	May 29, 2014	Civil code: articles 157, 163 and 164
Campeche	May 16, 2016	Civil code: articles 159 and 167
Coahuila de Zaragoza	September 4, 2015	Family code: articles 141 and 143
Colima	September 8, 2016	Civil code: articles 148 and 156
Chiapas	April 6, 2016	Civil code: articles 145 and 153
Chihuahua	December 23, 2017	Civil code: articles 136 and 144
Mexico City	July 13, 2016	Civil code: articles 148 and 156
Durango	February 26, 2017	Civil code: articles 143 and 151
Guanajuato	July 5, 2018	Civil code: articles 145 and 153
Guerrero	May 9, 2017	Civil code: articles 412 and 417
Hidalgo	December 31, 2016	Family code: articles 12 and 19
Jalisco	April 4, 2015	Civil code: articles 260 and 268
Mexico	March 14, 2016	Civil code: articles 4.4 and 4.7
Michoacan	June 22, 2016	Family code: articles 133 and 141
Morelos	August 17, 2016	Family code: articles 72 and 77
Nayarit	March 11, 2016	Civil code: articles 144 and 152
Nuevo Leon	January 8, 2018	Civil code: articles 148 and 156
Oaxaca	December 31, 2015	Civil code: articles 147 and 156
Puebla	March 28, 2016	Civil code: articles 299 and 300
Queretaro	October 17, 2018	Civil code: articles 140 and 148
Quintana Roo	December 19, 2014	Civil code: article 697
San Luis Potosi	September 17, 2015	Family code: article 21
Sinaloa	August 19, 2016	Family code: articles 43, 57 and 58
Sonora	December 14, 2018	Family code: articles 15 and 22
Tabasco	July 1, 2017	Civil code: articles 154 and 160
Tamaulipas	June 23, 2016	Civil code: articles 132 and 138
Tlaxcala	December 30, 2016	Civil code: articles 43 and 46
Veracruz	February 3, 2014	Civil code: articles 86 and 92
Yucatan	June 12, 2015	Family code: articles 54 and 59
Zacatecas	March 29, 2017	Family code: articles 107 and 114

Table A.2: Event-Study Estimates of the Effect of Banning Child Marriage on Early Motherhood (All Births) – 16 and 17-Year-Old Girls

	# Total births per 1000 girls of age					
	14-17	16-17	14	15	16	17
Child Marriage Banned - Months [-12, -9]	-0.048 (0.062) [0.453]	-0.071 (0.095) [0.468]	0.006 (0.043) [0.884]	-0.062 (0.087) [0.450]	-0.095 (0.100) [0.342]	-0.047 (0.127) [0.703]
Child Marriage Banned - Months [-8, -5]	0.089 (0.067) [0.176]	0.099 (0.094) [0.296]	0.087 (0.054) [0.127]	0.070 (0.099) [0.478]	0.043 (0.091) [0.650]	0.154 (0.126) [0.208]
Child Marriage Banned - Months [0, 3]	-0.060 (0.070) [0.403]	-0.077 (0.106) [0.459]	0.026 (0.050) [0.614]	-0.111 (0.089) [0.237]	-0.166 (0.112) [0.144]	0.012 (0.127) [0.924]
Child Marriage Banned - Months [4, 7]	0.036 (0.105) [0.738]	0.069 (0.146) [0.633]	0.022 (0.055) [0.700]	-0.014 (0.121) [0.902]	0.033 (0.140) [0.828]	0.105 (0.167) [0.537]
Child Marriage Banned - Months [8, 11]	0.058 (0.076) [0.453]	0.110 (0.098) [0.284]	0.070 (0.069) [0.337]	-0.053 (0.124) [0.689]	0.069 (0.133) [0.645]	0.152 (0.108) [0.159]
Month-year FE	✓	✓	✓	✓	✓	✓
State FE	✓	✓	✓	✓	✓	✓
Controls	✓	✓	✓	✓	✓	✓
Observations	3,552	3,552	3,552	3,552	3,552	3,552
R ²	0.738	0.713	0.515	0.566	0.618	0.644
Dependent Variable Mean	5.040	7.146	1.831	4.056	6.292	8.003

Notes: The sample includes all Mexican states from January 2008 to March 2017, and the unit of observation is a month-state. This figure plots the coefficients and 95% confidence intervals based on wild-bootstrap clustered standard errors of a regression in which the dependent variable is the monthly number of (live) births conceived in that month by 16 to 17-year-old girls, per 1,000 girls of this age who reside in that state. The regressors of interest are dummy variables for each month relative to the period in which child marriage was banned in state s , with the month before the reform being the omitted category. We only report 12 lead coefficients for ease of interpretation, and 12 lag coefficients because there are few states for which more than 12 months have passed since the reform was enacted. The regression also includes state fixed effects, month-year fixed effects, states' unemployment rate, poverty rate, female labor force participation, average income of employed individuals, population (in ln), and dummy variables for whether the state governor belongs to PRI, PAN, PRD or another political party. Standard errors are clustered at the state level.

Table A.3: Event-Study Estimates of the Effect of Banning Child Marriage on Civil Status of 16-17-Year Old Mothers (All Births)

	Share of total births by civil status			
	Married	Union	Single	Missing
Child Marriage Banned - Months [-12, -9]	0.003 (0.006) [0.625]	-0.000 (0.007) [0.964]	0.005 (0.006) [0.450]	-0.008*** (0.002) [0.000]
Child Marriage Banned - Months [-8, -5]	-0.003 (0.004) [0.493]	0.003 (0.004) [0.517]	0.005 (0.005) [0.361]	-0.005*** (0.001) [0.002]
Child Marriage Banned - Months [0, 3]	-0.011 (0.007) [0.113]	0.016* (0.008) [0.050]	-0.008 (0.006) [0.242]	0.003 (0.002) [0.120]
Child Marriage Banned - Months [4, 7]	-0.019* (0.010) [0.056]	0.028** (0.012) [0.027]	-0.012 (0.009) [0.245]	0.003 (0.003) [0.306]
Child Marriage Banned - Months [8, 11]	-0.029 (0.016) [0.100]	0.043** (0.017) [0.025]	-0.016 (0.010) [0.174]	0.002 (0.003) [0.553]
Child Marriage Banned - Months [12, 15]	-0.045** (0.020) [0.027]	0.067*** (0.021) [0.001]	-0.026** (0.011) [0.028]	0.004 (0.004) [0.359]
Child Marriage Banned - Months [16, 20]	-0.045* (0.024) [0.068]	0.072** (0.026) [0.011]	-0.029* (0.014) [0.052]	0.002 (0.003) [0.618]
Month-year FE	✓	✓	✓	✓
State FE	✓	✓	✓	✓
Controls	✓	✓	✓	✓
Observations	3,840	3,840	3,840	3,840
R ²	0.850	0.773	0.740	0.477
Dependent Variable Mean	0.158	0.631	0.192	0.019

Notes: The sample includes all Mexican states in 2008-2017, and the unit of observation is a month-state. These figures plot the coefficients and 95% confidence intervals based on wild-bootstrap clustered standard errors of a regression in which the dependent variable is the percentage of deliveries from girls ages 16-17 ages 25-29 that are in a marriage and informal union at the moment of birth, respectively. The regressors of interest are dummy variables for each month relative to the period in which child marriage was banned in state s , with the month before the reform being the omitted category. We only report 12 lead coefficients for ease of interpretation, and 21 lag coefficients because there are few states for which more than 21 months have passed since the reform was enacted. The regression also includes state fixed effects, month-year fixed effects, states' unemployment rate, poverty rate, female labor force participation, average income of employed individuals, population (in ln), and dummy variables for whether the state governor belongs to PRI, PAN, PRD or another political party. Standard errors are clustered at the state level.

Table A.4: Prenatal Investments and Newborn Health by Civil Status of the Mother Before 2014

	Mothers' civil status			
	Married	Informal Union	Single	Missing
<i>Panel A: Girls ages 14-17 at conception</i>				
Received prenatal care	0.981	0.971	0.953	0.960
First prenatal visit during the first trimester	0.746	0.703	0.618	0.688
Total number of prenatal visits	7.163	6.535	6.224	6.388
Delivery by caesarean	0.396	0.358	0.370	0.398
Less than 37 weeks of gestation	0.054	0.054	0.061	0.063
Birthweight < 2500 grams	0.055	0.060	0.064	0.069
Apgar score < 7	0.013	0.013	0.012	0.014
Observations	236,039	774,343	265,656	20,319
<i>Panel B: Girls ages 16-17 at conception</i>				
Received prenatal care	0.982	0.973	0.956	0.963
First prenatal visit during the first trimester	0.753	0.713	0.632	0.704
Total number of prenatal visits	7.244	6.624	6.305	6.495
Delivery by caesarean	0.399	0.362	0.370	0.404
Less than 37 weeks of gestation	0.053	0.052	0.059	0.060
Birthweight < 2500 grams	0.054	0.058	0.063	0.067
Apgar score < 7	0.013	0.012	0.012	0.014
Observations	184,789	518,191	172,014	137,27

Notes: These data were taken from the birth registry microdata in 2008-2013. We took the sample of women who were 14-17 (Panel A) or 16-17 (Panel B) at the time of conception of their first child, divided them into three groups according to their civil status, and computed averages for each group. Column 1 includes formally married mothers, column 2 includes those that were in an informal union (but not formally married), column 3 includes women who were single, and column 4 includes women who did not report their civil status.

Table A.5: Event-Study Estimates of the Effect of Banning Child Marriage on Prenatal Investment of 14-17-Year Old Mothers and Newborn Health

	Prenatal investments				Newborn health		
	Prenatal care	First visit 1T	# Prenatal visits	Caesarean	Premature	Low birthweight	Apgar < 7
Child Marriage Banned - Months [-12, -9]	-0.002 (0.002) [0.341]	-0.003 (0.006) [0.721]	-0.024 (0.037) [0.551]	-0.005 (0.004) [0.186]	0.002 (0.002) [0.268]	0.002 (0.002) [0.465]	0.001 (0.001) [0.191]
Child Marriage Banned - Months [-8, -5]	-0.001 (0.001) [0.352]	0.001 (0.005) [0.833]	-0.009 (0.022) [0.679]	-0.007 (0.003) [0.061]	0.002 (0.002) [0.446]	0.002 (0.002) [0.367]	0.002*** (0.001) [0.008]
Child Marriage Banned - Months [0, 3]	-0.001 (0.001) [0.584]	0.004 (0.003) [0.171]	0.002 (0.023) [0.913]	0.001 (0.004) [0.806]	0.000 (0.002) [0.994]	-0.001 (0.002) [0.678]	0.000 (0.001) [0.902]
Child Marriage Banned - Months [4, 7]	0.000 (0.002) [0.853]	0.005 (0.004) [0.223]	0.040 (0.036) [0.297]	-0.007 (0.006) [0.264]	-0.002 (0.002) [0.315]	-0.000 (0.001) [0.805]	-0.000 (0.001) [0.913]
Child Marriage Banned - Months [8, 11]	0.001 (0.002) [0.808]	0.009 (0.006) [0.195]	0.019 (0.055) [0.737]	0.004 (0.006) [0.556]	0.003 (0.002) [0.248]	0.002 (0.002) [0.506]	0.000 (0.001) [0.457]
Month-year FE	✓	✓	✓	✓	✓	✓	✓
State FE	✓	✓	✓	✓	✓	✓	✓
Controls	✓	✓	✓	✓	✓	✓	✓
Observations	1,949,230	1,870,628	1,904,270	1,963,053	1,966,086	1,856,532	1,947,376
R ²	0.008	0.010	0.022	0.011	0.002	0.004	0.003
Dependent Variable Mean	0.969	0.699	6.605	0.364	0.057	0.060	0.012

Notes: The sample includes all women who had their first child in 2008-2017 and were 14 to 17 years old at the moment of conception. The dependent variables are specified in the column header. In the regressions in columns 1 and 2, the dependent variables are dummies for whether the mother had any prenatal cares and had her first prenatal visit in the first trimester, respectively. The regressors of interest are dummy variables for each 4-month period relative to the period in which child marriage was banned in the state of residence of the mother, with the period before the reform being the omitted category. We only report lead coefficients for up to 12 months before the reform for ease of interpretation, and lag coefficients for 11 months after the reform, as there are few states for which more than 11 months have passed since the reform was enacted. Controls include states' unemployment rate, poverty rate, labor force participation of females ages 20 and above, average income of employed individuals, population (in ln), and dummy variables for whether the state governor belongs to PRI, PAN, PRD or another political party. Standard errors clustered by state are in parentheses, and cluster-robust wild-bootstrap p-values in square brackets. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table A.6: Event-Study Estimates of the Effect of Banning Child Marriage at the Moment of Birth on Prenatal Investment of 16-17-Year Old Mothers and Newborn Health

	Prenatal investments				Newborn health		
	Prenatal care	First visit 1T	# Prenatal visits	Caesarean	Premature	Low birthweight	Apgar < 7
Child Marriage Banned - Months [-12, -9]	0.000 (0.002) [0.832]	0.002 (0.008) [0.810]	-0.013 (0.036) [0.710]	-0.009 (0.007) [0.268]	0.000 (0.003) [0.899]	-0.001 (0.003) [0.723]	0.001 (0.001) [0.292]
Child Marriage Banned - Months [-8, -5]	-0.004** (0.001) [0.018]	0.002 (0.005) [0.700]	-0.017 (0.030) [0.592]	0.007 (0.006) [0.296]	-0.001 (0.003) [0.718]	-0.004 (0.002) [0.127]	-0.000 (0.001) [0.911]
Child Marriage Banned - Months [0, 3]	0.002 (0.002) [0.513]	0.003 (0.006) [0.658]	0.029 (0.039) [0.512]	-0.008* (0.004) [0.120]	-0.006* (0.003) [0.088]	-0.005* (0.002) [0.057]	-0.000 (0.001) [0.900]
Child Marriage Banned - Months [4, 7]	0.002 (0.003) [0.476]	0.009 (0.007) [0.290]	0.022 (0.054) [0.723]	0.001 (0.005) [0.793]	-0.007 (0.004) [0.157]	-0.003 (0.003) [0.503]	-0.000 (0.001) [0.780]
Child Marriage Banned - Months [8, 11]	0.002 (0.003) [0.577]	0.008 (0.008) [0.416]	0.044 (0.055) [0.455]	0.003 (0.006) [0.606]	-0.005 (0.003) [0.125]	-0.004 (0.003) [0.197]	-0.001 (0.001) [0.322]
Child Marriage Banned - Months [12, 15]	0.003 (0.004) [0.519]	0.009 (0.010) [0.455]	0.040 (0.066) [0.582]	-0.002 (0.008) [0.780]	-0.007* (0.004) [0.093]	-0.005 (0.004) [0.315]	-0.001 (0.001) [0.435]
Child Marriage Banned - Months [16, 20]	0.007 (0.004) [0.142]	0.008 (0.012) [0.550]	0.076 (0.087) [0.474]	0.010 (0.009) [0.341]	-0.003 (0.003) [0.324]	-0.004 (0.003) [0.162]	-0.002 (0.001) [0.153]
Month-year FE	✓	✓	✓	✓	✓	✓	✓
State FE	✓	✓	✓	✓	✓	✓	✓
Controls	✓	✓	✓	✓	✓	✓	✓
Observations	851,593	818,031	831,268	857,640	858,982	810,651	850,554
R ²	0.008	0.011	0.023	0.011	0.002	0.004	0.003
Dependent Variable Mean	0.970	0.703	6.630	0.364	0.061	0.062	0.012

Notes: The sample includes all women who had their first child in 2008-2017 and were 16 to 17 years old at the moment of birth. The dependent variables are specified in the column header. In the regressions in columns 1 and 2, the dependent variables are dummies for whether the mother had any prenatal cares and had her first prenatal visit in the first trimester, respectively. The regressors of interest are dummy variables for each 4-month period relative to the period in which child marriage was banned in the state of residence of the mother, with the period before the reform being the omitted category. We only report lead coefficients for up to 12 months before the reform for ease of interpretation, and lag coefficients for 20 months after the reform, as there are few states for which more than 20 months have passed since the reform was enacted. Controls include states' unemployment rate, poverty rate, labor force participation of females ages 20 and above, average income of employed individuals, population (in ln), and dummy variables for whether the state governor belongs to PRI, PAN, PRD or another political party. Standard errors clustered by state are in parentheses, and cluster-robust wild-bootstrap p-values in square brackets. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table A.7: Effect of Banning Child Marriage on Child Marriage Rates – Migration and Groom’s State of Residence

	# Marriages per 1000 girls of age				
	14-17	14	15	16	17
<i>Panel A: State where marriage happened</i>					
Child Marriage Banned	-0.353*** (0.098) [0.002]	0.001 (0.042) [0.993]	-0.017 (0.084) [0.854]	-0.633*** (0.173) [0.004]	-0.764*** (0.186) [0.001]
Observations	4,608	4,608	4,608	4,608	4,608
R ²	0.763	0.565	0.621	0.744	0.740
<i>Panel B: Groom’s state of residence</i>					
Child Marriage Banned	-0.343*** (0.102) [0.005]	-0.008 (0.041) [0.911]	-0.030 (0.083) [0.768]	-0.603*** (0.175) [0.003]	-0.736*** (0.193) [0.003]
Observations	4,608	4,608	4,608	4,608	4,608
R ²	0.770	0.575	0.629	0.751	0.747
Month-year FE	✓	✓	✓	✓	✓
State FE	✓	✓	✓	✓	✓
Controls	✓	✓	✓	✓	✓

Notes: The sample includes all Mexican states in 2007-2018, and the unit of observation is a month-state. The dependent variable in Panel A is the monthly number of marriages per 1,000 girls from the age group specified in the column header that took place in that state. The dependent variable in Panel B is the monthly number of marriages per 1,000 girls from the age group specified in the column header with a groom that resides in that state. The regressor of interest is a dummy for whether child marriage was not allowed in that given state and month. Controls include states’ unemployment rate, poverty rate, labor force participation of females ages 20 and above, average income of employed individuals, population (in ln), and dummy variables for whether the state governor belongs to PRI, PAN, PRD or another political party. Standard errors clustered by state are in parentheses, and cluster-robust wild-bootstrap p-values in square brackets. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table A.8: Effect of Banning Child Marriage on Adults' Formal Marriage Rates

	# Marriages per 1000 women of age			
	19-24	25-29	30-34	35-39
Child Marriage Banned	-0.053 (0.077) [0.599]	-0.038 (0.048) [0.455]	-0.010 (0.027) [0.724]	0.003 (0.019) [0.886]
Month-year FE	✓	✓	✓	✓
State FE	✓	✓	✓	✓
Controls	✓	✓	✓	✓
Observations	4,608	4,608	4,608	4,608
R ²	0.587	0.497	0.405	0.369
Dependent Variable Mean	2.747	2.146	1.092	0.607

Notes: The sample includes all Mexican states in 2007-2018, and the unit of observation is a month-state. The dependent variable is the monthly number of marriages per 1,000 women from the age group specified in the column header who reside in that state. The regressor of interest is a dummy for whether child marriage was not allowed in that given state and month. Controls include states' unemployment rate, poverty rate, labor force participation of females ages 20 and above, average income of employed individuals, population (in ln), and dummy variables for whether the state governor belongs to PRI, PAN, PRD or another political party. Standard errors clustered by state are in parentheses, and cluster-robust wild-bootstrap p-values in square brackets. * significant at 10%; ** significant at 5%; *** significant at 1%.