Divorce laws and intimate partner violence: Evidence from Mexico*

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Abstract

This paper examines whether divorce laws affect intimate partner violence (IPV) in the context of a developing country. Exploiting the state-level variation in the timing of the introduction of unilateral and no-fault divorce in Mexico, it estimates the causal effect of reducing the cost of divorce on male-to-female physical, sexual, emotional and economic IPV. The results indicate a significant decrease in sexual, emotional and economic IPV, which is driven by couples who continue to remain married after the reform. This decline, however, only holds when these types of IPV are not associated with physical violence. The results also show a significant increase in physical and sexual IPV occurring alone or with no associated emotional and/or economic violence. Taken together, these findings suggest a substitution effect across forms of IPV, which is not consistent with the prediction of divorce threat models.

Keywords: Divorce laws, domestic violence, household bargaining, developing countries

JEL Classification: J12, J16, K36

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1 Introduction

IPV[1] is a serious public health problem. In Mexico, estimates indicate that about 37% of married (74% of divorced) women have experienced it at some point during their current (past) relationship. IPV is also associated with a wide range of negative outcomes for victims including unstable employment, reductions in productivity and earnings, and poor health (Campbell, 2002; Farmer and Tiefenthaler, 2004; Lloyd, 1997; Tolman and Wang, 2005); as well as negative externalities on children (Aizer, 2011; Carrell and Hoekstra, 2010; Pollak, 2004). In this context, it is crucial to understand what can be done to prevent IPV. Economists have provided some insights into this question by examining factors that could potentially affect violence, including labour market opportunities (Aizer, 2010; Anderberg et al., 2015), conditional cash transfer (CCT) programmes (Angelucci, 2008; Bobonis et al., 2013), historical factors (Alesina et al., 2016; Tur-Prats, 2015), and arrest and prosecution policies (Aizer and Dal Bó, 2009; Iyengar, 2009).

There is still, however, little evidence of the impact of divorce laws on IPV, both inside and outside economics. This paper examines this question by exploiting the variation in the timing of the introduction of unilateral and no-fault divorce (hereafter unilateral divorce) across Mexican states. Unilateral divorce implies that either of the two spouses can file for divorce without the consent of the other and without the need to prove fault. Studying divorce laws is important because, by regulating the dissolution of the marriage, they are likely to affect intra-household dynamics including the experience of IPV.

To the best of my knowledge, only two papers have examined the impact of divorce laws on IPV (Brassiolo, 2016; Stevenson and Wolfers, 2006). Both of them find a significant decrease in IPV following a reduction in the cost of divorce. However, they focus on developed countries, namely Spain and United States, respectively, whose findings might not apply to the case of developing countries. The main reason lies in the different socio-economic and cultural contexts, including the importance of religion[2]. For instance, in developing countries, there is evidence that IPV is relatively more normal, there is less support for victims, more difficulties enforcing alimony payments and child maintenance, and fewer outside options for women. Divorce is also less culturally accepted[3] (Heise and Kotsadam, 2015; WHO, 2002, 2014). All these reasons might make women less likely to divorce and/or men more likely to inflict IPV in response to a reduction in the cost of divorce in developing countries compared to their counterparts in developed ones.

[1] I use IPV, violence and abuse interchangeably.

[2] According to the 2010 Population Census, 83% of Mexicans consider themselves as Catholics. Moreover, a national survey on the values and attitudes of Catholics conducted in 2006 found that only 19% of Catholics do not (or very rarely) attend religious services. Although one might argue that Catholicism is also very important in Spain, the percentage of practicing Catholics has sharply decreased over time. According to the CIS Barómetro of 2006, 78% of Spanish consider themselves as Catholics of which 53% never (or very rarely) attend mass.

[3] Comparing Mexico to United States, Mexico's crude divorce rate was 0.7 in 2006, whereas in United States it was 3.7 (data from the United Nations).

Consequently, it is not clear *a priori* whether the effect of unilateral divorce on IPV will be similar in both settings. For instance, one could observe an increase, instead of a decrease, if easier divorce leads to what is known as a 'male backlash effect'[4].

The primary contribution of my paper is, thus, to empirically examine the relationship between easier divorce and IPV in the context of a developing country. To do so, I focus on Mexico, which provides a unique case study for analysing the question of interest. First, divorce laws are determined at the state level, which allows me to exploit the staggered implementation of unilateral divorce. Similar divorce reforms in other countries have occurred at the national level[5]. Second, the timing of the reform and the availability of data are appropriate to examining the impact of easier divorce on IPV in a Difference-in-Differences (DiD) framework, which will provide an estimate of the average causal effect of the reform. In particular, there is information on IPV both before and after the law changes, which is not the case for the other reforming countries of the region.

In order to estimate the causal impact of reducing the cost of divorce on IPV, I use three waves (2003, 2006 and 2011) of a nationally representative survey called ENDIREH[6]. I employ a DiD approach and estimate the effect of the reform on four types of IPV, namely physical, sexual, emotional and economic.

My baseline results indicate that sexual, emotional and economic IPV have declined by 1.7, 4.9 and 4.3 percentage points, respectively, in treatment states relative to control ones following the reform. Compared to the prevalence of IPV in the treatment group prior to the divorce reform, this corresponds to a 30%, 23% and 20% decline in IPV, respectively. This reduction is mainly driven by couples who continue to remain married after the reform. In the case of physical IPV, the effect is found to be insignificant and close to zero, which is not explained by the definition of violence used or by heterogeneous effects of the reform.

I next examine whether easier divorce might have led to a substitution effect across types of IPV by constructing a set of indicators that capture different combinations of violence. I find that the significant decline in sexual, emotional and economic IPV only holds when these types of abuse are not associated with physical violence (and/or sexual IPV in the two latter cases). I also find that physical and sexual IPV occurring alone or with no associated emotional and/or economic violence have significantly increased after the reform. Taken together, these results suggest that the reduction in the cost of divorce

[4]In this context, a 'male backlash effect' occurs when the husband perceives the improvement in the wife's outside option-through the reduction in the cost of divorce- as a threat to his culturally prescribed dominant role.

[5]Nicaragua allowed for unilateral divorce in 1988. In Uruguay, since 2013 unilateral divorce can be filed for after four months of being married. Previously, only women could unilaterally file for it, but there was a two-year marriage requirement. More recently, Argentina (2015) has moved towards unilateral divorce without any temporal requirement.

[6]*Encuesta Nacional sobre la Dinámica de las Relaciones en los Hogares* (National Survey on the Dynamics of the Relationship within the Households).

might have led to a substitution of emotional and economic IPV for physical and sexual violence. My findings are not in line with the prediction of divorce threat models. Instead, they are consistent with a 'male backlash effect' explanation by which unilateral divorce has been perceived by the husband as a threat to his dominant position. They are also consistent with an explanation by which men use IPV as an instrument to prevent their wives from leaving the marriage. If these two mechanisms are in place, one would expect the substitution effect to be concentrated on wives and husbands with 'traditional' views on gender roles (Overall et al., 2016). I find that this is, indeed, the case.

There are at least two reasons—consistent with my data—that could explain why 'male backlash effect' or 'divorce prevention' explanations are in line with an increase in physical and sexual IPV, but not other forms of violence. First, physical and sexual IPV are less common and, as a result, more likely to have a greater impact on the wife's behaviour than emotional and economic abuse. Second, women usually consider physical and sexual IPV to be 'more serious' than emotional and economic abuse. Related to this, they tend to be more afraid of physical and sexual IPV, which makes these types of violence particularly suitable to create an atmosphere of fear (Radford and Harne, 2008). Together, these reasons suggest that physical and sexual IPV might be more 'effective' than other types of violence, at least in the short-run, which would make men more likely to use them as an instrument to reassert their dominance and to prevent their wives from divorcing.

Finally, I estimate the effect of unilateral divorce on a proxy for the woman's bargaining power in the household, namely her contribution to decision-making. My results indicate that, after the reform, the woman's absolute and relative decision-making power has significantly increased in the treatment, as compared to the control, group. Although divorce threat models posit that this improvement could work as as a channel through which easier divorce decreases IPV, this is unlikely to be the case in my context. The reason is that the decline in sexual, emotional and economic IPV has been accompanied by an increase in physical and sexual IPV occurring alone or with no associated emotional and/or economic violence, which seems to be consistent with 'male backlash effect' and 'divorce prevention' explanations.

In addition to examining the relationship between divorce laws and IPV in the context of a developing country, the results of this paper contribute to the previous literature in a number of other ways. First, they highlight the importance of analysing potential substitution effects across types of IPV; an analysis very rarely conducted in the literature. Second, they indicate that the spouses' views on gender roles are an important source of variation in explaining the impact of unilateral divorce on IPV, which is consistent with previous findings focusing on income (e.g. Angelucci (2008) and Atkinson et al. (2005)). Third, they shed some light on the determinants of the intra-household distribution of power by showing an improvement in the woman's decision-making power following a reduction in the cost of divorce. Finally, they inform about the potential consequences of

unilateral divorce in the specific case of Mexico. This is of particular importance in the context of this country, where states are gradually moving towards unilateral divorce and where this move is facing the opposition of conservative sectors of the society.

The rest of the paper is organised as follows. Section 2 briefly reviews previous related literature. Section 3 describes the divorce reform in Mexico. Section 4 specifies the identification strategy. Section 5 describes the data and presents some descriptive statistics. Section 6 reports the baseline results, conducts some robustness tests and examines the potential reasons behind my findings. Section 7 looks at the effect of easier divorce on the woman's bargaining power. Section 8 provides some conclusions and discusses the implications of the study.

2 Related literature

Divorce threat models predict that easier access to divorce divorce will decrease IPV through two main channels. The first works through a decrease in the probability of abuse within intact marriages. The idea is that easier divorce makes the threat of divorce more credible, which redistributes bargaining power towards the spouse relatively more willing to divorce. In the context of abusive relationships, she would presumably be the abused partner, who can use her improved bargaining position to lower the level of violence.

The second mechanism works through an increase in the probability that abused women divorce, since the reduction in the cost of divorce makes the dissolution of violent relationships easier. A necessary condition for this latter channel is that divorce rates have changed following the adoption of unilateral divorce. This was one of the earliest studied outcomes in the divorce literature[7]. Most of these studies have found a significant increase in divorce rates following a reduction in the cost of divorce, at least in the short run (see Friedberg (1998) and Wolfers (2006) for a state-level analysis in the United States, and González and Viitanen (2009) and Kneip and Bauer (2009) for a cross-country analysis in Europe). Nevertheless, the end of the marriage does not necessarily lead to the end of violence (Aizer and Dal Bó, 2009). This is confirmed by my 2006 sample in which 40% of divorced women who were abused during their last marriage, have also experienced IPV inflicted by their ex-husband after divorcing.

In spite of the theoretical association between divorce laws and IPV, the empirical evidence remains scarce. To the best of my knowledge, only two papers in the economics literature have looked at the effect of divorce laws on IPV. The earliest one is Stevenson and Wolfers (2006), who exploit the state-level variation in the timing of the introduction of unilateral divorce in United States. Employing a DiD strategy and two waves (1976 and 1985) of a national survey on physical violence, they find a large decline in both

[7]Other outcomes include marriage rates (Rasul, 2006), woman's labour supply (Bargain et al., 2012; Gray, 1998; Stevenson, 2008), home production (Gray, 1998), children's outcomes (Gruber, 2004), fertility decisions (Bellido and Marcén, 2014; Drewianka, 2008) and violent crime (Delpiano and Giolito, 2012).

male-to-female and female-to-male IPV. One of the main limitations of this paper is the fact that they only have two survey waves and, by the time of the first wave, 31 states had already introduced unilateral divorce, while 37 had done so by the time of the second one. In order to mitigate this latter concern, they use alternative control groups and show that their estimates are not sensitive to them[8].

In a more recent paper, Brassiolo (2016) analyses the impact of a 2005 reform that significantly reduced the cost of divorce in Spain on male-to-female IPV[9]. Using cohabiting women as a control group, he finds a significant decrease in IPV following the reform. He also finds that women in the middle and bottom of the education distribution, and those without young children appear to have benefited the most from the reform. Furthermore, Brassiolo (2016) attempts to disentangle whether the reduction in violence is due to a decrease in the propensity towards violence of married couples or to an increase in the propensity of abused women to dissolve the marriage. He does so by comparing the estimate obtained using the whole universe of women who were married at the time of the reform, regardless of their marital status at the time of the survey, with the estimate obtained when the sample is restricted to women who were married at the time of the reform and continue to be so at the time of the survey. He finds that the bulk of the decline is concentrated on the latter, which provides support for the first mechanism[10].

In the context of Mexico, a recent paper (Beleche, 2017) sheds some light on the effect of three reforms related to domestic violence (i.e. criminalisation of domestic violence in the Penal Code, inclusion of domestic violence as a ground for divorce and adoption of the Law of Access, Assistance and Prevention against Intra-Family Violence) on IPV. The objective of this study is to estimate the impact of these reforms on female suicide rates by exploiting their staggered introduction. The results show a significant decrease in suicide rates in adopting states, as compared to non-adopting ones, following the introduction of the Penal Code reform; whereas no significant effect is reported for the other two reforms[11]. In order to examine the possible mechanisms behind her findings, she looks at the effect of the Penal Code reform on IPV using the ENDIREH 2003 sample. She finds a

[8]Stevenson and Wolfers (2006) also examine the impact of unilateral divorce on intimate homicides. Their results show a significant decrease in male-to-female homicides, while the estimates are insignificant when female-to-male homicides are considered. These findings stand in sharp contrast to the ones in Dee (2003), who reports an insignificant effect of unilateral divorce on spousal homicides of wives, whereas a significant increase in spousal homicides of husbands. The latter is concentrated in states with matrimonial property laws that favour the husbands. Given this, he suggests that the increase in homicides of husbands might be due to a loss of the wife's bargaining power.

[9]This reform eliminated, among other things, the need for one-year judicial separation before a divorce could be filed, reduced the mandatory marriage length before dissolution from one year to three months, and introduced unilateral and no-fault divorce.

[10]Stevenson and Wolfers (2006) cannot disentangle both channels because their survey only captures information on married couples.

[11]Stevenson and Wolfers (2006) also look at the effect of unilateral divorce on suicide rates and find a significant decrease in female suicide rates following the reform, while the effect for male suicide rates seems to be insignificant.

significant decline in the probability of physical and sexual violence, while an insignificant effect is obtained for emotional abuse.

In addition to the divorce literature, my paper is also closely related to a body of research that aims to understand the determinants of IPV. In this regard, most attention has been devoted to the relationship between a woman's economic status and IPV. Studies from developed countries have usually reported a negative association between both (Aizer, 2010; Anderberg et al., 2015), which is consistent with the classical prediction of divorce threat models. By contrast, evidence from developing countries has been mixed.

In the context of Mexico, two papers have studied the impact of the antipoverty CCT programme *Oportunidades* on IPV (Angelucci, 2008; Bobonis et al., 2013). Bobonis et al. (2013) find that beneficiary women are less likely to experience physical IPV, but more likely to experience threats of violence with no associated physical violence compared to non-beneficiary women. They suggest that this may be driven by a motive of rent extraction. Exploiting the initial random implementation of the programme in rural villages, Angelucci (2008) examines its impact on drunken IPV. She finds different results depending on the magnitude of the income transfer and the husband's level of education. Violence decreases for households entitled to small transfers and for households entitled to large transfers where husbands have completed primary education, whereas it increases for households entitled to large transfers where husbands have not completed primary education. She suggests that men without primary education might hold 'traditional' views on gender roles and, consequently, they might perceive income transfers targeted at women as a threat to their dominant position (i.e. a 'male backlash effect' occurs).

Evidence from other regions is also mixed. In the context of India, Amaral (2017) finds that the probability of experiencing IPV decreases following a reform that improves women's inheritance rights. Using an instrumental variable (regional variation in the impact of rainfall shocks on female labour demand in rural areas) approach, Chin (2012) reports a negative effect of working for pay on the probability of physical IPV. This result stands in sharp contrast to the one in Luke and Munshi (2011) employing female income and a similar methodology.

Taken together, the literature has shown that, in the context of a developing country, an improvement in the woman's outside option will not necessarily decrease IPV, as was already suggested in section 1. This is empirically examined for the case of divorce laws in the following sections.

3 Reform of the divorce legislation in Mexico

In Mexico, divorce laws are determined at the state level. The first state to introduce unilateral divorce was Mexico City[12] in August 2008, followed by Hidalgo in March 2011

[12]During my time span Mexico had 31 states and one Federal District, but for simplicity I refer to all of them as states. Recently the Federal District has changed its name to Mexico City.

and ten other states between 2012 and 2017[13]. Given that the last wave of the survey was conducted in 2011, I only have two treatment states, namely Mexico City and Hidalgo.

In Mexico City, the Legislative Assembly approved unilateral divorce on 27th August 2008 by amending the Civil Code and the Code of Civil Procedures[14]. This reform was published in the *Gaceta Oficial* of the Federal District on 3rd October, which came into effect 30 days after it. In Hidalgo, the Congress approved unilateral divorce on 18th March 2011 by amending the Family Law and the Code of Family Procedures[15]. This was published in the *Periódico Oficial* of the State of Hidalgo on 31st March and came into effect 60 days after it. Under the new legislation, any of the two spouses can ask for the dissolution of the marriage without the consent of the other and without the need to prove fault. In the case of Mexico City there is the specific requirement of having been married for at least one year. The procedure of unilateral divorce is judicial and requires filing for it at the Family Court.

In the old divorce regime, if a partner wanted to unilaterally dissolve the marriage, she needed to prove a cause, which included, among others, the usual causes of domestic violence[16], infidelity and abandonment of the home. Fault divorce has been derogated in both Mexico City and Hidalgo. Alternatively, both partners could file for divorce by mutual consent at the Family Court (judicial procedure), which required a mandatory one-year of marriage. This type of mutual consent divorce has been derogated in Mexico City, whereas in Hidalgo it does no longer have the one-year length of marriage requirement. Furthermore, in Mexico City there was, and still is after the reform, the so-called administrative divorce, which is a mutual consent divorce by administrative procedure. Thus, it needs to be filed for at the Civil Registry, instead of the Family Court, and requires having been married for at least one year[17]. Further information on the divorce types and requirements can be found in columns 1-4 of table B1 in the Appendix.

The benefits of the reform depend on the type of divorce spouses are likely to file for. If mutual consent is an option, this reform has not introduced any benefit in Mexico City, since they could file for mutual consent divorce by judicial procedure under the old regime and they can still file for administrative divorce if they fulfill the requirements.

[13]Guerrero and Estado de Mexico in 2012; Quintana Roo, Coahuila and Sinaloa in 2013; Nayarit in 2014; Aguascalientes and Yucatan in 2015; Queretaro in 2016; and Oaxaca in 2017.

[14]See pages 31-56 of the *Diario de los debates de la Asamblea Legislativa del Distrito Federal* of 27th August 2008. Complete text in `http://www.aldf.gob.mx/archivo-29d877a2d50013f22c7ee4613fc35a2d.pdf`. This text also contains information about the origins of the reform, the motivation for approving it and the voting results.

[15]See Decree 584 in `http://intranet.e-hidalgo.gob.mx/normatecae/archivos/dec584.pdf`. It also contains information about the motivation for approving the reform.

[16]Domestic violence as a cause for divorce was explicitly recognised in Mexico City, but not Hidalgo. To the best of my knowledge, a proposal for legislative reform presented in September 2008 requested its addition, but it was not added by the time unilateral divorce was approved. Even when domestic violence was not explicitly recognised, it could be grounded on the cause of 'brutality, threats and serious insults'.

[17]It also requires being above 18, not having children under custody and having reached an agreement about the dissolution of the matrimonial property.

Comparing administrative to unilateral divorce, couples that qualify for the former are expected to file for it given its lower time[18] and likely economic cost[19]. Support for this is found in figure C1 in the Appendix, which depicts the divorce rate by type of divorce. It shows that the number of administrative divorces per 1,000 inhabitants has followed an increasing trend over time and this has not changed after the reform. In the case of Hidalgo, if mutual consent is an option, the reform has reduced the cost of divorce in terms of time, since mutual consent divorce does no longer require one year of marriage.

If mutual consent is not an option (which is likely in the context of violent marriages) or proving fault is difficult, this reform has clearly reduced the cost of divorce in time[20], monetary and emotional terms. However, the length of time and the cost needed to obtain unilateral divorce depend, among other things, on whether the spouses reach an agreement regarding the children's custody, alimony payments, use of marital home and dissolution of the matrimonial property.

The adoption of unilateral divorce has also been accompanied by changes in the economic compensation upon divorce. In particular, it has been made explicit that there needs to be a compensation for the spouse who has been responsible for the household chores and care of the children, or that has not acquired property (or of significantly lower value) during the marriage[21]. Although an economic compensation existed in the old divorce regime, in the case of fault divorce, it was only received by the innocent spouse. Thus, when there was no innocent spouse (e.g. divorce was grounded on a separation length of at least two years), none of the spouses received a compensation.

The reduction in the cost of divorce had immediate effects on divorce rates, as figure 1 shows. They boosted in the year following the reform with growth rates reaching 22% in Mexico City and 38% in Hidalgo. One possible reason for this large increase is that unilateral divorce could have increased divorce among couples that sooner or later were going to divorce, even if the law had not been passed. After the initial rise in divorces, the increasing trend decelerated in both states and, since 2012, the growth rate has become negative in Mexico City, which is consistent with findings in United States (Wolfers, 2006)[22].

Furthermore, the reduction in the cost of divorce could have had a differential impact

[18] Administrative divorce is usually granted within 15 and 30 days, while a judicial divorce requires at least one month.

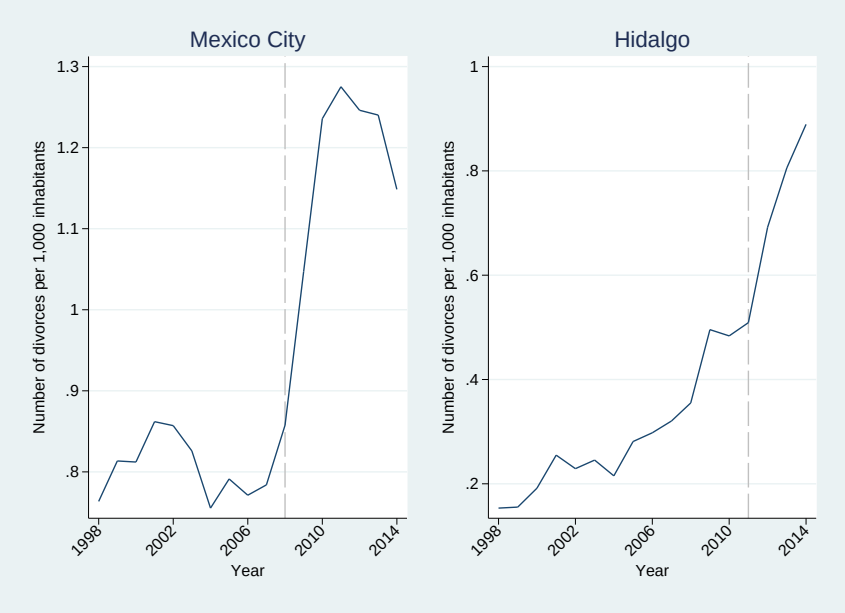
[19] The cost of registering an administrative divorce in Mexico City is 1,050.00 Mexican pesos, while a judicial decree 208.90 (SEFIN, 2016). However, once legal fees have been taken into account, the overall cost of an administrative divorce is usually lower than that of a judicial divorce

[20] A fault divorce could take a minimum of six months.

[21] In Mexico City, this only occurs when the matrimonial property regime is separation, while in Hidalgo regardless of the regime (for more details see Article 267 VI of the Civil Code of the Federal District and Article 476 bis of the Code of Family Procedures of Hidalgo).

[22] One possible explanation for the negative growth rate is that, even if divorce rates among couples that were married when the divorce reform was introduced could have risen, divorce rates among post-reform married couples might have dropped to a larger extent, as Mechoulan (2006) finds for United States, which would have left a negative net effect.

Figure 1: Divorce rate



Notes: The vertical axes refer to the annual number of divorces per 1,000 inhabitants. The vertical lines refer to the year unilateral divorce was introduced (2008 in Mexico City and 2011 in Hidalgo). *Source:* Divorce statistics, INEGI

on wives and husbands. As mentioned earlier, the spouse relatively more willing to exit the marriage, would have benefited the most from the reform. Looking at figure 2, which depicts the percentage of divorces petitioned by wives, husbands and both, women seem to be the most willing to exit the marriage. Further support for this is found when looking at fault divorces grounded on the cause of domestic violence (see figure C2 in the Appendix). Even when women file for divorce more often than men, the increase in the percentage of divorces initiated by them after the reform does not seem to be relatively larger than that experienced by men (see figure 2), which suggests that both spouses have benefited similarly from the reform. Filing for divorce is, however, only one part of a bigger picture. The reform could have benefited women relatively more than men even when they do not divorce. This would be the case if it has led to a redistribution of bargaining power towards them. In section 7, I will show that this seems to be, indeed, the case.

In addition, upon divorce, the change in the economic compensation rules is likely to have benefited women relatively more than men, since they usually fulfill the role of 'housewives' (58% of my sample) and acquire less assets during the marriage. In the case of Mexico City, this change only applies when the matrimonial property regime is separation. Even so, if couples are married under a community property regime, the spouse who has acquired less assets during the marriage, which is usually the wife, would be the one benefiting more from the regime. In Mexico, there is no matrimonial property regime by default, but spouses need to choose it at the time of the marriage. They

Figure 2: Percentage of divorces by who initiates divorce

Notes: The vertical axes refer to the percentage of divorces initiated by women, men and both. The vertical lines refer to the year unilateral divorce was introduced (2008 in Mexico City and 2011 in Hidalgo). *Source:* Divorce statistics, INEGI.

have the option of community and separate regimes, or a mix of both types[23]; and this has not changed with the reform. The survey provides information on the matrimonial property regime of couples in 2003, which indicates that 69% of them were married under a community property regime, 14% under a separate regime and 17% did not know the regime. If these numbers can be extrapolated to the two other years[24], I would expect that, overall, easier divorce has not damaged women in terms of property.

4 Identification strategy

In order to estimate the causal impact of reducing the cost of divorce on IPV, I take advantage of the natural experiment explained above. Specifically, the geographical and temporal variation in the introduction of unilateral divorce provides an ideal setting for a DiD framework. This approach compares the average prevalence of IPV in reform and non-reform states, before and after the reform. More formally, I pool the three survey

[23]I do not have information on the matrimonial property regime of couples, which does not allow me to examine heterogeneous effects of the reform by this variable.

[24]Although this question is not directly asked in the other two years, I can infer the matrimonial property regime for the group of abused women in 2006, which shows that in most cases they are also married under a community property regime.

years (2003, 2006, 2011) and estimate the following Linear Probability Model[25]:

$$IPV_{ist} = \beta_0 + \delta Treat_s \times Post_t + \beta_1 X_{ist} + \alpha_s + \gamma_t + \varepsilon_{ist} \quad (1)$$

where ist refers to woman i living in state s at the time of the survey observed in survey year t. The sample is restricted to married women at the time of the reform. IPV_{ist} is an indicator of whether the woman has experienced IPV in the past 12 months. $Treat_s$ is a dichotomous variable equal to one if the state has introduced unilateral divorce by 2011, i.e. if it is Mexico City or Hidalgo, and zero otherwise (the control group is formed by 9 non-reform states, which is explained below). $Post_t$ is an indicator of whether the survey was conducted in the post-treatment period i.e. 2011. δ is the DiD estimator or, in other words, the average change in the prevalence of IPV due to the divorce reform.

X_{ist} includes a set of time-varying covariates at the individual, couple and household level. These variables control for differences in observable characteristics across women that could have affected the selection into the state of residence, as well as IPV. α_s is a vector of state fixed effects for a woman's state of residence. It absorbs the treatment indicator, $Treat_s$. α_s controls for any time-invariant unobserved factor, such as access to health clinics and shelters, historical and cultural aspects, and policies that were introduced before my time span. γ_t is a vector of survey year fixed effects, which capture aggregate shocks including nationwide reforms (e.g. General Law on Women's Access to a Life Free of Violence of 2007). γ_t absorbs the post-treatment indicator, $Post_t$. ε_{ist} is the error term. I cluster the standard errors at the state level in order to allow for within-state autocorrelation of unobserved shocks (Bertrand et al., 2004)[26].

The introduction of unilateral divorce can be considered a valid natural experiment provided that, conditional on the covariates, the probability of being in the treatment group is random. To provide support for this, I first argue that the adoption of unilateral divorce was unanticipated in both Mexico City and Hidalgo. The origins of the divorce reform in Mexico City can be found in two initiatives for reforming the Civil Code and the Code of Civil Procedures of the Federal District presented by two political parties on 29 November 2007 and 20 May 2008. Early discussions between legislators and external stakeholders started in March 2008. After a process of debate, which was accompanied by media coverage, it was officially approved on 27 August 2008. Even when discussions

[25]I will also present marginal effects from estimating a Probit model. There is still a debate on how to interpret these marginal effects (Ai and Norton, 2003; Greene, 2010; Puhani, 2012). I follow Puhani (2012, p. 87) approach. He demonstrates that, in the case of DiD models, the treatment effect is equal to 'the cross difference of the conditional expectation of the observed outcome minus the cross difference of the conditional expectation of the potential outcome without treatment'.

[26]My preferred specification only includes 11 states, which is well below the accepted number of clusters in order to produce accurate standard errors. As a consequence of it, my standard errors are likely to be underestimated. One common practice for dealing with this shortcoming is to use the Wild cluster bootstrap-t procedure described in Cameron et al. (2008). As a robustness check, I will present the main results using these alternative standard errors.

started several months before its approval, it was unclear what change they would lead to. The reason lies in the 'pro-traditional family' support of large part of the Mexican population, which is reflected in the composition of the Legislative Assembly[27]. The final distribution of votes was as shown in figure C3 in the Appendix. All 'against votes' come from the conservative party, PAN (*Partido de Acción Nacional*) [National Action Party] and most of the 'in favour' votes from PRD (*Partido Revolucionario Democrático*) [Democratic Revolutionary Party], which is a party of progressive ideology and one of the proponents of the divorce reform.

In the case of Hidalgo, the origins of the divorce reform are based on the Initiative for Decree presented by the Executive Power of Hidalgo on 17 January 2011. A quick search on google reveals that prior to this date there were no news published in relation to unilateral divorce in this state. Moreover, even when unilateral divorce was approved two months later, the result of the Initiative was unclear *a priori*. As in Mexico City, the reason lies on the 'pro-traditional family' support of large part of the population, which is relatively more pronounced in Hidalgo than in the urban metropolis of Mexico City.

Even if unilateral divorce was unanticipated, given that the post-treatment data were collected after its approval, women and men could have adjusted their behaviour in response to its expected introduction, which would have changed the sample part of the treatment and control groups. First, unilateral divorce could have changed the incentives to marry. For instance, it might have encouraged women who were undecided about marrying to do so (González and Viitanen, 2009). If these new marriages are of lower (better) quality, IPV could have increased (decreased). Conversely, marriage rates could have also decreased following the reform (Rasul, 2003). In order to account for this, I restrict the sample to women who were married at the time of the reform-already mentioned above-, i.e. married for at least three years living in Mexico City or at least one year living in Hidalgo when the data was collected in the post-treatment period. I use the same definition for 2003 and 2006 in order to ensure comparability across years. Regarding women living in non-reform states, I take a conservative approach and restrict the sample to women who have been married for at least three years at the time of the survey.

Second, unilateral divorce could have pushed 'bad marriages' (i.e. most violent ones) to drop out of the sample. In order to examine whether this is the case, I restrict the sample to couples who were married at the time of the reform living in Mexico City or Hidalgo and compare the probability of experiencing IPV throughout the relationship between marriages that continue intact after the reform and those that split. A simple mean difference test shows that marriages that break up were significantly more violent than those that continue married. This could introduce sample selection bias because my

[27]This is related to the importance of Catholicism in Mexico. As mentioned earlier, 83% of Mexicans are Catholics. This figure is 82% in Mexico City and 87% in Hidalgo. Moreover, according to the 2006 national survey on the values and attitudes of Catholics, 38% of Catholics are highly religious, 42% medium and 20% little. Moreover, 84% of Catholics say that religion is very important in their lives.

preferred sample is restricted to marriages that remain intact after the reform. The reason is twofold. First, the definition of IPV for divorced/separated women is not comparable to that used for married women, as well as across survey years. Second, divorced/separated women were not surveyed in 2003. In order to reduce concerns of sample selection, I will also present estimates including all women who were married at the time of the reform, regardless of their marital status at the time of the survey. This will also shed some light on the two channels posited by economists to explain the effect of divorce laws on IPV[28].

Third, the reform could have also driven inter-state migration. I only observe the state of residence of the woman at the time of the survey, which could have changed as a consequence of the divorce reform. For instance, women might have moved to reform states in order to benefit from easy divorce[29]. If these women are more (less) likely to experience abuse, the estimates will be upward (downward) biased. Migratory divorce is, however, not expected to be of concern due to two reasons. First, only 32 couples have divorced after unilateral divorce was introduced. Second, in the case of my main sample (i.e. married women at the time of the survey), migratory divorce is unlikely to have occurred, since it only includes women who are residing with their husbands[30].

An additional condition for unilateral divorce to be a valid natural experiment is that the adoption of this reform has been exogenous to the evolution of IPV. Section 6.2 will show that this seems to be, indeed, the case.

The key issue in estimating policy impacts is the construction of a valid control group, which will be used to estimate the unobserved counterfactual. In order for the DiD framework to be valid, the control group should follow a trend in IPV similar to the one that the treatment group would have experienced in the absence of the policy. This is called the parallel trend assumption, which is the crucial identifying assumption in any DiD setting. There is no formal way of testing for this assumption, but the usual approach has been to visually examine the pre-treatment trends of both groups. If they follow a similar trend, this provides support for the assumption.

A natural control group would be to choose all non-reform states (i.e. other 30 states). My preferred control group is, however, limited to 9 of them[31]. The reason is that I can confidently inspect the parallel trend assumption for 10 states only, since the 2003 sample

[28]Given that my main sample is restricted to women who are married at the time of the survey, the fact that there is a one year of marriage requirement in Mexico City is irrelevant for defining the sample. This will be taken into account when including divorced/separated women.

[29]Spouses can divorce in the state where they set their residence, regardless of where they married.

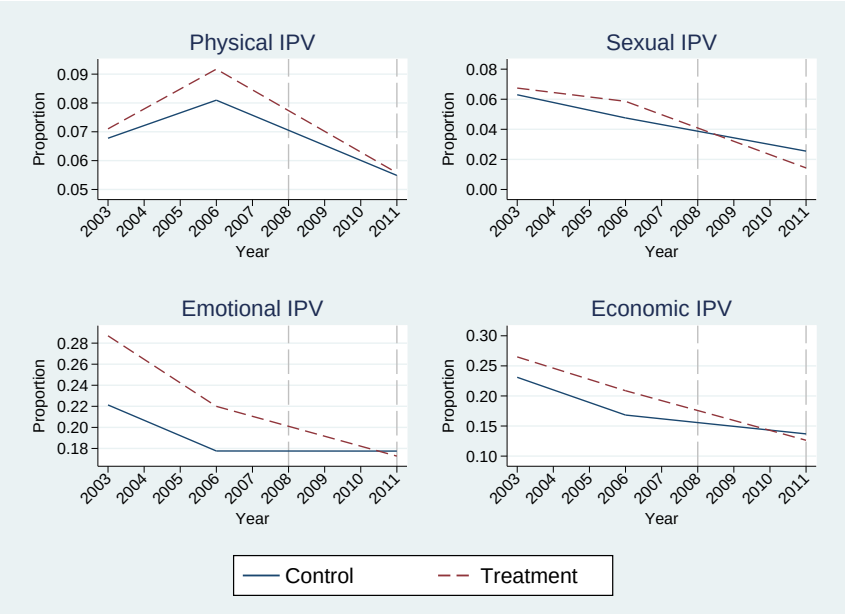
[30]Women who migrate for divorce purposes are unlikely to be residing with their husbands, since otherwise they could have filed for a mutual consent divorce in their state of origin.

[31]I could have also chosen cohabiting women in reform states as the control group, as done in Brassiolo (2016). However, this does not seem to be an appropriate control group for my sample. The reason is that I do not find support for the satisfaction of the parallel trend assumption both graphically and by conducting the two falsification tests explained later. Moreover, the estimates are extremely sensitive to the covariates included and the robustness checks do not always confirm the baseline estimates.

is only representative in 11 out of 32 states (1 reform-Hidalgo- and 10 non-reform[32] states; see column 8 of table B1)[33]. From these 10 non-reform states, I further exclude one (Nuevo Leon), since, after checking the evolution of IPV during the pre-treatment period, it shows a path markedly different to the one experienced by the reform states. Thus, my final preferred set of states consists of 2 treatment and 9 control states.

Figure 3 shows the trends of treatment and control groups between 2003 and 2011 for the four types of IPV[34]. The pre-treatment trends of both groups seem to have followed a similar path in the four types of IPV, which provides confidence for the parallel trend assumption. Section 6.2 will further examine the validity of this assumption by conducting two falsification tests.

Figure 3: IPV trend by treatment status



Notes: The vertical axes refer to the proportion of women experiencing IPV. The vertical lines refer to the year unilateral divorce was introduced (2008 in Mexico City and 2011 in Hidalgo). Sampling weights are applied.

A potential threat to the validity of the parallel trend assumption refers to the adoption of reforms during my time span other than unilateral divorce that could have had a differential impact on women living in reform and non-reform states. I outline four possibilities. First, three states part of my control group[35] introduced the ground for divorce based on domestic violence in 2004 (see column 5 of table B1 for more details).

[32]Baja California, Coahuila, Chihuahua, Nuevo Leon, Sonora, Zacatecas, Michoacán, Chiapas, Quintana Roo and Yucatán.

[33]As a robustness check, I consider all 30 non-reform states as the control group.

[34]The treatment group in 2003 includes Mexico City, but it should be interpreted carefully, since the sample is not representative for this state. In order to diminish concerns in this regard, I have applied the survey sampling weights.

[35]Baja California, Chiapas and Quintana Roo.

Second, since the 1990s, all states have introduced changes to their Penal Codes with the objective of recognising domestic violence as a criminal offence. However, only one state in my preferred sample has done so during my time span[36] (see column 6 of table B1). The trends shown in figure 3 are not affected if I exclude those states that have changed their divorce or criminal legislations. Moreover, to test for the sensitivity of my estimates to these reforms, section 6.2 will re-estimate equation 1 controlling for them.

Third, the Congress of the Union decreed the *Ley General de Acceso de las Mujeres a una Vida Libre de Violencia* (General Law on Women's Access to a Life Free of Violence) in 2007[37], which is the current normative framework about violence against women at the national level. This General Law constitutes the basic reference framework under which each state has to frame specific Laws, as well as modify the Civil and Criminal Codes. Column 7 of table B1 provides the specific date in which each state approved the reform. All of them did it between 2006 and 2011, which suggests that both treatment and control groups might have been affected similarly. Even though, one cannot rule out that any observed change in IPV might be, in part, capturing the impact of this other law.

A final reform that could represent a threat to identification is the decriminalisation of elective abortion in the first 12 weeks of pregnancy in Mexico City, which came into force in April 2007. This could have affected IPV in either direction. This type of abortion is performed free of charge at any of the health clinics and hospitals part of the Ministry of Health for women residents in Mexico City. In addition, non-residents can abort for free at any of the health clinics (four in total), while in the hospitals they need to pay a sliding-scale fee, which depends on their socio-economic status. Moreover, some organisations offer financial support for women traveling from other states of Mexico (including a stipend for covering the travel costs). Even when financial help for women who cannot afford to abort in Mexico City exists, mis-information might make them less likely to benefit from the reform as compared to women without financial constraints. If this is the case, women living in treatment and control states would have not benefited similarly from the reform. Furthermore, in response to the abortion reform in Mexico City, several other states have amended their Constitutions to protect the right to life from conception or fertilisation. A total of 16 have done so since 2007 and all of them were between 2008 and 2009. As a robustness check, I will control for whether the woman is likely to have benefited from the reform in Mexico City and whether the state has introduced regressive constitutional changes in terms of abortion.

In addition to all these reforms, there might still be unobserved factors that have affected treatment and control groups differently. To further reduce this concern, in section 6.2 I will, for instance, conduct two falsification tests; control for state time-varying

[36] Quintana Roo.

[37] Published in the *Diario Oficial de la Federación* on 1 February 2007. See text in `http://www.diputados.gob.mx/LeyesBiblio/pdf/LGAMVLV_171215.pdf`.

covariates, such as the general level of violence and the economic conditions in the state; and interact all covariates with the $Post_t$ indicator in order to control for different trends in observable characteristics between women residing in reform and non-reform states.

5 Data and descriptive statistics

5.1 ENDIREH survey and sample

ENDIREH is a national (urban and rural) and state level representative survey[38], which collects data on independent cross-sectional samples. In 2003, the target population were women aged 15 or older with a partner residing in the household. In 2006 and 2011, this population was expanded to also include ever married or cohabiting (divorced, separated or widowed), in a relationship (never married or cohabiting), and single women, as well as those married or cohabiting not residing with their partners. A total of 34,184, 133,398 and 152,636 women were interviewed in 2003, 2006 and 2011, respectively. My main sample is comprised of married women living with their husbands, which represent 82% of the ENDIREH sample in 2003, 49% in 2006 and 43% in 2011[39]. Of these, I exclude women not living in treatment and control states, and those with missing values in any of the variables[40], which reduces the final sample to 55,593 women (16,137 in 2003, 19,463 in 2006 and 19,993 in 2011).

ENDIREH data were collected through direct interviews conducted by trained women between 20$^{\text{th}}$ October and 14$^{\text{th}}$ November of 2003, 9$^{\text{th}}$ October and 3$^{\text{rd}}$ November of 2006, and 3$^{\text{rd}}$ October and 11$^{\text{th}}$ November of 2011[41]. Moreover, interviews were conducted in private and participants were guaranteed confidentiality, which reduces concerns of under-reporting (Ellsberg et al., 2001).

5.2 IPV

ENDIREH provides information on whether the woman has experienced 29 violent items[42], which I group into four categories of IPV, namely physical and serious threats, sexual, emotional and economic. I group serious threats together with physical violence because they can be considered to be similar in terms of their severity. This is consistent with the classification of physical IPV used in previous studies (e.g. Stevenson and Wolfers (2006) and La Mattina (2017)). For the rest of the items, the classification follows the one suggested by ENDIREH. From the 29 violent events, I exclude one, namely 'has your partner stopped talking to you?', since this question can be interpreted with a large degree

[38] As mentioned earlier, it is representative in all states in 2006 and 2011, but only in 11 in 2003.

[39] In 2006 and 2011, cohabiting women represent 13% of the sample, divorced 2%, separated 7%, widowed 7%, and in a relationship or single 26%.

[40] I decide to do pairwise deletion due to the small number of missing values once I remove those corresponding to the dependent variable, namely 2% of the sample.

[41] See INEGI (2003, 2006, 2011) for a detailed explanation of the methodology.

[42] 30 violent items in 2006 and 2011, but only 29 in 2003. In order to ensure comparability across years, I restrict them to 29.

of subjectivity. Table B2 in the Appendix presents the prevalence of each violent item in treatment and control groups in 2003, 2006 and 2011.

For each of the four categories of IPV, I construct a dichotomous variable equal to one if the woman has experienced any violent item in the 12 months prior to when the survey was conducted and zero otherwise. The fact that the questionnaire includes a broad range of questions regarding each of the four types of violence, further reduces concerns of under-reporting (Ellsberg et al., 2001). Panel A of table 1 reports the prevalence of these four forms of IPV in treatment and control groups in 2003, 2006 and 2011. In general, emotional IPV is the most common, followed by economic, physical and sexual, respectively. Moreover, with the exception of physical abuse between 2003 and 2006, there has been a decline in IPV over time.

Table 1: Descriptive statistics

	2003		2006		2011	
	T	C	T	C	T	C
Panel A: Prevalence of IPV						
Physical IPV	0.071	0.068	0.092	0.081	0.056	0.055
Sexual IPV	0.067	0.063	0.059	0.048	0.014	0.026
Emotional IPV	0.287	0.221	0.220	0.178	0.173	0.177
Economic IPV	0.265	0.231	0.209	0.168	0.126	0.137
Panel B: Covariates						
Age woman	45.200	41.373	45.012	42.940	46.565	44.141
Age man	48.602	44.685	48.161	46.189	49.680	47.265
Indigenous woman	0.072	0.099	0.070	0.104	0.044	0.096
Indigenous man	0.053	0.105	0.071	0.111	0.047	0.103
<Primary education woman	0.069	0.105	0.065	0.119	0.048	0.085
Primary education woman	0.329	0.445	0.307	0.401	0.250	0.364
Secondary education woman	0.458	0.358	0.465	0.373	0.495	0.425
Higher education woman	0.144	0.093	0.163	0.107	0.207	0.126
<Primary education man	0.041	0.102	0.045	0.108	0.038	0.083
Primary education man	0.333	0.412	0.278	0.379	0.227	0.361
Secondary education man	0.360	0.340	0.443	0.363	0.464	0.396
Higher education man	0.266	0.146	0.234	0.150	0.270	0.160
Violence in childhood	0.159	0.120	0.442	0.386	0.408	0.410
Length relationship	23.436	20.971	23.327	22.462	24.649	23.384
Number young children	0.328	0.471	0.301	0.412	0.132	0.186
Urban residence	0.922	0.774	0.888	0.757	0.895	0.759
SES low	0.242	0.456	0.237	0.397	0.208	0.395
SES middle	0.515	0.371	0.453	0.401	0.419	0.399
SES high	0.243	0.173	0.310	0.202	0.373	0.206
Observations	1,618	14,519	3,285	16,178	3,489	16,504

Notes: 'T' stands for treatment and 'C' for control. Sampling weights are applied.

5.3 Covariates

ENDIREH also contains information on a rich set of individual, couple and household characteristics. I specifically control for both partners' age, both partners' indigenous background, both partners' educational attainment, woman's experience of violence in her childhood, length of the relationship, number of young children, urban residence and a Socio-Economic Status (SES) index[43] (see details in the Appendix).

Panel B of table 1 reports the mean value of all the covariates in treatment and control groups in 2003, 2006 and 2011. Women living in reform states are older (as are their spouse), less likely to be indigenous (likewise for their partner), more likely to achieve a higher educational level (also their spouse), to have experienced violence in their childhood, been in the relationship for a longer time, have a lower number of young children, live in urban areas and have a high SES index. The difference in means between treatment and control groups is significant in most of the cases, even (although in relatively less) when I estimate within-state differences, which indicates that controlling for these characteristics is important.

6 Results

6.1 Baseline results

Table 2 reports the DiD estimate associated with equation 1. Column 1 only controls for state and year fixed effects, while columns 2, 3 and 4 add individual, couple and household level covariates, respectively. Taking into consideration the binary nature of the dependent variable, column 5 shows the marginal effects from estimating a Probit model. Finally, column 6 reports the prevalence of IPV in the treatment group during the pre-reform period, while column 7 the prevalence of IPV in the entire sample.

Specification 1 indicates that sexual, emotional and economic IPV have significantly (at the 1% level) decreased in reform states in comparison with non-reform states after the reduction in the cost of divorce. Adding the covariates in subsequent models reduces the magnitude of the coefficients, but the sign and significance remains unchanged. Likewise, the marginal effects are similar to the OLS estimates, although their magnitude is smaller. My preferred specification controls for the full set of covariates (model 4). According to it, the reduction in IPV has been of 1.7, 4.9 and 4.3 percentage points for sexual, emotional and economic IPV, respectively. Comparing these figures to the prevalence of IPV in the treatment group prior to the divorce reform (column 6), they represent a 30%, 23% and 20% decrease in violence, respectively. The fact that sexual IPV represents a larger decline than emotional and economic abuse is consistent with previous empirical findings (Brassiolo, 2016). Regarding physical IPV, the coefficient of interest is negative, but insignificant and very close to zero across all specifications.

[43] I do not control for woman's employment status because it is likely to be affected by the divorce reform (Bargain et al., 2012), as well as by IPV (Tolman and Wang, 2005).

Table 2: Effect of easier divorce on IPV – Main specification

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	LPM				Probit	Mean (pre/treat)	Mean (all)
Physical	-0.007	-0.003	-0.004	-0.003	-0.001	0.081	0.068
	(0.007)	(0.007)	(0.007)	(0.007)	(0.008)		
Sexual	-0.019***	-0.017***	-0.017***	-0.017***	-0.013***	0.056	0.042
	(0.003)	(0.003)	(0.003)	(0.003)	(0.001)		
Emotional	-0.058***	-0.050***	-0.051***	-0.049***	-0.038***	0.213	0.192
	(0.010)	(0.007)	(0.007)	(0.007)	(0.006)		
Economic	-0.048***	-0.044***	-0.044***	-0.043***	-0.034***	0.217	0.182
	(0.009)	(0.008)	(0.008)	(0.007)	(0.005)		
State/Year FE	Yes	Yes	Yes	Yes	Yes		
Individual	No	Yes	Yes	Yes	Yes		
Couple	No	No	Yes	Yes	Yes		
Household	No	No	No	Yes	Yes		
Observations	55,593	55,593	55,593	55,593	55,593		

Notes: OLS estimates (columns 1-4) and marginal effects (column 5) associated with the variable $Treat \times Post$ reported. Robust standard errors clustered at the state level in parentheses. Sampling weights are applied. 'Mean (pre/treat)' refers to the prevalence of IPV in the treatment group before the divorce reform (i.e. average 2003-2006). 'Mean (all)' refers to the prevalence of IPV in the entire sample. 'FE' stands for fixed effects. The sample includes women who were married at the time of the reform and continue to be married at the time of the survey. The dependent variable is an indicator of whether the woman has experienced IPV in the year before the survey. Individual covariates include both partners' age, both partners' indigenous background, both partners' educational attainment and woman's experience of violence in her childhood. Couple covariates include length of the relationship and number of young children. Household covariates include urban residence and SES index. ***significant at 1% level, **at 5%, *at 10%.

As mentioned earlier, by restricting the sample to marriages that remain intact after the reform, the estimates might be biased due to sample selection. In order to diminish this concern and shed some light on the two potential channels that economists have proposed to explain the effect of easier divorce on IPV, I now expand my sample to include women who were married at the time of the reform, regardless of their marital status at the time of the survey (i.e. married, divorced or separated)[44]. This approach reduces the sample to years 2006 and 2011, since no information on divorced and separated women is available for 2003. However, the main limitation of including these two additional groups of women refers to the definition of IPV. In 2006, IPV refers to violence experienced since the couple split, whereas in 2011 to violence experienced in the year before the survey, regardless of whether it has been inflicted during or after the couple split.

Table 3 reports the estimates of interest[45]. Panel A only includes intact marriages

[44]In the case of Mexico City, the definition of the treatment group for divorced and separated women accounts for the fact that there is a one-year marriage requirement.

[45]I do not control for the length of the relationship because it is likely to be endogenous when including divorced and separated women.

Table 3: Effect of easier divorce on IPV – Expanded sample

	(1)	(2)	(3)	(4)	(5)
	LPM				Probit
Panel A: Married women					
Physical	-0.010	-0.005	-0.006	-0.005	-0.002
	(0.009)	(0.008)	(0.008)	(0.008)	(0.009)
Sexual	-0.022***	-0.020***	-0.020***	-0.019***	-0.018***
	(0.003)	(0.003)	(0.003)	(0.003)	(0.002)
Emotional	-0.047***	-0.038***	-0.039***	-0.038***	-0.037***
	(0.009)	(0.008)	(0.008)	(0.008)	(0.010)
Economic	-0.051***	-0.044***	-0.045***	-0.043***	-0.044***
	(0.007)	(0.008)	(0.007)	(0.007)	(0.008)
Observations	39,456	39,456	39,456	39,456	39,456
Panel B: Married+Divorced women					
Physical	-0.010	-0.006	-0.006	-0.005	-0.002
	(0.009)	(0.008)	(0.008)	(0.008)	(0.008)
Sexual	-0.022***	-0.020***	-0.020***	-0.019***	-0.017***
	(0.003)	(0.003)	(0.003)	(0.003)	(0.002)
Emotional	-0.046***	-0.037***	-0.038***	-0.036***	-0.036***
	(0.009)	(0.009)	(0.008)	(0.008)	(0.010)
Economic	-0.050***	-0.043***	-0.043***	-0.042***	-0.042***
	(0.007)	(0.008)	(0.008)	(0.008)	(0.009)
Observations	39,782	39,782	39,782	39,782	39,782
Panel C: Married+Divorced+Separated women					
Physical	-0.008	-0.004	-0.004	-0.003	-0.001
	(0.007)	(0.006)	(0.007)	(0.007)	(0.007)
Sexual	-0.023***	-0.021***	-0.021***	-0.021***	-0.020***
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
Emotional	-0.047***	-0.038***	-0.038***	-0.037***	-0.037***
	(0.009)	(0.009)	(0.009)	(0.009)	(0.010)
Economic	-0.051***	-0.044***	-0.045***	-0.043***	-0.044***
	(0.008)	(0.008)	(0.008)	(0.008)	(0.009)
Observations	41,598	41,598	41,598	41,598	41,598
State/Year FE	Yes	Yes	Yes	Yes	Yes
Individual	No	Yes	Yes	Yes	Yes
Couple	No	No	Yes	Yes	Yes
Household	No	No	No	Yes	Yes

Notes: OLS estimates (columns 1-4) and marginal effects (column 5) associated with the variable $Treat \times Post$ reported. Robust standard errors clustered at the state level in parentheses. Sampling weights are applied. 'FE' stands for fixed effects. The sample includes women who were married at the time of the reform and continue to be married at the time of the survey (panel A), continue to be married or have divorced at the time of the survey (panel B) and continue to be married, or have divorced or separated at the time of the survey (panel C). The dependent variable is an indicator of whether the woman has experienced IPV in the year before the survey (for all married women and for divorced/separated in 2011) or since the couple split (for divorced/separated women in 2006). Individual covariates include woman's age, woman's indigenous background, woman's educational attainment and woman's experience of violence in her childhood. Couple covariates include number of young children. Household covariates include urban residence and SES index. ***significant at 1% level, **at 5%, *at 10%.

excluding the year 2003 and not controlling for the partner's characteristics[46]. The estimates confirm the findings in table 2. Panel B expands the sample to include women who have divorced after the reform, while panel C also includes those who have separated. Separated women could have been either married or cohabiting at the time of the reform and this cannot be disentangled with the available data[47]. The estimates reported in panels B and C are almost identical to those in panel A. According to divorce threat models, this suggests that the decrease in IPV is likely to be driven by a redistribution of bargaining power towards the woman, rather than by a change in divorce rates, which is in line with the findings in Brassiolo (2016). These results also suggest that, by restricting the sample to marriages that remain intact after the reform, I would be capturing most of the effect of easier access to divorce on IPV.

Further support for this bargaining power channel will be provided in section 7, where I find that the bargaining power (proxied by their contribution to decision-making in the household) of women living in reform states, as compared to those living in non-reform states, has significantly increased following the reduction in the cost of divorce.

Even when the divorce channel (i.e. an increase in the propensity that abused women divorce) does not seem to be explaining the decline in IPV, I further examine this mechanism by estimating the impact of easier divorce on an indicator of whether the woman is divorced. To do so, I use the whole sample of women provided by ENDIREH (i.e. married, cohabiting, divorced, separated, widowed, in a relationship and single). This exercise will shed some light on whether the proportion of women who are divorced has risen after the reform, which is a necessary condition for this channel to be in place. Table B3 in the Appendix reports the results. I find that in treatment, as compared to control, states the proportion of women who are divorced has significantly increased after the reform, but only at the 10% level. Moreover, the magnitude of the estimates is low in economic terms, since it only represents 4-5% of the average proportion of divorced women in the treatment group during the pre-reform period (0.017).

6.2 Robustness checks

In this section, I test for the validity of the DiD framework, as well as for the sensitiveness of my estimates to controlling for other reforms, including other time-varying state level covariates and employing alternative control groups. I also compute the standard errors using the Wild cluster bootstrap-t procedure and examine whether my findings reflect changes in the woman's reporting behaviour rather than in the prevalence of IPV.

[46]I do not control for the partner's characteristics because this information is not available for women not residing with their partners (most of the divorced and separated ones).

[47]I can disentangle this for 2006, when cross-tabulations show that most women who were separated had been married before.

6.2.1 Exogeneity of the timing of unilateral reform

I first test whether the introduction of unilateral divorce in Mexico City and Hidalgo was exogenous to the evolution of IPV for the group of married women. To examine this, I first compute the weighted average value of each outcome and covariate by state and year. I then regress an indicator of whether the state has introduced unilateral divorce (i.e. equal to one for Mexico City and Hidalgo) on the average prevalence of IPV in the pre-reform periods (i.e. 2003 and 2006). If higher (lower) prevalence led to the introduction of unilateral divorce, I would expect to see a significant positive (negative) coefficient. Table B4 in the Appendix presents the results. Columns 1, 3, 5 and 7 do not control for any covariate, while columns 2, 4, 6 and 8 control for the full set of them. As can be seen, the prevalence of IPV in the pre-reform period is not significantly associated with the subsequent adoption of unilateral divorce. Moreover, none of the covariates are significantly associated with the timing of the reform. This provides support for the validity of unilateral divorce as a natural experiment.

6.2.2 Falsification tests

I next examine the validity of the parallel trend assumption. Figure 3 in section 4 provided support for this assumption by showing that the four types of IPV had followed a similar trend in both treatment and control groups during the pre-reform period. In order to further test for the satisfaction of this assumption, I conduct two falsification tests. First, restricting the sample to the pre-reform period, I re-estimate the DiD model assuming that unilateral divorce was introduced at some point between 2003 and 2006. Thus, 2003 is the pre-treatment period, while 2006 the post-treatment one. Since this 'placebo treatment' precedes the divorce reform, I would expect the DiD coefficient to be close to zero and insignificant. Panel A of table 4 presents the results. Column 1 reproduces the baseline estimates from table 2 for comparison purposes, while columns 2-6 report the estimates from the falsification test. The coefficients for the four types of IPV are insignificant and close to zero, regardless of whether I control for the covariates or estimate a probit model.

The second falsification test is based on estimating the effect of the divorce reform on a type of violence against women different to IPV, which I call public abuse, inflicted by an unknown person. This type of abuse should not be affected by the reform. I exclude violence inflicted by a known person because this could be correlated with the woman's marital status, as well as IPV. Information on public abuse is only available for 2006 and 2011, which explains the smaller number of observations. It refers to abuse experienced at any point in life by women in several settings including work, school, streets, public transport, parties and home[48]. Results are shown in panel B of table 4. As expected, the

[48]The violent items refer to having been humiliated, ignored for being a woman, been physically assaulted, received insinuations or proposals for having sex in exchange for something, experienced reprisals

DiD coefficients are insignificant and close to zero.

Table 4: Effect of easier divorce on IPV/Public abuse – Falsification tests

	(1)	(2)	(3)	(4)	(5)	(6)
	Baseline	Falsification test				
	LPM	LPM				Probit
Panel A: Placebo DiD						
Physical IPV	-0.003	0.007	0.003	0.003	0.003	0.003
	(0.007)	(0.005)	(0.003)	(0.003)	(0.004)	(0.005)
Sexual IPV	-0.017***	0.006	0.004	0.004	0.004	0.007
	(0.003)	(0.007)	(0.005)	(0.005)	(0.005)	(0.005)
Emotional IPV	-0.049***	-0.022	-0.028	-0.028	-0.026	-0.016
	(0.007)	(0.018)	(0.019)	(0.019)	(0.018)	(0.014)
Economic IPV	-0.043***	0.006	-0.003	-0.003	-0.002	0.005
	(0.007)	(0.015)	(0.017)	(0.017)	(0.017)	(0.015)
Observations	55,593	35,600	35,600	35,600	35,600	35,600
Panel B: Effect of unilateral divorce on public abuse						
Public abuse		-0.023	-0.019	-0.018	-0.020	-0.007
		(0.025)	(0.021)	(0.020)	(0.021)	(0.015)
Observations	39,425	39,425	39,425	39,425	39,425	
State/Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Individual	Yes	No	Yes	Yes	Yes	Yes
Couple	Yes	No	No	Yes	Yes	Yes
Household	Yes	No	No	No	Yes	Yes

Notes: OLS estimates associated with the variable $Treat \times Post$ reported. Robust standard errors clustered at the state level in parentheses. Sampling weights are applied. 'FE' stands for fixed effects. The sample includes women who were married at the time of the reform and continue to be married at the time of the survey. The sample in panel A is restricted to years 2003 and 2006, while the sample in panel B to years 2006 and 2011. The dependent variable is an indicator of whether the woman has experienced IPV in the year before the survey (panel A) and an indicator of whether the woman has experienced public abuse at any point in her life (panel B). Individual covariates include both partners' age, both partners' indigenous background, both partners' educational attainment and woman's experience of violence in her childhood. Couple covariates include length of the relationship and number of young children. Household covariates include urban residence and SES index. ***significant at 1% level, **at 5%, *at 10%.

Overall, the results from these two falsification tests provide support for the parallel trend assumption. First, they indicate that the decline in IPV is not likely to be driven by an alternative phenomenon that predated the divorce change. Second, they suggest that changes in IPV do not seem to be driven by systematic unobserved differences between treatment and control groups.

due to the negative to these proposals, been touched without permission, been forced to have sex, been forced to have sex in exchange for money, experienced fear of being sexually assaulted or abused, and received rude or offensive saucy remarks about the body or with sexual connotation. The last three were asked for all settings in 2011, but only for settings other than work and school in 2006. Moreover, for abuse at work in 2006, it refers to violence experienced during the year before the survey.

6.2.3 Controlling for other covariates

The next set of robustness checks consists of controlling for covariates (including other reforms) that could potentially have a differential impact on the IPV trends of treatment and control groups. Section 4 reviewed three main potential confounding reforms, namely the introduction of the divorce cause of domestic violence, the criminalisation of domestic violence in the Penal Code and the decriminalisation of abortion in Mexico City. Regarding the first two, three states have modified their divorce (Baja California, Chiapas and Quintana Roo) and criminal (Quintana Roo) legislations and all of them did it between 2003 and 2006. To examine the sensitivity of my results to these changes, I include an indicator of whether the state has adopted any legislation modification by the time of the survey. Column 2 of table 5 presents the results. They show that the magnitude of the effect is slightly smaller than that reported in column 1 for all types of IPV, but the main conclusions remain unchanged.

Regarding the decriminalisation of abortion in Mexico City, I control for whether the woman is likely to benefit from it (column 3). In particular, I create a dichotomous variable equal to one if a woman aged 15-44[49] lives in Mexico City or if she lives in any other state, but her dwelling is classified as having a middle or high SES; and zero otherwise. One would expect that women living in low SES dwellings would be unlikely to afford the costs associated with aborting in Mexico City. The inclusion of this covariate leaves the coefficients of interest largely unaffected. Column 4 controls for whether the state has introduced constitutional changes to protect the right to life. The effect is now smaller in magnitude, but the main conclusions remain unchanged.

Model 5 controls for two other time-varying state level covariates in order to further diminish concerns of omitted variables. Specifically, it controls for the male's homicide rate and the male's unemployment rate (see details of their construction in the Appendix). I control for the homicide rate as a proxy for the general level of violence. Since 2007, some regions of the country have experienced a large increase in violence[50]. It could be that IPV is higher in these states due to a greater tolerance for it. I exclude female homicides, since these would include intimate partner homicides, which previous studies have found to be affected by the reduction in the cost of divorce (Stevenson and Wolfers, 2006). The unemployment rate serves as a proxy for the macroeconomic trend in the state. As in the previous case, I only control for the male's unemployment rate. Results in model 5 show that the estimates of interest remain largely unaffected.

[49] Women below 45 are more likely to be in reproductive age.

[50] Previous studies have found this to be closely related to the 'war on drugs' initiated by the former President Felipe Calderón (Dell, 2015).

Table 5: Effect of easier divorce on IPV – Robustness checks: Additional covariates

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Baseline	Divorce+ Criminal	Abortion MC	Abortion Const.	State covariates	Covariates × Post	Reform states
Physical	-0.003	-0.002	-0.002	-0.005	-0.002	-0.004	-0.003
	(0.007)	(0.007)	(0.006)	(0.007)	(0.007)	(0.006)	(0.007)
Sexual	-0.017***	-0.016***	-0.017***	-0.012***	-0.017***	-0.020***	-0.017***
	(0.003)	(0.003)	(0.003)	(0.003)	(0.004)	(0.003)	(0.003)
Emotional	-0.049***	-0.047***	-0.049***	-0.047***	-0.049***	-0.050***	-0.049***
	(0.007)	(0.007)	(0.007)	(0.008)	(0.007)	(0.011)	(0.007)
Economic	-0.043***	-0.042***	-0.042***	-0.034***	-0.045***	-0.045***	-0.043***
	(0.007)	(0.006)	(0.007)	(0.004)	(0.007)	(0.007)	(0.007)
Observations	55,593	55,593	55,593	55,593	55,593	55,593	55,593

Notes: OLS estimates associated with the variable $Treat \times Post$ reported. Robust standard errors clustered at the state level in parentheses. Sampling weights are applied. Column 1 reproduces the baseline estimates from table 2, column 2 controls for whether the state has modified the divorce and/or criminal legislations with regard to domestic violence, column 3 controls for whether the woman is likely to benefit from the decriminalisation of abortion in Mexico City, column 4 controls for whether the state has introduction constitutional changes to protect the right to life from conception or fertilisation, column 5 controls for male's homicide and unemployment rates in the state, columns 6 controls for the interaction between the covariates and the post-reform indicator, and column 7 includes an indicator of whether the state has introduced unilateral divorce after 2011. 'MC' stands for Mexico City and 'Const' for constitutional. The sample includes women who were married at the time of the reform and continue to be married at the time of the survey. The dependent variable is an indicator of whether the woman has experienced IPV in the year before the survey. All specifications control for both partners' age, both partners' indigenous background, both partners' educational attainment, woman's experience of violence in her childhood, length of the relationship, number of young children, urban residence, SES index, and state and year fixed effects. ***significant at 1% level, **at 5%, *at 10%.

Column 6 adds interaction terms between all covariates and the post-treatment indicator $Post_t$. The objective is to control for different trends in observable characteristics, which could otherwise be driving my findings. Adding these covariates slightly increases the magnitude of the effect of interest, but the estimates point in the same direction.

As a final robustness check, column 7 includes an indicator of whether the state has introduced unilateral divorce after 2011. Only three states in my control group have done so (Coahuila, Quintana Roo and Yucatán). The reason for this test is that these states might have unobserved factors that make them more prone to adopt unilateral divorce. If these factors have changed over time (e.g. gender norms), they could have contaminated my results. Including this variable does not affect the estimates of interest, which remain almost identical to those reported in column 1.

6.2.4 Additional robustness checks

I first consider alternative control groups to test whether my results are sensitive to the restriction of the number of states. Column 2 of table B5 in the Appendix reports the results when the control group is formed by the 30 non-reform states. In column 3 I restrict this control group to states that have not reformed their divorce and criminal legislations. In addition to this restriction, column 4 excludes women who are not likely to have

benefited from the decriminalisation of abortion in Mexico City, column 5 removes states that have introduced constitutional changes in response to Mexico City's abortion reform and column 6 excludes late reform states. Although in some of the cases the estimates show that the effect of easier divorce is now smaller or slightly larger in magnitude, the coefficients lead to the same conclusions than those obtained from column 1.

One concern of my survey is that the variable 'length of the marriage' is based on the question 'How old were you when you married or started living with your partner?'. Thus, the age reported is not necessarily the age at marriage, but the age at which the couple started living together. Consequently, the computed length of the marriage is not precisely calculated. As a robustness check, I restrict the sample to women married for at least 10 years at the time of the reform, i.e. at least 13 years at the time of the survey living in Mexico City and 11 years in Hidalgo, since these women are more likely to actually be 'married'[51]. Specification 7 shows the estimates of interest, which confirm the baseline findings.

6.2.5 Wild cluster bootstrapped standard errors

Using cluster-robust standard errors when the number of clusters is small is likely to underestimate the standard errors (see footnote 26). One commonly used method to deal with this limitation is to employ the Wild cluster bootstrap-t procedure described in Cameron et al. (2008). Table B6 in the Appendix re-estimates the baseline results using this method. As can be seen, the Wild cluster bootstrapped standard errors are larger than the cluster-robust ones reported in table 2, but the baseline findings are confirmed.

6.2.6 Reporting behaviour

A final concern of my estimates is that they could be driven by a differential propensity to report IPV of women residing in treatment and control states induced by the reform. To examine this, I estimate the effect of the reform on woman's reporting behaviour. ENDIREH survey provides information on whether the woman reports the violent incident to the police, Public Ministry or another authority. I construct an indicator of whether she reports it[52].

A woman's reporting behaviour is only observed for abused women, which can introduce sample selection bias if the probability that men use IPV is non-randomly distributed. For instance, men who think that their wives would report IPV upon abuse might be less likely to use it. To correct for this, I use Heckman sample selection model. For doing so, I need a variable that affects the man's decision to use IPV, but not the woman's probability of reporting it directly. A candidate for this role is the man's experience of violence in his childhood. Previous literature has shown that men are more

[51] The sample in the control group is restricted to women who have been married for at least 13 years.

[52] 14% of women in my sample have reported IPV to the police, Public Ministry or another authority, but this drops to 9% when they do not experience physical IPV.

likely to inflict violence if they have experienced it in the past (Gover et al., 2008; Kwong et al., 2003; Pollak, 2004). At the same time, there is no reason for expecting this variable to be associated with the woman's reporting behaviour through any channel other than the IPV one. Using this variable, however, has the problem of having a large number of missing values (16%). Given this, I also estimate the baseline regression using this restricted sample, which provides very similar results to the ones reported in table 2 (see table B7 in the Appendix).

Table B8 presents the results. Column 2 reports the Probit estimate associated with the selection variable. It shows that a man's experience of violence in his childhood is significantly positively associated with a woman's experience of IPV as an adult. Column 1 presents the OLS estimate corresponding to an ordinary LPM model, while column 3 takes into account sample selection and reports the maximum likelihood estimate associated with the Heckman model. Regardless of the specification, the proportion of IPV cases reported to the police or any other authority has not significantly changed in treatment states relative to control ones after the reform. This is consistent with the fact that women rarely report IPV, regardless of the cost of divorce.

6.3 Comparison with previous studies

The findings so far suggest that IPV has decreased in treatment states, as compared to control ones, following easier divorce. This is in line with the prediction of divorce threat models. However, the significance and magnitude of the estimates vary across types of IPV, as well as compared to previous studies.

Focusing on physical IPV, while I find a negative, but insignificant effect of the divorce reform on this type of violence, both Stevenson and Wolfers (2006) and Brassiolo (2016) report a significant decrease. Their estimates indicate a decline of 4.8 and 0.6 percentage points (32% of the sample mean), respectively, which is larger than the 0.3 percentage point (4% of the sample mean) decrease in my case. Compared to Stevenson and Wolfers (2006, p. 281), this cannot be attributed to the definition of IPV, since I use a very similar one to them. However, this is not the case for Brassiolo (2016, p. 474).

In order to ensure comparability with this latter study, I construct an alternative measure similar to the one employed by him. He considers three items[53], which can be matched with seven of mine[54]; five of which I classify as physical IPV, while two as emotional abuse. Results are reported in columns 1-3 of table 6. Column 1 includes all seven violent items, column 2 only the five related to physical IPV, while column 3 the two related to emotional abuse. Using this alternative definition, physical violence has declined by 1.9 percentage points in reform states compared to non-reform ones after the

[53]He insults or threatens you, at times he frightens you, he pushes or hits you when he is angry.

[54]Has your husband... pushed you or pulled your hair?, kicked you?, beaten you with his hands or any object?, threatened you with a weapon?, threatened to kill you, himself or the children?, threatened to leave you, hurt you, take your children away or kick you out?, made you feel fear?.

Table 6: Effect of easier divorce on IPV – Definition of IPV based on Brassiolo (2016)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
		Physical		Emotional	Economic		
	All (7 items)	Physical (5 items)	Emotional (2 items)	All (3 items)	All (5 items)	Economic (4 items)	Emotional (1 item)
Treat × Post	-0.019*	-0.005	-0.020***	-0.039***	-0.047***	-0.048***	-0.003
	(0.009)	(0.007)	(0.005)	(0.006)	(0.009)	(0.009)	(0.003)
Mean (all)	0.109	0.064	0.079	0.113	0.125	0.119	0.022
Observations	55,593	55,593	55,593	55,593	55,593	55,593	55,593

Notes: OLS estimates associated with the variable $Treat \times Post$ reported. Robust standard errors clustered at the state level in parentheses. Sampling weights are applied. 'Mean (all)' refers to the prevalence of IPV in the sample. The sample includes women who were married at the time of the reform and continue to be married at the time of the survey. The dependent variable is an indicator of whether the woman has experienced IPV in the year before the survey. All specifications control for both partners' age, both partners' indigenous background, both partners' educational attainment, woman's experience of violence in her childhood, length of the relationship, number of young children, urban residence, SES index, and state and year fixed effects. ***significant at 1% level, **at 5%, *at 10%.

reform, although only at the 10% significance level. This represents a 17% decrease with respect to the sample mean, which is below the value obtained by Brassiolo (2016) (and Stevenson and Wolfers (2006)). The reduction is, however, entirely driven by the items classified as emotional violence under my definition.

Regarding sexual IPV, my estimates show a significant decline in the prevalence of this type of violence, which is consistent with the findings in Brassiolo (2016). In terms of the magnitude of the effect, the baseline specification indicates a decline in sexual IPV of 1.7 percentage points (40% of the sample mean), which is very close to the 1.5 percentage point (41% of the sample mean) decline reported by Brassiolo (2016).

In the case of emotional IPV, I find a significant 4.9 percentage point decrease, which is more than double the 2.2 percentage point decrease reported by Brassiolo (2016). However, when looking at how much this represents over the sample mean, my estimate represents 25%, which is below the 30% found by him. Furthermore, when I restrict the definition of emotional IPV to be more closely related to that used by Brassiolo (2016, p. 474)[55], the DiD estimate decreases to 3.9 percentage points, although this represents 35% of the sample mean (see column 4 of table 6).

Regarding economic violence, this is to some extent comparable with what Brassiolo (2016) terms 'psychological abuse in the form of control'. He finds a negative, but in-

[55]His definition includes the following items: He does not consider your needs; he tells you that you are not capable of anything without him; he says everything you do is wrong, that you are clumsy; he belittles or does not value your beliefs (religious, political, etc.); he does not value the work you do; he demeans you in front of your children. These six items can be compared to three of mine: Has your husband... ashamed, underestimated or humiliated you?; ignored or not shown you affection?; turned your children or relatives against you?.

significant, impact of the reform on this type of violence, while I find a significant negative one. Even when it is insignificant, the magnitude of the coefficient indicates a decrease of 30% of the sample mean, which is larger than the 24% found in my case. Following the exercise done for physical and emotional IPV, I examine whether the different results between both studies are sensitive to the definition of abuse used[56]. Results are reported in columns 5-8 of table 6, which confirm my baseline findings. Moreover, the magnitude of the effect is now larger than before (4.7 percentage points or 38% of the sample mean).

The findings so far highlight two main points. First, a reduction in the cost of divorce seems to have a decreasing effect on IPV. However, the significance and magnitude of this effect varies across forms of abuse, as well as compared to estimates from developed countries. In particular, I have found an insignificant and small effect of unilateral divorce on physical IPV, whereas a significant and large effect of this reform on sexual, emotional and economic IPV. In addition, the magnitude of the effect for physical and sexual IPV has been found to be smaller than that reported for developed countries. Conversely, when emotional and economic abuse have been defined similarly to Brassiolo (2016), the magnitude of the impact has been found to be larger than in Spain.

Second, the estimates might be sensitive to the definition of IPV used, which has been shown to occur for physical violence. This is, however, unlikely to explain the insignificant effect of the reform on physical IPV, since my results are not consistent with those in Stevenson and Wolfers (2006) employing a very similar definition. This insignificant impact is also unlikely to be explained by a non-response of physical IPV to changes in the spouses' outside option, as internal threat point models posit (Anderson and Eswaran, 2009; Lundberg and Pollak, 1993)[57], since other forms of abuse have experienced a decrease following the reform. Moreover, the insignificant effect does not seem to be hiding heterogeneous impacts of the reform by variables, such as education (see section 6.5), indigenous background, presence of young children, urban residence and SES index (see table B9 in the Appendix). This suggests that there might be other reasons behind my findings, which are examined in the next section.

[56]Brassiolo (2016) includes three violent items (he prevents you from seeing your family or relating to friends and neighbors, he takes the money your earn or does not give you what you need, he decides what you can and cannot do), which are matched with five of mine. I classify four of them as economic items (been stingy with the household expenses, even though he has money?, not given you the upkeep or threatened you to not giving it?, appropriated or taken money or possessions from you?, forbidden you to work or study?) and one as emotional (locked you in, forbidden you from going out or being visited?).

[57]Internal threat point models argue that the threat of divorce might not be credible under certain circumstances, such as when the breakdown of the bargaining process arises over minor decisions or when divorce is not socially acceptable. In these cases, a more plausible threat scenario would be a non-cooperative outcome within the marriage. Consequently, changes in the spouses' outside options should have no impact on their bargaining positions.

6.4 Substitution effect across types of IPV

A plausible explanation for the insignificant impact of unilateral divorce on physical IPV is that it might be hiding a substitution effect across types of IPV. In order to examine this, I construct a set of indicators of whether the woman has experienced physical IPV with no associated sexual; emotional; economic; emotional and economic; and sexual, emotional and economic IPV. Results are reported in panel A of table 7. Panels B, C and D construct equivalent indicators for sexual, emotional and economic violence, respectively. The sample mean value (last row of column 5 in each panel) shows that 1.3% of women report that physical IPV occurs alone (6.6% report physical IPV). The equivalent figures are 0.4% (4.1%) for sexual, 6.4% (18.9%) for emotional and 6.3% (17.9%) for economic abuse. This provides support for the widespread recognation that IPV manifests itself in multiple forms, which usually overlap (Mechanic et al., 2008).

The estimates indicate that, after the reform, physical IPV occurring alone or with no associated emotional and/or economic abuse has significantly increased in the treatment group relative to the control group. Focusing on column 5, the estimate indicates an increase of 0.7 percentage points, which represents a 87% increase with respect to the prevalence of IPV in the treatment group prior to the divorce reform. Interestingly, panel B shows that the decrease in sexual IPV observed in table 2 only holds when this type of abuse is not associated with physical violence. In the rest of the cases, the prevalence of sexual violence increases, although it is not always significant (0.3 percentage points or 75% of the prevalence of IPV in treatment states before the reform in model 5).

Panels C and D show very similar results for emotional and economic IPV. The significant decrease is only observed when these types of violence do not occur together with physical and/or sexual abuse. The decline in terms of percentage points has been of 2.4-3.7 and 1.7-3.2 for emotional and economic IPV, respectively, which is smaller than the one reported in table 2 (4.9 and 4.3 percentage points). Compared to the prevalence of IPV in the treatment group prior to the divorce reform, the decrease represents 19-26% and 12-20%, respectively.

Taking the results in tables 2 and 7 together, they suggest that making divorce easier might have led to a substitution of emotional and economic IPV for physical and sexual violence. These findings are not consistent with the prediction of divorce threat models, since they predict that *all* types of IPV will decline following a reduction in the cost of divorce. In contrast, they are consistent with a 'male backlash effect' explanation by which the reform has been perceived by the husband as a threat to his dominant position. They are also consistent with an explanation by which IPV is used to prevent women from divorcing.

Table 7: Effect of easier divorce on IPV – Substitution effects

	(1)	(2)	(3)	(4)	(5)
Panel A: Physical IPV with no associated...					
	Sexual	Emotional	Economic	Emo/Eco	Sex/Emo/Eco
Treat × Post	0.001	0.009**	0.008**	0.007*	0.007*
	(0.007)	(0.003)	(0.004)	(0.004)	(0.004)
Mean (pre/treat)	0.054	0.013	0.024	0.009	0.008
Mean (all)	0.048	0.018	0.026	0.014	0.013
Panel B: Sexual IPV with no associated...					
	Physical	Emotional	Economic	Emo/Eco	Phy/Emo/Eco
Treat × Post	-0.012***	0.001	0.003	0.003**	0.003**
	(0.002)	(0.001)	(0.002)	(0.001)	(0.001)
Mean (pre/treat)	0.030	0.009	0.011	0.004	0.004
Mean (all)	0.023	0.008	0.011	0.005	0.004
Panel C: Emotional IPV with no associated...					
	Physical	Sexual	Economic	Phy/Sex	Phy/Sex/Eco
Treat × Post	-0.037***	-0.031***	-0.008	-0.024***	-0.008
	(0.007)	(0.009)	(0.007)	(0.007)	(0.007)
Mean (pre/treat)	0.145	0.165	0.083	0.124	0.062
Mean (all)	0.142	0.159	0.082	0.127	0.065
Panel D: Economic IPV with no associated...					
	Physical	Sexual	Emotional	Phy/Sex	Phy/Sex/Emo
Treat × Post	-0.032***	-0.023***	-0.002	-0.017**	-0.001
	(0.006)	(0.005)	(0.005)	(0.006)	(0.005)
Mean (pre/treat)	0.161	0.172	0.088	0.140	0.078
Mean (all)	0.140	0.151	0.071	0.125	0.064
Observations	55,593	55,593	55,593	55,593	55,593

Notes: OLS estimates associated with the variable $Treat \times Post$ reported. Robust standard errors clustered at the state level in parentheses. Sampling weights are applied. 'Phy' stands for physical, 'Sex' for sexual, 'Emo' for emotional and 'Eco' for economic. '/' refers to 'and' (i.e. Phy/Sex means Physical *and* sexual). 'Mean (pre/treat)' refers to the prevalence of IPV in the treatment group before the divorce reform (i.e. average 2003-2006). 'Mean (all)' refers to the prevalence of IPV in my sample. The sample includes women who were married at the time of the reform and continue to be married at the time of the survey. The dependent variable is an indicator of whether the woman has experienced IPV in the year before the survey. All specifications control for both partners' age, both partners' indigenous background, both partners' educational attainment, woman's experience of violence in her childhood, length of the relationship, number of young children, urban residence, SES index, and state and year fixed effects. ***significant at 1% level, **at 5%, *at 10%.

A remaining question is why 'male backlash effect' or 'divorce prevention' explanations are consistent with an increase in physical and sexual IPV, but not other forms of violence. I provide two possible reasons. First, physical and sexual IPV are less common, and, as a result, they are more likely to have a greater impact on the wife's behaviour than

emotional and economic abuse. Second, women usually consider physical and sexual IPV to be 'more serious' than emotional and economic abuse[58], even when the consequences of the latter two can be longer-lasting (Arias and Pape, 1999; Mechanic et al., 2008). Related to this, women tend to be more afraid of physical and sexual IPV than of emotional and economic abuse[59], which makes these types of violence more likely to be used to create an atmosphere of fear both during the marriage and after leaving it (Mullender, 1996; Radford and Harne, 2008). Together, these two reasons suggest that physical and sexual IPV might be more 'effective' than other types of violence, at least in the short-run, which would make men more likely to use them as an instrument to reassert their dominance and to prevent their wives from leaving the marriage. One might be wondering, however, that physical and sexual IPV are also more likely to push women beyond their threat point and, thus, lead them to divorce. This, however, does not seem to be very plausible in my sample, as analysed in section 6.1.

My findings provide support for the hypothesis that, in developing countries, the reduction in the cost of divorce would not necessarily decrease IPV, but it might lead to an increase of it if, for instance, the improvement in the woman's outside option is perceived as a threat to the man's dominant position. An increase in violence following an improvement in the woman's outside option has also been found in previous studies about Mexico looking at the effect of the CCT programme *Oportunidades* on IPV (Angelucci, 2008; Bobonis et al., 2013).

6.5 Heterogeneous effects

The findings in the previous section suggest that the reduction in the cost of divorce might have led to a substitution effect across types of IPV motivated by a 'male backlash effect' or a 'divorce prevention' strategy. If any of these motivations are in place, one would expect them to be driven by spouses who hold more 'traditional' views on gender roles (Overall et al., 2016). To examine whether this is the case, I proxy for views on gender roles using the level of education, which has been a proxy employed previously in the literature (Angelucci, 2008; Sullivan et al., 2014)[60].

[58] In the survey, abused women are asked about whether they think that the violent act is very serious, serious or not serious. On average, physical and sexual violent items are ranked among the most serious, followed by economic and emotional ones, respectively.

[59] Abused women in 2006 and 2011 are asked about the reasons for not divorcing. 'Fear of what the husband could do to them or their children' is the answer provided in 4% of the cases when either physical or sexual IPV occur, whereas in 0% when they do not occur.

[60] In the survey, the woman is directly asked about her views on gender roles. I use this information to check whether this is associated with her educational attainment. I find that 16% of women with less than primary education completed agree with the statement 'the man has the right to beat his wife', while this figure is only 1% for women with higher education completed. I do not use women's views on gender roles directly, since it is likely to be endogenous.

6.5.1 Husband's educational attainment

To analyse whether the effect of the reform varies with the husband's education, I interact this variable with $Treat \times Post$[61], which provides the differential impact of the reform across levels of education. Results are reported in table 8. Columns 1, 2, 3 and 4 refer to physical, sexual, emotional and economic IPV defined as in the baseline case, whereas columns 5 and 6 to physical and sexual IPV occurring alone, respectively. Panel A reports the estimates assuming a homogeneous impact across women. Panel B presents the estimates associated with each educational level[62], while panel C the differential impact of the reform across educational groups.

As expected, the substitution effect is concentrated on women married to men with low education. For this group of women, emotional and economic abuse have experienced a large, although insignificant, decrease (columns 3 and 4). This has been accompanied by a significant increase in physical and sexual IPV occurring alone (columns 5 and 6). In particular, emotional and economic abuse have declined by 7.8 and 6.8 percentage points in treatment, relative to control, states following the reform; whereas physical and sexual IPV have increased by 7.1 and 1.0 percentage points, respectively. Moreover, this increase is significantly larger than that experienced by women married to men with intermediate or high education. If physical and sexual IPV are defined as not being associated with emotional and/or economic abuse, results point in the same direction to those reported in columns 5-6 (see table B10 in the Appendix)[63].

[61] I also include the corresponding lower order interactions terms.

[62] For women married to men with low education, the effect of the reform on IPV is given by $Treat \times Post$; for women married to men with intermediate education, by the sum of $Treat \times Post$ and $Treat \times Post \times Intermediate$; and for women married to men with high education, by the sum of $Treat \times Post$ and $Treat \times Post \times High$.

[63] Also, considering physical IPV with no associated sexual violence leads to similar results than those reported in column 1. Same for sexual IPV with no associated physical violence in column 2; and emotional and economic abuse with no associated physical and/or sexual violence in columns 3 and 4, respectively.

Table 8: Effect of easier divorce on IPV – Heterogeneous effects by husband's education

	(1)	(2)	(3)	(4)	(5)	(6)
	Physical	Sexual	Emotional	Economic	Physical alone	Sexual alone
Panel A: Overall effect (homogeneous)						
All women	-0.003	-0.017***	-0.049***	-0.043***	0.007*	0.003**
	(0.007)	(0.003)	(0.007)	(0.007)	(0.004)	(0.001)
Panel B: Overall effect (heterogeneous)						
Low	0.011	-0.012	-0.078	-0.068	0.071**	0.010***
	(0.055)	(0.015)	(0.074)	(0.059)	(0.023)	(0.002)
Intermediate	-0.009	-0.018***	-0.040***	-0.034***	0.008**	0.003
	(0.012)	(0.004)	(0.012)	(0.010)	(0.003)	(0.002)
High	0.011	-0.026***	-0.078***	-0.070***	-0.001	0.001
	(0.007)	(0.005)	(0.012)	(0.013)	(0.005)	(0.001)
Panel C: Differential effect						
Intermediate vs. Low	-0.020	-0.006	0.038	0.034	-0.063**	-0.007**
	(0.067)	(0.016)	(0.085)	(0.062)	(0.025)	(0.003)
High vs. Low	-0.000	-0.014	0.000	-0.002	-0.072**	-0.009***
	(0.061)	(0.018)	(0.079)	(0.068)	(0.026)	(0.003)
High vs. Intermediate	0.020*	-0.008	-0.038**	-0.036**	-0.009**	-0.002
	(0.010)	(0.006)	(0.013)	(0.016)	(0.004)	(0.002)
Observations	55,593	55,593	55,593	55,593	55,593	55,593

Notes: Panels A and B report the OLS estimates associated with the variable $Treat \times Post$. Panel C reports the OLS estimates associated with the variable $Treat \times Post$ interacted with the man's educational level. Robust standard errors clustered at the state level in parentheses. Sampling weights are applied. 'Low' refers to less than primary education completed, 'Intermediate' to primary, secondary or vocational training completed, and 'High' to university education completed. The sample includes women who were married at the time of the reform and continue to be married at the time of the survey. The dependent variable is an indicator of whether the woman has experienced IPV in the year before the survey. All specifications control for both partners' age, both partners' indigenous background, woman's educational attainment, woman's experience of violence in her childhood, length of the relationship, number of young children, urban residence, SES index, and state and year fixed effects. ***significant at 1% level, **at 5%, *at 10%.

6.5.2 Wife's educational attainment

Table 9 presents the results for the wife. Similar to the husband's case, women with low education hold the bulk of the substitution effect. In particular, columns 3 and 4 report a decline of 6.3 and 2.3 percentage points in emotional and economic IPV, whereas columns 5 and 6 show a significant and large increase in physical and sexual IPV (6.6 and 0.9 percentage points), respectively. This increase is significantly larger than that experienced by women in the middle and top of the education distribution. Table B11 in the Appendix presents the results using alternative definitions of physical and sexual IPV, which essentially confirm the findings. The pattern in table 9 is very similar to that

observed in table 8. This suggests that the increase in violence might not only be driven by women holding a 'traditional' view on gender roles, but also by positive assortative mating in terms of views on gender roles. That is, if women with low education tend to marry men with low education[64], they would be marrying men who hold more 'traditional' views on gender roles and, thus, who are more likely to be violent.

Table 9: Effect of easier divorce on IPV – Heterogeneous effects by wife's education

	(1)	(2)	(3)	(4)	(5)	(6)
	Physical	Sexual	Emotional	Economic	Physical alone	Sexual alone
Panel A: Overall effect (homogeneous)						
All women	-0.003	-0.017***	-0.049***	-0.043***	0.007*	0.003**
	(0.007)	(0.003)	(0.007)	(0.007)	(0.004)	(0.001)
Panel B: Overall effect (heterogeneous)						
Low	0.047	0.022	-0.063***	-0.027	0.066***	0.009***
	(0.042)	(0.018)	(0.011)	(0.019)	(0.005)	(0.002)
Intermediate	-0.009	-0.021***	-0.059***	-0.051***	0.006*	0.003
	(0.011)	(0.004)	(0.012)	(0.011)	(0.003)	(0.002)
High	0.010	-0.023***	-0.019	-0.020	0.004	0.002
	(0.012)	(0.007)	(0.019)	(0.014)	(0.002)	(0.001)
Panel C: Differential effect						
Intermediate vs. Low	-0.056	-0.043**	0.004	-0.024	-0.060***	-0.006
	(0.053)	(0.018)	(0.016)	(0.027)	(0.006)	(0.004)
High vs. Low	-0.037	-0.045*	0.044*	0.007	-0.062***	-0.007**
	(0.046)	(0.024)	(0.021)	(0.021)	(0.006)	(0.003)
High vs. Intermediate	0.019	-0.002	0.040	0.031	-0.002	-0.001
	(0.016)	(0.008)	(0.022)	(0.020)	(0.002)	(0.002)
Observations	55,593	55,593	55,593	55,593	55,593	55,593

Notes: Panels A and B report the OLS estimates associated with the variable $Treat \times Post$. Panel C reports the OLS estimates associated with the variable $Treat \times Post$ interacted with the woman's educational level. Robust standard errors clustered at the state level in parentheses. Sampling weights are applied. 'Low' refers to less than primary education completed, 'Intermediate' to primary, secondary or vocational training completed, and 'High' to university education completed. The sample includes women who were married at the time of the reform and continue to be married at the time of the survey. The dependent variable is an indicator of whether the woman has experienced IPV in the year before the survey. All specifications control for both partners' age, both partners' indigenous background, man's educational attainment, woman's experience of violence in her childhood, length of the relationship, number of young children, urban residence, SES index, and state and year fixed effects. ***significant at 1% level, **at 5%, *at 10%.

[64]There is a large theoretical and empirical literature on assortative mating on education (Becker, 1973; Çelikaksoy et al., 2006). In my sample, 46% of women with low education are married to men of the same level of education. This number is 83% for women with intermediate education and 72% for those with high education.

7 The effect of easier divorce on woman's bargaining power

Divorce threat models posit that a reduction in the cost of divorce should redistribute power towards the spouse relatively more willing to divorce. To the best of my knowledge this prediction has, however, not been tested in the empirical literature. The present section aims to fill this gap by using the woman's (absolute and relative) contribution to decision-making as a proxy for her bargaining power[65]. Examining the link between divorce laws and bargaining power is not only important by itself but also because divorce laws have been found to affect a number of outcomes of the bargaining process including IPV, woman's labour force participation and household production (see section 2 for references). In the specific case of IPV, divorce threat models predict that easier divorce should reduce IPV through an improvement in the woman's bargaining power. This prediction, however, ignores the possibility that the husband perceives his wife's improved bargaining power as a threat to his dominant position. If this is the case, violence could increase, as my results for physical and sexual IPV suggest.

In order to examine whether the divorce reform has had any impact on the intra-household distribution of power, I re-estimate equation 1, but considering as dependent variable the woman's contribution to decision-making. The survey asks women who (her alone, her partner alone, both together or other people[66]) makes most of the times eight decisions regarding whether she can work or study, go out of home, how to spend the household money, what the children can do, move house or town, when to have sexual relations, if contraception methods are used and who uses them[67].

I use these eight decisions to construct two set of indices. The first set captures the woman's absolute decision-making power, while the second one her relative say (see details in the Appendix). Moreover, for each of them, I construct three indices. First, an overall index that groups the eight decisions. Second, an index that groups the two decisions related to the woman's personal activities, which are decisions most of the times made by her alone (personal index)[68]. Following the terminology of household bargaining models, they can be considered to be her private goods and services. Third, an index that groups the six decisions related to household activities, which are decisions most often taken by both partners together (household index)[69]. They can be interpreted as the household public goods and services. Table B12 in the Appendix provides some descriptive statistics. Focusing on the overall index for the treatment group in 2011, 34% of the decisions were made by the woman alone, 7% by her partner alone and 59% by both together. Since more decisions were taken by the woman alone than by her husband, the relative decision-

[65] This has been a proxy used previously in the literature. See, for instance, Majlesi (2016).

[66] In less than 0.20% of the cases the decision is taken by other people.

[67] In 2003, the survey asked women about 13 decisions, whereas in 2006 and 2011 about 11. However, only 8 are comparable across waves.

[68] Whether she can work or study and whether she can go out of home.

[69] How to spend the household money, what the children can do, whether to move house or town, when to have sexual relations, if contraception methods are used and who uses them.

making power index is positive. Comparing 2011 with previous years, the percentage of decisions made by the woman alone has been increasing over time, but this is entirely driven by those decisions related to her personal activities.

Table 10 presents the results. Columns 1-3 report the estimates associated with the woman's absolute decision-making power, whereas columns 4-6 the ones associated with her relative say. Columns 1 and 4 refer to the overall index, columns 2 and 5 to the personal index, and columns 3 and 6 to the household index. Focusing on the overall index, the absolute and relative decision-making power of women has significantly improved in treatment states relative to control ones after the reform. Comparing the magnitude of the coefficient with the average value of the index for the treatment group in the pre-reform period, this represents a 10% increase in column 1 and 24% in column 4. In both cases the significant increase is driven by the woman's personal index. Moreover, although insignificant, the introduction of unilateral divorce seems to have improved the woman's relative say about household decisions with an observed 10% increase (column 6).

Table 10: Effect of easier divorce on woman's decision-making power

	(1)	(2)	(3)	(4)	(5)	(6)
	Absolute			Relative		
	Overall	Personal	Household	Overall	Personal	Household
Treat × Post	0.029*	0.094***	-0.006	0.045**	0.108***	0.011
	(0.015)	(0.029)	(0.007)	(0.015)	(0.029)	(0.007)
Mean	0.275	0.468	0.195	0.185	0.375	0.106
Observations	55,178	55,178	55,178	55,178	55,178	55,178

Notes: OLS estimates associated with the variable $Treat \times Post$ reported. Robust standard errors clustered at the state level in parentheses. Sample weights are applied. The smaller number of observations compared to table 2 is due to the missing values in the variables used to construct the woman's decision-making power indices. 'Mean' refers to the mean value of the dependent variable in the treatment group before the divorce reform (i.e. average 2003-2006). The sample includes women who were married at the time of the reform and continue to be married at the time of the survey. The dependent variable is an index of woman's absolute (columns 1-3) or relative (columns 4-6) decision-making power. In columns 1 and 4 it groups all the decisions (eight), in columns 2 and 5 those related to the woman's personal goods and services (two) and in columns 3 and 4 those related to the household public goods and services (five). All specifications control for both partners' age, both partners' indigenous background, both partners' educational attainment, woman's experience of violence in her childhood, length of the relationship, number of young children, urban residence, SES index, and state and year fixed effects. ***significant at 1% level, **at 5%, *at 10%.

In short, the results presented in this section suggest that, following the reform, the bargaining power of women has significantly increased in treatment, as compared to control, states. This shows that easier access to divorce has benefited women relatively more than men, which has translated into a redistribution of power towards them. However, this has only occurred in decisions usually made by women alone and, as such, it only reflects a limited improvement in their bargaining position. Furthermore, in contrast with the prediction of divorce threat models, women's improved bargaining power is unlikely

to serve as a channel for explaining the decrease in sexual, emotional and economic IPV. The reason is that this decline has been accompanied by an increase in physical and sexual IPV occurring alone or with no associated emotional and/or economic abuse, which seems to be consistent with 'male backlash effect' and 'divorce prevention' explanations. Moreover, the results in this section are also consistent with the possibility that the improvement in the woman's bargaining position serves as an additional channel (in addition to the reduction in the cost of divorce) through which men feel their dominant position threatened.

8 Conclusion

This paper has provided empirical evidence of the relationship between divorce laws and IPV in the context of a developing country. It has specifically estimated the causal effect of reducing the cost of divorce on male-to-female physical, sexual, emotional and economic IPV by exploiting the state-level variation in the timing of the introduction of unilateral divorce in Mexico.

My results have shown that sexual, emotional and economic IPV have significantly declined in reform states compared to non-reform ones following the reform. They have also shown a significant increase in physical and sexual IPV occurring alone or with no associated emotional and/or economic abuse. Taken together, these findings suggest that easier divorce might have led to a substitution of emotional and economic abuse for physical and sexual violence. This substitution effect has been found to be concentrated on wives and husbands with 'traditional' views on gender roles. My results are not in line with the prediction of divorce threat models, but seem consistent with 'male backlash effect' or 'divorce prevention' explanations. Furthermore, I have also found that the reduction in the cost of divorce has improved the decision-making power of women.

The findings in this paper have highlighted the importance of analysing the relationship between divorce laws and IPV in the context of a developing country by showing different intra-household dynamics than those observed in developed countries. They have also highlighted the sensitivity of the results to the definition of physical IPV, which suggests the need for using reliable and validated definitions, as those employed in this paper.

My results have a clear policy implication. They suggest that laws aimed at making the dissolution of marriage easier can contribute to reduce IPV, even when spouses do not divorce. However, they can also have adverse consequences on women if these types of reforms lead to, for instance, a 'male backlash effect'. This suggests the need for complementing easier access to divorce with interventions that challenge 'traditional' views on gender roles. Taken together, my findings are of particular importance in the current context of Mexico, where states are gradually introducing unilateral divorce, as well as for other developing countries considering such measures.

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Appendix A: Data

Definition of covariates

Unless otherwise specified, data are obtained from ENDIREH.

- **Age:** Number of years.
- **Indigenous:** Dichotomous variable equal to one if the woman (man) speaks an indigenous language and zero otherwise.
- **Education:** Educational attainment is measured as the maximum level of education reached by using a categorical variable with four categories. It is equal to one if the woman (man) has not completed primary education; equal to two if she (he) has finished primary education; equal to three if she (he) has completed secondary education, A levels or technical vocational training; and equal to four if she (he) has finished any of the courses considered part of higher education (undergraduate or postgraduate studies).
- **Violence in childhood:** Indicator of whether the woman experienced either physical or emotional abuse before the age of 13 in her family of origin.
- **Length of relationship:** Number of years that the spouses have been living together.
- **Number of young children:** Number of children below 6 that the couple has.
- **Urban residence:** Dichotomous variable equal to one if the household is located in an urban area and zero if in a rural.
- **Socio-Economic Status:** The SES index captures the household living standard by considering variables related to dwelling infrastructure and access to utilities, household ownership of durable assets and number of residents (see details below).
- **Male Homicide rate:** The homicide rate is measured as the number of intentional homicides per 100,000 inhabitants. Data for homicides come from death certificates and for population from CONAPO *(Consejo Nacional de Población)* [National Council of Population].
- **Unemployment rate:** The unemployment rate is measured as the ratio of the unemployed population to the economically active population. Data are obtained from ENOE *(Encuesta Nacional de Ocupación y Empleo)* and ENE *(Encuesta Nacional de Empleo)* [National Labour Force Survey].

Construction of SES index

This section briefly explains the construction of the household SES index[70]. The SES index groups a wide range of variables that capture the household living standard (26 in total). In order to construct this index I follow several steps. First, I convert each categorical variable into a dichotomous one. Second, I exclude variables that have a very low frequency and are conceptually similar to others with higher frequency. Third, I remove specific variables in order to avoid perfect linear combinations of them. Fourth, I drop women with missing values in any of the variables. After all these adjustments, I end up with 20 variables. The index is constructed as the weighted sum of all them in which the weights are the loadings of the first principal component obtained from conducting a principal component analysis. Households are then classified into three groups according to the value of the index. Households in the lowest 40% of the distribution are classified as 'low', in the highest 20% as 'high' and in the rest as 'middle'.

Woman's decision-making power

For constructing the woman's absolute decision-making power, I first recode each decision as one if the woman makes it alone and zero otherwise[71]. The index is then constructed as the sum of the number of decisions made by the woman alone, which I re-scale to range between zero and one. Thus, it should be interpreted as the proportion of decisions made by her alone. The woman's relative decision-making power is defined as the proportion of decisions made by the woman alone minus the proportion of decisions made by the man alone.

[70]See Garcia-Ramos (2017) for a detailed explanation of it.

[71]It could be that, however, the woman reports that she makes the decision alone, but she is influenced by her partner or, if he disagrees, it is him who actually has the final say. I have information on whether he complains if she makes the decision alone, but not on what occurs if he does. Even though, the fact that only 8% of women in 2006 and 2011 (no information for 2003) report that he complains provides confidence for the idea that a woman's decision when taken alone is usually respected.

Appendix B: Supplementary tables

Table B1: Divorce/Domestic Violence Laws and Representative sample in 2003

State	(1) U	(2) U year	(3) MC (judicial)	(4) MC (adm)	(5) DV Divorce	(6) DV Penal Code	(7) DV Law	(8) Rep.
Central								
Mexico City	08/2008	yes	yes/no	yes	yes	yes	01/2008	no
Guanajuato			yes	no	06/2008	yes	11/2010	no
Hidalgo	03/2011	no	yes/yes(1)	no	no	yes	12/2007	yes
México	05/2012	yes	yes/yes	yes	01/2007	yes	11/2008	no
Morelos			yes	yes	09/2006	06/2006	12/2007	no
Puebla			yes	yes	11/2007	yes	11/2007	no
Querétaro	04/2016	no	yes	yes	2008	02/2008	03/2009	no
Tlaxcala			yes	yes	01/2006	12/2013	12/2007	no
North								
Aguascalientes	06/2015	yes	yes/no	yes	yes	02/2004	11/2007	no
Baja California			yes	yes	11/2004	yes	06/2008	yes
Baja California Sur			yes	yes	yes	03/2005	03/2008	no
Coahuila	04/2013	yes	yes/yes	12/2006	yes	yes	07/2008	yes
Chihuahua			yes	yes	yes	yes	01/2007	yes
Durango			yes	yes	yes	04/2004	11/2007	no
Nuevo León			yes	yes	yes	yes	09/2007	yes
San Luis Potosí			yes	yes	yes	yes	08/2007	no
Sinaloa	02/2013	no	yes/yes(1)	yes	yes	yes	07/2007	no
Sonora			yes	no	yes	yes	10/2007	yes
Tamaulipas			yes	yes	yes	yes	08/2007	no
Zacatecas			yes	no	yes	yes	01/2009	yes
West								
Colima			yes	yes	yes	11/2005	11/2008	no
Jalisco			yes	yes	11/2007	yes	05/2008	no
Michoacán			yes	yes	yes	yes	12/2008	yes
Nayarit	05/2014	no	yes/yes	yes	05/2007	12/2004	11/2008	no
East and South								
Campeche			yes	yes	06/2007	12/2014	07/2007	no
Chiapas			yes	yes	11/04	yes	03/2009	yes
Guerrero	03/2012	yes	yes/yes	yes	yes	yes	02/2008	no
Oaxaca	04/2017	no	yes/no	yes	yes	yes	03/2009	no
Quintana Roo	05/2013(2)	yes	yes/yes	yes	07/2004	06/2006	11/2007	yes
Tabasco			yes	yes	12/2008	yes	12/2008	no
Veracruz			yes	yes	yes	11/2003	02/2008	no
Yucatán	06/2015	yes	yes/yes	yes	no	yes	03/2008	yes

Notes: Column 1 refers to the date unilateral divorce was approved and column 2 to whether there is a one-year marriage requirement. If unilateral divorce has not been introduced these two columns are in blank. Column 3 refers to whether there was/is mutual consent divorce by judicial procedure (when unilateral divorce has been introduced, the first term refers to before its implementation and the second to after). Column 4 refers to whether there is administrative divorce. Column 5 refers to whether domestic violence was/is explicitly recognised as a cause for divorce. If it was before 20th October 2003 (when the data collection for ENDIREH 2003 started), it says 'yes'. Columns 6 refers to whether domestic violence has been recognised in the Penal Code. If it was before 20th October 2003, it says 'yes'. Column 7 refers to the date in which the Law on Women's Access to a Life Free of Violence was adopted. Column 8 states whether the sample was representative in ENDIREH 2003. 'U' and 'MC' stand for unilateral and mutual consent, respectively, 'adm' for administrative, 'DV' for domestic violence and 'Rep' for representative.
(1) Do not require a mandatory one-year of marriage after the introduction of unilateral divorce.
(2) Quintana Roo continuous to have fault divorce on its Civil Code after introducing unilateral divorce.
Source: Own elaboration based on Civil Codes, Codes of Civil Procedures, Family Codes, Codes of Family Procedures, Family Laws and Divorce Laws (columns 1-5); Penal Codes (column 6); Law on Women's Access to a Life Free of Violence (column 7) and ENDIREH (column 8).

Table B2: Prevalence of IPV by violent item

	2003		2006		2011	
	T	C	T	C	T	C
During the last year, has your husband or partner...						
Physical IPV and serious threats						
pushed you or pulled your hair?	0.047	0.046	0.074	0.059	0.027	0.032
tied you up?	0.000	0.001	0.003	0.002	0.000	0.001
kicked you?	0.015	0.012	0.020	0.016	0.006	0.006
thrown any object at you?	0.011	0.020	0.030	0.025	0.009	0.013
beaten you with his hands or any object?	0.043	0.036	0.050	0.044	0.032	0.028
tried to hang or choke you?	0.004	0.007	0.010	0.007	0.003	0.004
assaulted you with a knife or blade?	0.001	0.004	0.005	0.004	0.002	0.002
fired a weapon at you?	0.000	0.001	0.002	0.001	0.000	0.001
threatened you with a weapon?	0.008	0.011	0.006	0.006	0.005	0.004
threatened to kill you, himself or the children?	0.023	0.020	0.010	0.012	0.005	0.011
Sexual IPV						
demanded you to have sexual relations?	0.066	0.061	0.056	0.046	0.013	0.024
forced you to do sexual things that you do not like?	0.011	0.018	0.014	0.010	0.004	0.008
used physical strength to force you to have sexual relations?	0.015	0.019	0.018	0.014	0.006	0.008
Emotional IPV						
ashamed, underestimated or humiliated you?	0.109	0.073	0.073	0.056	0.058	0.058
ignored or not shown you affection?	0.124	0.082	0.111	0.076	0.085	0.081
said you cheat on him?	0.084	0.057	0.063	0.050	0.039	0.050
made you feel fear?	0.075	0.071	0.059	0.047	0.037	0.038
threatened to leave you, hurt you, take your children away or kick you out?	0.082	0.068	0.054	0.046	0.033	0.048
locked you in, forbidden you from going out or being visited?	0.031	0.030	0.023	0.023	0.013	0.017
turned your children or relatives against you?	0.039	0.037	0.031	0.019	0.016	0.019
destroyed, thrown away or hidden things belonging to you or the household?	0.052	0.035	0.030	0.027	0.012	0.022
sopped talking to you?	0.177	0.155	0.194	0.166	0.179	0.133
got angry because household chores are not done like he wants?	0.110	0.094	0.099	0.083	0.071	0.070
Economic IPV						
complained about how you spend money?	0.108	0.118	0.124	0.090	0.081	0.080
been stingy with the household expenses, even though he has money?	0.098	0.070	0.088	0.062	0.046	0.054
not given you the upkeep or threatened you to not giving it?	0.062	0.045	0.042	0.038	0.027	0.031
spent money needed for the household?	0.075	0.069	0.061	0.053	0.022	0.040
appropriated or taken money or possessions from you?	0.012	0.010	0.008	0.007	0.006	0.008
forbidden you to work or study?	0.096	0.090	0.063	0.054	0.028	0.038
Observations	1,618	14,519	3,285	16,178	3,489	16,504

Notes: 'T' stands for treatment and 'C' for control. Sampling weights are applied.

Table B3: Effect of easier divorce on being divorced

	(1)	(2)	(3)
Treat × Post	0.009*	0.008*	0.007*
	(0.004)	(0.004)	(0.004)
State/Year FE	Yes	Yes	Yes
Individual	No	Yes	Yes
Household	No	No	Yes
Observations	101,056	101,056	101,056

Notes: OLS estimates associated with the variable $Treat \times Post$ reported. Sampling weights are applied. 'FE' stands for fixed effects. The sample includes all women (i.e. married, cohabiting, divorced, separated, in a relationship, single). The dependent variable is an indicator of whether the woman is divorced. Individual covariates include woman's age, woman's indigenous background and woman's educational attainment. Household covariates include urban residence and SES index. ***significant at 1% level, **at 5%, *at 10%.

Table B4: Exogeneity of the reform

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Physical 06	-0.491	-1.466						
	(0.499)	(2.328)						
Physical 03	-0.583	-0.769						
	(0.542)	(1.467)						
Sexual 06			0.269	-0.041				
			(0.716)	(3.456)				
Sexual 03			0.106	-0.307				
			(0.548)	(1.400)				
Emotional 06					0.029	-1.101		
					(0.505)	(1.183)		
Emotional 03					0.017	-0.511		
					(0.424)	(0.711)		
Economic 06							-0.022	-0.171
							(0.269)	(0.862)
Economic 03							-0.044	-0.290
							(0.206)	(0.518)
Age_w		0.038		0.005		0.047		0.009
		(0.115)		(0.112)		(0.121)		(0.104)
Age_m		0.082		0.113		0.088		0.118
		(0.100)		(0.103)		(0.091)		(0.090)
Indigenous_w		6.956		6.911		7.413		7.667
		(4.910)		(4.287)		(5.437)		(4.961)
Indigenous_m		-6.216		-6.160		-6.709		-6.915
		(4.455)		(3.830)		(5.011)		(4.496)
Primary edu_w		-0.644		-0.668		-0.366		-0.510
		(1.279)		(1.257)		(1.344)		(1.205)
Secondary edu_w		-1.716		-1.812		-1.456		-1.736
		(2.163)		(2.232)		(2.242)		(2.027)
Higher edu_w		-4.662		-4.896		-4.859		-4.790
		(3.005)		(2.938)		(2.966)		(2.876)
Primary edu_m		1.346		1.233		1.495		1.285
		(1.412)		(1.449)		(1.456)		(1.458)
Secondary edu_m		3.044		2.957		3.166		3.027
		(2.335)		(2.435)		(2.401)		(2.444)
Higher edu_m		4.982		4.955		5.243		4.993
		(3.780)		(3.913)		(3.757)		(3.812)
Child violence		-0.097		-0.382		0.064		-0.418
		(0.371)		(0.454)		(0.424)		(0.456)
Length relation		-0.038		-0.039		-0.041		-0.046
		(0.075)		(0.074)		(0.080)		(0.077)
Young children		-0.031		-0.072		0.172		-0.003
		(0.749)		(0.745)		(0.729)		(0.828)
Urban		-0.556		-0.488		-0.469		-0.455
		(0.644)		(0.626)		(0.574)		(0.593)
SES middle		-0.074		-0.036		-0.248		-0.132
		(0.800)		(0.689)		(0.962)		(0.754)
SES high		0.011		0.101		0.033		0.071
		(0.524)		(0.579)		(0.549)		(0.595)
Constant	0.107	-4.828	0.052	-4.779	0.057	-5.789	0.071	-5.119
	(0.082)	(3.157)	(0.052)	(3.050)	(0.114)	(3.704)	(0.073)	(3.423)
Observations	64	64	64	64	64	64	64	64

Notes: OLS estimates reported. Robust standard errors clustered at the state level in parentheses. 'edu' stands for education, 'w' for woman, 'm' for man, '03' for 2003 and '06' for 2006. The sample includes women who are married. All the variables are weighted averages of the ENDIREH sample by state and year. The dependent variable is an indicator of whether the state has introduced unilateral divorce by 2011. ***significant at 1% level, **at 5%, *at 10%.

Table B5: Effect of easier divorce on IPV – Additional robustness checks

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Baseline	Alternative control groups					Married >10 years
		All	Divorce +Criminal	Abortion MC	Abortion Const.	Late reform	
Physical	-0.003	0.004	0.000	-0.004	0.001	-0.006	-0.003
	(0.007)	(0.007)	(0.007)	(0.008)	(0.009)	(0.008)	(0.007)
Sexual	-0.017***	-0.011***	-0.012***	-0.020***	-0.010**	-0.014**	-0.022***
	(0.003)	(0.003)	(0.003)	(0.002)	(0.003)	(0.005)	(0.004)
Emotional	-0.049***	-0.037***	-0.044***	-0.051***	-0.036***	-0.048***	-0.038***
	(0.007)	(0.009)	(0.008)	(0.010)	(0.009)	(0.009)	(0.007)
Economic	-0.043***	-0.033***	-0.034***	-0.045***	-0.023**	-0.041***	-0.057***
	(0.007)	(0.007)	(0.006)	(0.007)	(0.008)	(0.006)	(0.011)
Observations	55,593	141,644	61,851	42,048	38,814	37,760	40,530

Notes: OLS estimates associated with the variable $Treat \times Post$ reported. Robust standard errors clustered at the state level in parentheses. Sampling weights are applied. Column 1 reproduces the baseline estimates from table 2. Column 2 considers all non-reform states (i.e. 30) as control group. Column 3 excludes from all these non-reform states those that have reformed their divorce and criminal legislations and, in addition to this, column 4 excludes women who are not likely to have benefited from the decriminalisation of abortion in Mexico City, column 5 removes states that have introduced constitutional changes to protect the right to life from conception or fertilisation, and column 6 excludes states that have introduced unilateral divorce after 2011. Column 7 defines the treatment group as women married for at least 10 years at the time of the reform living in Mexico City or Hidalgo. 'MC' stands for Mexico City and 'Const' for constitutional. The sample includes women who were married at the time of the reform and continue to be married at the time of the survey. The dependent variable is an indicator of whether the woman has experienced IPV in the year before the survey. All specifications control for both partners' age, both partners' indigenous background, both partners' educational attainment, woman's experience of violence in her childhood, length of the relationship, number of young children, urban residence, SES index, and state and year fixed effects. ***significant at 1% level, **at 5%, *at 10%.

Table B6: Effect of easier divorce on IPV – Wild cluster bootstrapped standard errors

	(1)	(2)	(3)	(4)
Physical	-0.007	-0.003	-0.004	-0.003
	(0.009)	(0.008)	(0.008)	(0.008)
Sexual	-0.019***	-0.017***	-0.017***	-0.017***
	(0.006)	(0.006)	(0.005)	(0.005)
Emotional	-0.058***	-0.050***	-0.051***	-0.049***
	(0.019)	(0.016)	(0.016)	(0.016)
Economic	-0.048***	-0.044***	-0.044***	-0.043***
	(0.016)	(0.014)	(0.014)	(0.014)
State/Year FE	Yes	Yes	Yes	Yes
Individual	No	Yes	Yes	Yes
Couple	No	No	Yes	Yes
Household	No	No	No	Yes
Observations	55,593	55,593	55,593	55,593

Notes: OLS estimates associated with the variable $Treat \times Post$ reported. Wild cluster bootstrapped standard errors in parentheses. Sampling weights are applied. 'FE' stands for fixed effects. The sample includes women who were married at the time of the reform and continue to be married at the time of the survey. The dependent variable is an indicator of whether the woman has experienced IPV in the year before the survey. Individual covariates include both partners' age, both partners' indigenous background, both partners' educational attainment and woman's experience of violence in her childhood. Couple covariates include length of the relationship and number of young children. Household covariates include urban residence and SES index. ***significant at 1% level, **at 5%, *at 10%.

Table B7: Effect of easier divorce on IPV – Man's experience of violence in childhood

	(1)	(2)	(3)	(4)	(5)
	LPM				Probit
Physical	-0.009	-0.006	-0.007	-0.006	-0.004
	(0.008)	(0.007)	(0.007)	(0.008)	(0.008)
Sexual	-0.021***	-0.019***	-0.019***	-0.018***	-0.016***
	(0.003)	(0.003)	(0.003)	(0.003)	(0.001)
Emotional	-0.064***	-0.056***	-0.057***	-0.055***	-0.042***
	(0.013)	(0.011)	(0.011)	(0.011)	(0.008)
Economic	-0.054***	-0.050***	-0.050***	-0.049***	-0.040***
	(0.013)	(0.011)	(0.011)	(0.011)	(0.009)
State/Year FE	Yes	Yes	Yes	Yes	Yes
Individual	No	Yes	Yes	Yes	Yes
Couple	No	No	Yes	Yes	Yes
Household	No	No	No	Yes	Yes
Observations	46,609	46,609	46,609	46,609	46,609

Notes: OLS estimates (columns 1-4) and marginal effects (column 5) associated with the variable $Treat \times Post$ reported. Robust standard errors clustered at the state level in parentheses. Sampling weights are applied. 'FE' stands for fixed effects. The sample includes women who were married at the time of the reform and continue to be married at the time of the survey. The sample excludes missing values of the variable man's experience of violence in childhood. The dependent variable is an indicator of whether the woman has experienced IPV in the year before the survey. Individual covariates include both partners' age, both partners' indigenous background, both partners' educational attainment and woman's experience of violence in her childhood. Couple covariates include length of the relationship and number of young children. Household covariates include urban residence and SES index. ***significant at 1% level, **at 5%, *at 10%.

Table B8: Effect of easier divorce on reporting behaviour

	(1)	(2)	(3)
	Ordinary LPM	Selection equation	Heckman
Violence childhood man		0.417***	
		(0.031)	
Treat × Post	-0.006		-0.008
	(0.017)		(0.018)
Wald test (p-value)			0.000
Observations	10,641	46,146	46,146

Notes: Column 1 reports the OLS estimate associated with the variable $Treat \times Post$ when an ordinary LPM is estimated. Column 2 reports the Probit estimate associated with the selection variable 'Violence childhood man' and column 3 the maximum likelihood estimate associated with the variable $Treat \times Post$ when a Heckman selection model is estimated. Robust standard errors clustered at the state level in parentheses. Sampling weights are applied. 'Wald test' refers to the test of independent equations. The sample includes women who were married at the time of the reform and continue to be married at the time of the survey. The sample in column 1 is restricted to women who have experienced IPV in the 12 months prior to the survey. The smaller number of observations in columns 2 and 3 compared to the baseline specification in table 2 is due to the missing values in the variables man's experience of violence in childhood and report of IPV to the police or any other authority. The dependent variable is an indicator of whether the woman has reported IPV to the police, Public Ministry or any other authority (columns 1 and 3); or an indicator of whether her husband has experienced IPV in his childhood (column 2). All specifications control for both partners' age, both partners' indigenous background, both partners' educational attainment, woman's experience of violence in her childhood, length of the relationship, number of young children, urban residence, SES index, and state and year fixed effects. ***significant at 1% level, **at 5%, *at 10%.

Table B9: Effect of easier divorce on physical IPV – Heterogeneous effects

	(1)	(2)	(3)	(4)	(5)
	Ind_w	Ind_m	Children	Urban	SES
Treat × Post	-0.003	-0.003	-0.005	-0.001	-0.006
	(0.010)	(0.010)	(0.005)	(0.007)	(0.007)
Treat× Post × Ind_w	0.010				
	(0.055)				
Treat× Post × Ind_m		-0.009			
		(0.035)			
Treat× Post × Children			0.017		
			(0.012)		
Treat× Post × Urban				0.000	
				(0.008)	
Treat× Post × SES (Middle)					0.006
					(0.018)
Treat× Post × SES (High)					-0.004
					(0.008)
Observations	55,593	55,593	55,593	55,593	55,593

Notes: OLS estimates associated with the variable $Treat \times Post$ reported. Robust standard errors clustered at the state level in parentheses. Sampling weights are applied. 'Ind_w (Ind_w)' refers to whether the woman (man) is indigenous, '$Children$' to whether the woman has young children, '$Urban$' to whether the couple lives in an urban area, and 'SES' to the SES index. The sample includes women who were married at the time of the reform and continue to be married at the time of the survey. The dependent variable is an indicator of whether the woman has experienced physical IPV in the year before the survey. All specifications control for both partners' age, both partners' indigenous background, woman's educational attainment, woman's experience of violence in her childhood, length of the relationship, number of young children, urban residence, SES index, and state and year fixed effects. ***significant at 1% level, **at 5%, *at 10%.

Table B10: Effect of easier divorce on IPV – Heterogeneous effects by husband's education: Alternative definition of physical and sexual IPV

	(1)	(2)	(3)	(4)	(5)	(6)
	Physical (no emo and eco)	Physical (no emo)	Physical (no eco)	Sexual (no emo and eco)	Sexual (no emo)	Sexual (no eco)
Panel A: Overall effect (homogeneous)						
All women	-0.003	-0.017***	-0.049***	-0.043***	0.007*	0.003**
	(0.007)	(0.003)	(0.007)	(0.007)	(0.004)	(0.001)
Panel B: Overall effect (heterogeneous)						
Low	0.071**	0.080***	0.044	0.011***	0.014***	0.014**
	(0.023)	(0.020)	(0.028)	(0.002)	(0.003)	(0.006)
Intermediate	0.008**	0.008***	0.010**	0.003	-0.001	0.000
	(0.003)	(0.002)	(0.004)	(0.002)	(0.001)	(0.002)
High	-0.000	0.001	-0.001	0.002	0.002	0.006***
	(0.005)	(0.004)	(0.005)	(0.001)	(0.002)	(0.001)
Panel C: Differential effect						
Intermediate vs. Low	-0.063**	-0.072***	-0.034	-0.008**	-0.015***	-0.014**
	(0.025)	(0.021)	(0.032)	(0.003)	(0.003)	(0.005)
High vs. Low	-0.071**	-0.079***	-0.045	-0.009***	-0.012***	-0.008
	(0.026)	(0.023)	(0.032)	(0.002)	(0.003)	(0.006)
High vs. Intermediate	-0.008*	-0.007*	-0.011**	-0.002	0.003	0.006*
	(0.004)	(0.003)	(0.004)	(0.002)	(0.002)	(0.002)
Observations	55,593	55,593	55,593	55,593	55,593	55,593

Notes: Panels A and B report the OLS estimates associated with the variable $Treat \times Post$. Panel C reports the OLS estimates associated with the variable $Treat \times Post$ interacted with the man's educational level. Robust standard errors clustered at the state level in parentheses. Sampling weights are applied. 'Emo' stands for 'emotional' and 'eco' for economic. 'Low' refers to less than primary education completed, 'Intermediate' to primary, secondary or vocational training completed, and 'High' to university education completed. The sample includes women who were married at the time of the reform and continue to be married at the time of the survey. The dependent variable is an indicator of whether the woman has experienced IPV in the year before the survey. All specifications control for both partners' age, both partners' indigenous background, woman's educational attainment, woman's experience of violence in her childhood, length of the relationship, number of young children, urban residence, SES index, and state and year fixed effects. ***significant at 1% level, **at 5%, *at 10%.

Table B11: Effect of easier divorce on IPV – Heterogeneous effects by wife's education: Alternative definitions of physical and sexual IPV

	(1)	(2)	(3)	(4)	(5)	(6)
	Physical (no emo and eco)	Physical (no emo)	Physical (no eco)	Sexual (no emo and eco)	Sexual (no emo)	Sexual (no eco)
Panel A: Overall effect (homogeneous)						
All women	-0.003	-0.017***	-0.049***	-0.043***	0.007*	0.003**
	(0.007)	(0.003)	(0.007)	(0.007)	(0.004)	(0.001)
Panel B: Overall effect (heterogeneous)						
Low	0.066***	0.070***	0.065***	0.009***	0.019***	0.012**
	(0.005)	(0.004)	(0.008)	(0.002)	(0.004)	(0.005)
Intermediate	0.006*	0.007**	0.006*	0.002	-0.001	0.002
	(0.003)	(0.003)	(0.003)	(0.002)	(0.002)	(0.002)
High	0.004**	0.006***	0.003	0.003*	0.003	-0.001
	(0.002)	(0.002)	(0.004)	(0.001)	(0.002)	(0.002)
Panel C: Differential effect						
Intermediate vs. Low	-0.060***	-0.063***	-0.059***	-0.007*	-0.021***	-0.010**
	(0.006)	(0.005)	(0.011)	(0.004)	(0.006)	(0.004)
High vs. Low	-0.062***	-0.064***	-0.062***	-0.006**	-0.016***	-0.013**
	(0.006)	(0.005)	(0.011)	(0.003)	(0.005)	(0.005)
High vs. Intermediate	-0.001	-0.001	-0.003	0.000	0.004	-0.003
	(0.002)	(0.002)	(0.004)	(0.002)	(0.003)	(0.003)
Observations	55,593	55,593	55,593	55,593	55,593	55,593

Notes: Panels A and B report the OLS estimates associated with the variable $Treat \times Post$. Panel C reports the OLS estimates associated with the variable $Treat \times Post$ interacted with the woman's educational level. Robust standard errors clustered at the state level in parentheses. Sampling weights are applied. 'Emo' stands for 'emotional' and 'eco' for economic. 'Low' refers to less than primary education completed, 'Intermediate' to primary, secondary or vocational training completed, and 'High' to university education completed. The sample includes women who were married at the time of the reform and continue to be married at the time of the survey. The dependent variable is an indicator of whether the woman has experienced IPV in the year before the survey. All specifications control for both partners' age, both partners' indigenous background, man's educational attainment, woman's experience of violence in her childhood, length of the relationship, number of young children, urban residence, SES index, and state and year fixed effects. ***significant at 1% level, **at 5%, *at 10%.

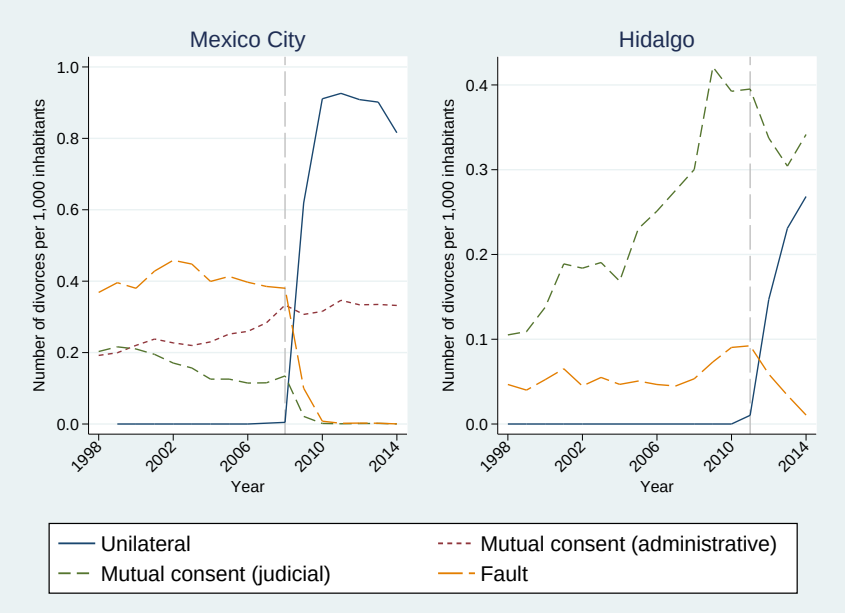
Table B12: Descriptive statistics: Decision-making power

	2003		2006		2011	
	T	C	T	C	T	C
Woman's decision making-power: Overall	0.234	0.237	0.295	0.279	0.339	0.321
Woman's decision making-power: Personal	0.260	0.267	0.570	0.518	0.690	0.613
Woman's decision making-power: Household	0.223	0.222	0.181	0.181	0.187	0.195
Man's decision making-power: Overall	0.067	0.065	0.101	0.107	0.069	0.089
Man's decision making-power: Personal	0.075	0.073	0.101	0.119	0.064	0.085
Man's decision making-power: Household	0.064	0.062	0.101	0.102	0.072	0.092
Both partners' decision making-power: Overall	0.555	0.563	0.604	0.612	0.590	0.589
Both partners' decision making-power: Personal	0.500	0.504	0.328	0.362	0.245	0.301
Both partners' decision making-power: Household	0.577	0.588	0.717	0.714	0.740	0.711
Relative decision making-power: Overall	0.167	0.172	0.194	0.173	0.269	0.232
Relative decision making-power: Personal	0.186	0.194	0.468	0.399	0.627	0.529
Relative decision making-power: Household	0.159	0.161	0.080	0.080	0.115	0.103
Observations	1,597	14,293	3,262	16,104	3,483	16,439

Notes: 'T' stands for treatment and 'C' for control. Woman's (man's) decision-making power refers to the proportion of decisions made by the woman (man) alone. Both partners' decision-making power refers to the proportion of decisions made by both partners jointly. Relative decision-making power is the proportion of decisions made by the woman alone minus the proportion of decisions made by the man alone.

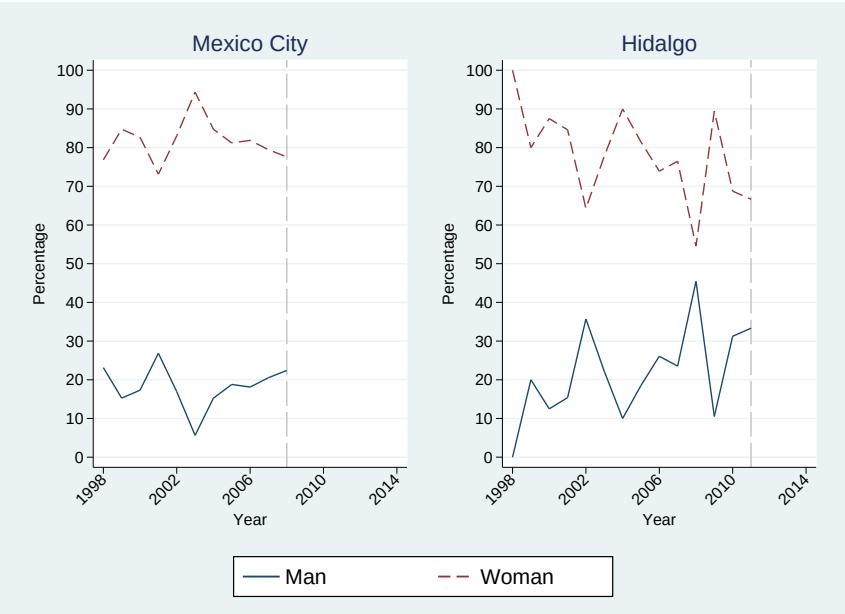
Appendix C: Supplementary figures

Figure C1: Divorce rate by type of divorce



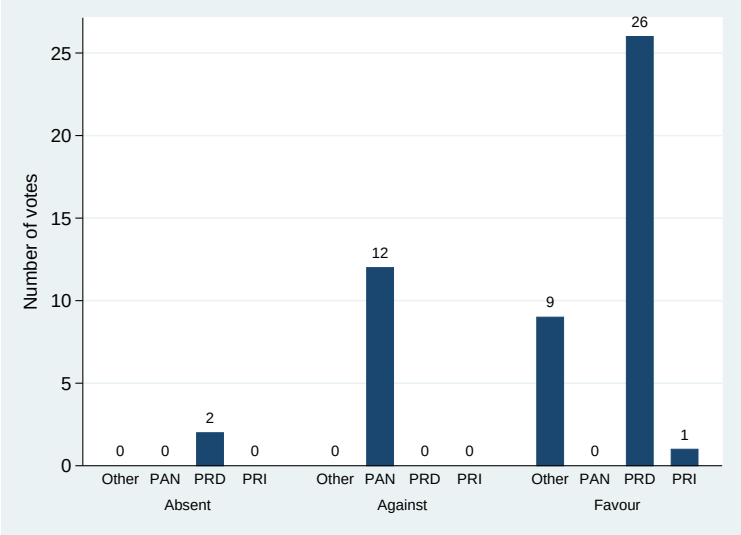
Notes: The vertical axes refer to the annual number of divorces per 1,000 inhabitants. The vertical lines refer to the year unilateral divorce was introduced (2008 in Mexico City and 2011 in Hidalgo). *Source:* Divorce statistics, INEGI

Figure C2: Percentage of divorces by who initiates divorce grounded on domestic violence



Notes: The vertical axes refer to the percentage of divorces initiated by women and men grounded on the explicit cause of domestic violence or the cause of 'brutality, threats and serious injuries'. The vertical lines refer to the year unilateral divorce was introduced (2008 in Mexico City and 2011 in Hidalgo). *Source:* Divorce statistics, INEGI.

Figure C3: Distribution of votes in the Legislative Assembly



Notes: The vertical axis refers to the number of votes. *Source: Diario de los debates de la Asamblea Legislativa del Distrito Federal*, 27 August 2008.