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School of Economics and Management

Public Childcare and Female Empowerment

Evidence from Mexico

by

Mia Hoffmann

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Supervisors: Kaveh Majlesi, Hanna Mühlrad

Abstract

Despite ample evidence on the importance of labor market opportunities for women's bargaining power, the link between public childcare availability and female empowerment has so far been widely overlooked. Using detailed survey data on household dynamics, this paper investigates the impact of the Mexican childcare program *Estancias Infantiles para Apoyar a Madres Trabajadoras* on women's decision-making power and the prevalence of intimate partner violence. I take advantage of the program's rapid expansion and the resulting geographical variation in exposure to isolate the causal impact of childcare availability on women's empowerment through a triple difference-in-differences model based on municipality-level treatment intensity. Estimates show that childcare availability leads to a decline in the incidence rates of spousal abuse, but also aggravates women's decision-making power, which points towards yet unobserved household responses to enhanced economic opportunities for women. Disaggregation by income uncovers behavioral patterns best predicted by the male backlash theory among low-income households.

Keywords: Female empowerment, Intimate partner violence, Household bargaining, Public childcare, Transition economies

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1 Introduction

The Beijing World Conference on Women in 1995 was groundbreaking in placing female empowerment on the policy agenda of the developing world. Ever since, enhancing women's economic autonomy is seen as an indispensable tool for promoting gender equality, a perception backed by ample empirical evidence (Anderson and Eswaran, 2009; Aizer, 2010; Doss, 2013; Antman, 2014; Majlesi, 2016).

Childbearing and childcare responsibilities are widely recognized as major obstacles to women's labor market participation and economic independence (Angrist and Evans, 1998; Waldfogel, 1998; Lundborg et al., 2017). Accordingly, access to public childcare has been found to significantly raise women's labor supply both in industrialized and developing countries (Blau and Robins, 1988; Gustafsson and Stafford, 1992; Chevalier and Viitanen, 2002; Attanasio and Vera-Hernandez, 2004; Berlinski and Galiani, 2007)[1]. While the primary goal of childcare services in low- and middle-income contexts so far has been the improvement of child health and cognitive development (Behrman et al., 2004; Berlinski et al., 2008; Attanasio et al., 2013)[2] lately, international organizations have grown increasingly aware of childrearing responsibilities as an impediment to women's empowerment in the developing world, and have begun to promote childcare service expansions (United Nations, 2017).

In this paper, I examine the impact of public childcare availability on female empowerment. To that end, I leverage the roll out of a public daycare program in Mexico to investigate the impact of access to childcare on different measurements of female empowerment including household decision-making and prevalence of intimate partner violence (IPV). In contrast to the rich literature on the impacts of childcare on women's labor supply, studies on the effects of childcare on parental behavior are scarce. While previous research has studied the impact of public childcare on women's fertility (Del Boca, 2002; Haan and Wrohlich, 2011; Bick, 2016) or human capital formation (Joshi and Davies, 1993; Blundell et al., 2016), there is, to the best of my knowledge, no other study examining the effect of daycare availability on intra-household bargaining dynamics.

[1] See, among many more, Connelly (1992), Gelbach (2002), Cascio (2009) and Fitzpatrick (2010) on the USA, Baker et al. (2008) on Canada, Lundin et al. (2008) on Sweden, Simonsen (2010) on Denmark, Bauernschuster and Schlotter (2015) on Germany and Givord and Marbot (2015) on France.
[2] See Leroy et al. (2012) For a survey of the literature

I exploit the program's rapid expansion and the resulting geographical variation in exposure to isolate the causal effect of childcare availability on women's bargaining power and domestic abuse. Since the government focused on quick implementation rather than strategic placement of childcare centers, I obtain the intention-to-treat estimate using a triple difference-in-differences design based on municipality-level treatment intensity. I allow for heterogeneous effects by disaggregating my sample by income levels to analyze whether the program improves the situation of the most vulnerable. Detailed data from the Mexican Family Life survey (MxFLS) and the National Survey on the Dynamics of Household Relationships (ENDIREH) allow me to directly observe the impact on women's participation in household decision-making and the prevalence of spousal abuse.

The program under examination is a public daycare program that was launched by the Mexican government in 2007. This program, called *Estancias Infantiles para Apoyar a Madres Trabajadoras* (hereafter referred to as EI), targets mothers of young children and aims to improve their access to the labor market and promote gender equality. In Mexico, women are severely underrepresented in the formal working sector (World Bank, 2011). To address this, the Mexican government offered subsidized childcare to women with children under the age of four who are working, studying or seeking employment. Expansion of the program was so rapid that within only two years more than 8,000 daycare centers had been created nationwide to improve economic opportunities for mothers. Within three years of operation the program succeeded in raising the share of women working in formal employment and promoting overall female labor force participation (Calderón, 2014).

EI could therefore mitigate a well-known phenomenon in developing countries: after the birth of their first child many women move into informal or unpaid domestic work since subsistence farming or home-run microenterprises are more easily combined with the responsibilities of child rearing than market employment (Duflo, 2012)[3]. The same does not seem to apply to men. Fathers' economic opportunities are not aggravated by childcare responsibilities (Angrist and Evans, 1998; Killewald, 2013). Indeed, the male equivalent of the motherhood wage penalty appears to be the fatherhood wage premium (Lundberg and Rose, 2002; Loughran and Zissimopoulos, 2009; Petersen et al., 2014).

[3] This has been shown by Agüero and Marks (2011). The authors use infertility shocks as an instrument for family size in a cross-section of 26 developing countries and find that having children increases the likelihood of moving into unpaid work, especially for young women under the age of 35. Similarly, Cruces and Galiani (2007) exploit the sex-composition of the first two siblings to instrument for family size on a sample of Mexican and Argentinean households and find that having a third child reduces the labor force participation of Mexican women by up to 8.6%.

By alleviating childcare responsibilities, EI enhances economic opportunities for eligible women. It allows those who enroll their children to reallocate their time towards more productive activities, such as entering the labor market and earning market income. The transition to non-domestic work and the increase in relative income should empower those women to extend their participation in household decision-making (Acharya and Bennet, 1983; Anderson and Eswaran, 2009; Jensen, 2012). In addition, there may be an empowering network effect. Daily interactions with daycare staff and other mothers in similar family situations may become a source of social support for women with enrolled children. In the context of domestic violence, they might furthermore notice bruising or other signs of abuse. Building this social network outside of the household may strengthen women's self-esteem and confidence in bargaining situations at home (Green, 1998)[4]. Importantly, benefits are not limited to women who choose to enroll their children. Some mothers may decide not to do so, because there is no need to find employment in their current marital situation. If they were to separate from their partners, however, these women may increase their labor supply. Childcare responsibilities may then prevent them from taking up formal employment. By providing public daycare, EI facilitates their potential entrance to the labor market. EI consequently reduces women's dependence from their partners and thereby strengthens their intra-household bargaining power[5].

This study contributes to the literature along several dimensions. As pointed out above, it is the first paper that investigates the relationship between female empowerment and childcare availability. It thereby extends previous research on the impacts of childcare on maternal outcomes. Moreover, it adds to existing work on female empowerment and household decision-making. Previous studies have focused on the impact of reforms of women's reproductive rights, including abortion legislation (Oreffice, 2007; Clarke and Mühlrad, 2016) and access to birth control (Goldin and Katz, 2002; Bailey, 2006; Chiappori and Oreffice, 2008). Others have studied the influence of marriage and divorce legislation on intra-household bargaining (Gray, 1998; Chiappori et al., 2002; Rangel, 2006), and another branch has examined the role of asset and land ownership (Agarwal, 1994; Udry, 1996; Allendorf, 2007; Wang, 2014). By addressing a so-far neglected determinant of women's decision-making power, unequal childcare

[4] Evidence on the effect of social capital on women's empowerment has also been found in the context of microfinance. See, for example, Mayoux (2001) or Swain and Wallentin (2009).

[5] This was both argued and shown by Majlesi (2016). Using shocks to the local manufacturing sector, Majlesi isolates the impact of female labor demand on household decision-making. An improvement in women's labor market opportunities is associated with more say in a number of household decisions, including choices concerning women's private and a number of household public goods. Effects are found both for women who did and women who did not respond to the change in labor demand with an increase in their labor supply.

responsibilities, this study sheds light on an overlooked dimension of household bargaining. Finally, this paper adds to a small body of literature examining the relationship between women's economic opportunities and the prevalence of IPV (Farmer and Tiefenthaler, 1997; Aizer, 2010; Heath, 2014; Kagy, 2014; Alonso-Borrego and Carrasco, 2017; Guarnieri and Rainer, 2018).

My results point towards a negative impact of childcare availability on women's participation in household decision-making, contradicting the program's intended female empowerment. Increased exposure to EI causes a reduction in eligible women's influence on aggregate, on child-related matters and in their autonomy. These results are robust to different specifications of eligibility. Estimates from a subsample analysis and the placebo test suggest, however, that the baseline results may be slightly downward biased. The analysis by income reveals that poor women may benefit from childcare access. Although estimates are insignificant, this provides prima facie evidence of heterogeneity in the effect of childcare access on women's decision-making power.

The analysis of IPV shows that childcare accessibility causes a reduction in the prevalence of physical spousal abuse towards eligible women. The estimates are robust to variations in the definition of treatment and control group. I also find that EI reduces incidence rates of emotional and sexual abuse, although these estimates are more sensitive. However, women from poor households appear to face increased risks of spousal abuse which points to a heterogeneity in household dynamics across income groups. While statistical significance for this observation is weak, the large difference in the effects might indicate a route for future research.

The results have high policy relevance for countries with low access to childcare. First, by presenting empirical evidence on the impact of childcare availability on female empowerment, this paper helps to understand which policies may prove most effective in promoting gender equality. Economists have long recognized the importance of empowering women to achieve other development outcomes. Strengthening women's bargaining power is associated with higher household expenditures for nutrition, health and education (Thomas, 1990, 1993) and better child health outcomes (Duflo, 2003). It has also been found to raise schooling levels for children and women (Qian, 2008; Nagarajan et al., 2010) and reduce daughter discrimination (Qian, 2008; Bose, 2011). It is therefore of considerable interest to policymakers to understand how they can promote women's say and their status in society.

Second, the dichotomous analysis of female empowerment through household decision-making and spousal violence sheds light on the complex household dynamics that are set off by policies

promoting women's economic opportunities. Development strategies typically aim to improve welfare of vulnerable or disadvantaged groups. The extent to which policies can unfold their potential benefits, however, depends strongly on the individual's ability to respond to them (Alderman et al., 1995). Failure to recognize the complex intra-household dynamics that respond to reforms targeting individual members, such as the childcare program, will lead to ineffective policymaking and may even aggravate welfare of those targeted by the reform.

The remainder of the paper is set out as follows: Section 2 presents the institutional context of the EI program in Mexico and some additional background on the different measures of empowerment. Section 3 describes the data used in the empirical analysis, to which section 4 adds the identification strategy. Section 5 presents the main findings, followed by a discussion in section 6. A final section concludes.

2 Background

2.1 Childcare Services in Mexico

The daycare program for working mothers, *Estancias Infantiles para Apoyar a Madres Trabajadoras*, was implemented in 2007 by former president Felipe Calderón as a cornerstone of his agenda to promote gender equality in Mexico (Staab and Gerhard, 2010)[6]. Calderón emphasized the role of female workforce participation in accelerating development and eradicating poverty, yet women's labor supply is often constrained by housework and childcare responsibilities due to the traditionalist division of labor in Mexican households (World Bank, 2011). Hence, EI was designed to target low female labor force participation rates.

The program provides subsidized childcare to low-income mothers who are working, studying or searching for employment. By expanding childcare availability, the program aims to facilitate entry to the labor market and enhance women's economic opportunities. It therefore contrasts other childcare programs in developing countries, which typically address poor child health and cognitive development. By targeting the most vulnerable families, low-income and single-parent households, policymakers expected EI to raise household incomes and decrease persistent poverty (EI Operating Rules, 2007).

Before 2007 access to daycare for young children was limited. While private childcare services were available, costs typically exceeded what low-income households could afford[7]. To address these shortcomings, EI was designed to support working mothers both by increasing availability of public childcare and by reducing its costs (SEDESOL, 2017). The program's inception in 2007 was followed by a massive expansion of childcare centers throughout the country. Within the first year of operation, the Ministry of Social Development had opened more than 6000 daycare centers, establishing spots for over 200,000 eligible children. This number rose to 244,000 covered children in over 8000 daycare centers by the end of 2008, and 330,000 children in more than 9000 centers by 2016 (SEDESOL, 2017). Moreover, upon admittance to the program eligible parents receive a governmental subsidy per child enrolled[8]. The amount of the

[6] The program continues to run at the federal level, both during Enrique Pena Nieto's administration (2012-2018) and presently under Andrés Manuel Lopéz Obrador.
[7] According to data by the Household Income and Expenditure Survey (ENIGH), in 2006 average private childcare costs reached approximately 975 Pesos, corresponding to around 70% of the monthly minimum wage.
[8] The subsidy goes directly to the childcare center, and not to the parents

subsidy decreases with household income, with a maximum of 700 Pesos per month corresponding to approximately 90% of the total daycare costs. However, the majority of children comes from households in the lowest income group (Staab and Gerhard, 2010).

The introduction of EI filled a substantial gap in childcare coverage left by the Social Security Institute (IMSS). In 1973 the IMSS established the right to public daycare for women working in the formal sector. The institute guaranteed daycare spots to children between the ages of 43 days and four years. Despite a promising objective, coverage widely failed to meet demand. Two decades after its inception IMSS merely served 5% of eligible children (Staab and Gerhard, 2010). More importantly, by limiting access to formally employed parents more than half of the population was excluded from the IMSS services[9]. The high share of informal labor illustrates well the need for social programs such as EI in Mexico.

Mothers and single fathers of children between the ages of 1 year to 3 years and 11 months are eligible for the EI program. In 2002, pre-school enrollment became compulsory for children aged four and five (primary school begins at age six), following a change in legislation by the Ministry of Public Education. The policy was highly successful in raising attendance and achieved universal enrollment by 2007 (Staab and Gerhard, 2010). Consequently, childcare needs are highest for parents of children that are too young for public pre-school and EI catered to this demand.

In addition to the age threshold, parents must be working, studying or searching for employment and not be covered by the IMSS-administered childcare network to be eligible for EI. Since EI targets low-income families, total household income must not exceed the threshold of six times the minimum monthly wage (Calderón, 2014). However, admission is based on self-reported income which implies that technically, EI is available to everyone. Moreover, women covered by social security are eligible if there are no IMSS-run daycare spots available. Thus, given that enforcement of admission rules was slack I will not limit my sample to low-income households but define eligibility based on the children's age threshold.

[9] According to data from the statistical bureau in Mexico (INEGI) the rate of informal workers was 57.8% in 2007. Informal labor, including workers at firms that do not contribute to the social security system, temporary staff and self-employed entrepreneurs, is excluded from the social security system. (Calderón, 2014)

2.2 Childcare in a Household Bargaining Model

Traditional models of household decision-making considered families as single units that maximize a common utility function (Becker, 1974, 1991). These unitary frameworks were built on two fundamental assumptions. First, household members are assumed to share a constant set of preferences. Second, all income earned by various members of the family is pooled. The theory's key implication is that the distribution of resources within the family does not matter for the allocation of expenditures (Alderman et al., 1995; Lundberg and Pollak, 1996). Empirical studies, however, have provided compelling evidence that the control over resources in the household has considerable influence on health, education and consumption outcomes, thereby disproving the underlying assumptions of the unitary model (Schultz, 1990; Thomas, 1990, 1993; Ward-Batts, 2008).

More recently, the literature on intrafamily bargaining has turned to cooperative game theory for models explaining decision-making among spouses (see Pollak, 2005 and Katz, 1997 for surveys of the literature). In particular, these models recognize differing preferences among husband and wife, the process of negotiation involved in household decision-making and the importance of individual bargaining power for the outcome of these decisions (Katz, 1997). An individual's bargaining power, in turn, depends on his or her extra-bargaining resources (Katz, 1997; Pollak, 2005). Cooperative, intra-spousal bargaining can be illustrated in a stylized Nash bargaining framework, with the following objective function

$$N = [U_w(x_w) - V_w(b_w)][U_h(x_h) - V_h(b_h)]$$

where the household members i are h (husband) and w (wife), U_i indicates each spouse's utility and x_i is a set of household decisions, such as consumption or time allocation. V_i represents individual i's outside option, the maximum potential utility outside of the marriage[10] and b_i is a vector of parameters that influence this potential utility (Katz, 1997). Members of the household remain willing to cooperate as long as the utility attained from household choices x exceeds the potential utility outside of the household, or $U_i(x_i) - V_i(b_i) > 0$. To solve the model, N is maximized subject to budget and time constraints.

Cooperation, or bargaining, outcomes are determined by the spouses' threat points $V_i(b_i)$. The higher the potential utility outside of the marriage, the more credible is the threat to leave and the higher is one's bargaining power. The threat point is shifted by changes in a wide range of

[10] For simplicity, the alternative outside option of a separate spheres non-cooperative equilibrium within marriage is not considered in this paper.

economic and non-economic factors, such as wages, non-labor income, labor market opportunities, property legislation as well as institutions and societal norms (Katz, 1997). Importantly, bargaining power does not depend on actual income, that is income earned at the cooperative equilibrium within the marriage. Instead, bargaining power is determined by the potential income at the threat point. Pollak (2005) illustrates this with an example of a stay-at-home wife. A woman that does not work while married earns zero wages at the cooperative equilibrium. In the case of divorce, however, this woman would find employment and earn income. Her current income at the cooperative equilibrium is therefore a poor proxy for her income in the absence of cooperation. Thus, her bargaining power depends on her potential wage rate, not her actual income.

In the context of this stylized model, the EI program can be seen as a policy affecting women's parameter b_w. In the absence of daycare services, a married woman with young children has relatively low potential outside welfare, as childcare responsibilities would continue to prevent her from earning income in the case of divorce. By providing access to full-time childcare EI facilitates the labor market entry for mothers of young children and thereby considerably improves their outside option, thus shifting the threat point of cooperation in their favor. As a result, women are able to bargain for outcomes x_i that enhance their utility derived from the relationship. In other words, following the implementation of EI, women's preferences should be mirrored more strongly in the outcome of household decisions. An important point is that women do not actually need to enroll their children and find employment in order for the program to benefit their decision-making power. The mere availability of public daycare and the potential relief from childcare responsibilities should increase women's potential utility sufficiently to empower them in negotiations with their partners.

2.3 Domestic violence in Mexico

Violence against women is one of the most pervasive human rights violations in the world (García-Moreno et al., 2005). It scars women who suffer it both physically and mentally. (Harper and Parsons, 1997; Martin et al., 1999). Children who witness violence among their parents show disruptive behavioral and emotional development and are more likely to enter violent relationships as adults (McCloskey et al., 1995; Edleson, 1999; Martin et al., 2002; Pollak, 2004). Moreover, through declines in productivity and high health care and legal costs,

IPV imposes a considerable economic burden on societies as a whole (Alonso-Borrego and Carrasco, 2017).

IPV is a dominant phenomenon in Mexico. Estimates from Mexico City suggest that almost 50% of female homicides are committed by the victim's partner (Díaz-Olavarrieta et al., 2002). Similarly, survey-based reports of domestic abuse range from 9% (Díaz-Olavarrieta et al., 2002) to 45% (Rivera-Rivera et al., 2004). At the same time, Mexico is undergoing substantial structural economic transitions that are changing traditional gender perceptions (Bobonis et al., 2013). Over the past decades, there have been significant enhances in women's economic achievements and educational attainment (Villarreal, 2007). The growth of the service sector has generated many employment opportunities for women resulting in dramatic increases in female labor force participation rates and slight adjustments in men's household responsibilities (Bobonis et al., 2013). Together with other cultural developments, these transitions have begun to induce changes in the perception of gender roles and stereotypes (Bobonis et al., 2013). Yet, persistent institutional and ideological gender bias seems to lag behind economic development such that open gender discrimination, as well as instrumental violence against women as a mean of control remains widely accepted (Villarreal, 2007; Bueno and Henderson, 2017).

Improving women's economic opportunities is a frequently advocated measure to reduce the prevalence of spousal abuse. It is argued, based on the theory presented earlier, that potential employment strengthens women's outside option and enables them to negotiate better outcomes for themselves (Farmer and Tiefenthaler, 1997). Women should therefore be able to either leave abusive marriages or bargain against violent behaviors with their husband, hence experience less abuse overall.

However, the relationship between women's bargaining power and IPV is complex. A contending model predicts that increased economic independence may trigger violent behavior by the women's partners (Bueno and Henderson, 2017). The theory, also known as male backlash theory, argues that male partners apply IPV when they feel like the hierarchy in the household is being destabilized (Heath, 2014). Violence then functions as an instrument for reasserting the husband's dominance over his wife, and it is used to offset any rise in bargaining power she would have otherwise attained.

Empirical evidence is equally mixed. Panda and Agarwal (2005) find that the ownership of property, such as land or housing, protects women from IPV, which the authors link to higher female bargaining power. Similarly, Aizer (2010) investigates how labor market opportunities affect incidence rates of spousal abuse in California. Her results corroborate the bargaining

power hypothesis, as higher demand for female labor is associated with a reduction in the prevalence of IPV.

In contrast, Luke and Munshi (2011) examine the effect of income increases on spousal violence among former slave castes in India and find an increase in women's share in total household income raises the risk of IPV towards them. Evidence from Bangladesh confirms the relevance of the male backlash theory among female workers in the garment industry (Kagy, 2014) and Guarnieri and Rainer (2018) show that higher employment opportunities for women leads to considerable increases in the risk of domestic abuse in Cameroon.

Given the lack of consensus, recent studies have taken a more multi-layered approach. In their study on IPV in the Dominican Republic Bueno and Henderson (2017) test both models and disaggregate their sample along several socioeconomic indicators. The results show that poor women experience more violence overall, and that the pattern of violence perpetrated against them is best predicted by male backlash. The household bargaining model, instead, better accounts for IPV against wealthier women, who also experience physical abuse more often than sexual. While this again suggests that economic power provides some protection, their study also shows that the risk of IPV increases substantially as soon as women earn higher wages than their husbands.

Others argue that the heterogeneity in the risk of IPV stems from differential levels of initial bargaining power (Tauchen et al., 1991; Eswaran and Malhotra, 2011; Heath, 2014). Women with high levels of bargaining power upon entering the labor force face smaller risk of IPV than those less powerful in their relationship. This may be caused by changes in women's behavior following the improvement in their outside option, such as enhanced confidence or assertiveness, which have been found to be an important source of spousal conflict (Heath, 2014). Women that participated in the decision-making process beforehand would therefore trigger less frustration than women who only feel empowered to do so after a reform.

Evidence from Mexico suggests that programs aiming to empower women have heterogeneous effects. Bobonis et al. (2013) find that Oportunidades, a conditional cash transfer (CCT) program, reduces the probability of physical or sexual violence against beneficiary women, but increasingly exposes them to emotional abuse. Angelucci (2008) evaluates the effect of the randomized rural Progresa CCT-program on recipient women and finds that small transfers lead to a decrease in the risk of spousal abuse, but that large transfers trigger additional violence. Hence the impact the EI program has on the prevalence on IPV towards eligible women cannot be anticipated.

3 Data

3.1 Household Decision-Making

The analysis of women's empowerment is based on longitudinal data on household decision-making from the Mexican Family Life survey (MxFLS). The MxFLS survey is both nationally and regionally representative of the Mexican population and covers a wide range of topics related to family life and welfare. Its three waves, conducted in 2002, 2005-2006 and 2009-2012 follow the same individuals and households over time to observe their social, economic and demographic development. Despite high emigration rates in Mexico, researchers succeeded in keeping attrition rates below 10% and were thus able to collect a continuous panel of approximately 8,400 households with close to 35,000 individuals over a period of ten years.

The survey contains a set of twelve questions dedicated to household decision-making. Respondents are asked about who chooses the food that is eaten, the clothes they wear, the clothes their spouses and their children wear, who makes decisions about the children's education, health, large household expenditures, the amount of money given to relatives, whether or not the respondent or their spouse should work and about the use of contraceptives. Decisions are made either by the respondent, their spouse, jointly or by another household member. I use this information to construct three indices of relative bargaining power. Following Majlesi (2016), I calculate the number of decisions in which the husband participates and subtract it from the number of decisions involving the wife. Through changes in this variable I observe whose preferences are mirrored more strongly in the outcome of the decision-making process. Apart from a general index including all twelve questions, I construct a measure that includes only decisions that concern the respondent herself, such as her labor supply, the way she dresses, the use of contraceptives and the money given to her parents. The third index is based on decisions concerning child matters, their clothes, education and health. Finally, I investigate the changes in relative participation for each individual decision.

Using all survey waves of MxFLS I construct a panel of 4,589 women that live with their husbands or partners and have been interviewed at least once before and once after the introduction of the EI program. The main population of interest are women with children older than one and younger than four years of age. I limit my sample to women between the age of 15 and 60, who are heads of households or spouses of heads of households. The age threshold

is guided by the operating rules of EI which provide childcare to mothers of at least 15 years, which is also the legal working age in Mexico (Sjöholm, 2019). The impact of EI on alternative treatment and control groups are tested in the robustness section. Table 1 presents summary statistics of women's relative decision-making power. A positive number indicates that the woman participates in more decisions than her husband, and vice versa for a negative value. I distinguish between women with adult or no children and women with children under 18. The latter group is further divided by eligibility. Three things stand out from this table. First, the aggregate bargaining index (first row) is positive for all groups, suggesting a relatively even distribution of decision-making power among married couples. Second, the index on private decisions concerning the woman is negative among all groups, implying that husbands nonetheless have considerable power over women's everyday lives in Mexico. Third, when looking at the aggregate index eligible women appear to have the lowest level of bargaining power, but disaggregation reveals high variation by topic. While the eligible group has the least influence on private matters, they have the highest participation in decisions concerning their children. Table A1 in the appendix presents the relative involvement in household decisions for each question individually.

TABLE 1
AVERAGE BARGAINING POWER - INDICES

Variable	All Women	Without Children	With Children – all	Eligible	Ineligible
Index All	0.360	0.246	0.393	0.114	0.486
	(2.607)	(2.589)	(2.612)	(2.459)	(2.654)
Index Private	-0.079	-0.070	-0.082	-0.197	-0.0442
	(1.086)	(1.116)	(1.078)	(1.023)	(1.093)
Index Children	0.329	0.120	0.391	0.394	0.390
	(1.085)	(1.151)	(1.057)	(0.969)	(1.084)
Observations	7,234	1,635	5,599	1,392	4,207

Note: Data is obtained from the Mexican Family Life Survey (MxFLS). Women without children are defined as women with no children under 18. Mean values are displayed with standard deviations below in parentheses.

Individual and household characteristics are described in Table 2. The women in my sample are on average 39 years old and have two children under the age of 18. Eleven percent are indigenous and sixteen percent live together with extended family. Educational attainment is relatively low. On average, women have completed less than four years of schooling. Around ten percent of households have soil floors and sixteen percent have makeshift roofs made from reed-grass, plastic, cardboard, or similar material. Forty percent of households live in an urban area, where urban is defined as a community with over 15,000 inhabitants. The husbands' ethnicity and educational attainment is similar to their spouses'.

The panel on spousal time allocation reveals the traditionalist division of labor in Mexican households. Virtually every woman spends time on unpaid housework, including cleaning, laundry or cooking, and the number of hours hardly varies between women with and without children. Only 24% of husbands report doing any type of housework. Differences between groups of women widen once we consider time allocated to care work. Eligible women spend over 30 hours per week exclusively on child and elderly care, twelve hours more than the average woman with children and over six times the average for women without childcare responsibilities. Husbands with children between one and three years spend on average four hours per week on childcare. This data illustrates well the immense need and potential impact childcare accessibility can have on mothers of young children.

TABLE 2
DESCRIPTIVE STATISTICS - MxFLS

Variable	All Women	Without Children	With Children	Eligible	Ineligible
Panel A: Woman's Characteristic					
Woman's age	39.00	48.03	36.45	30.08	38.61
	(9.710)	(9.368)	(8.166)	(6.275)	(7.583)
Indigenous Woman	0.111	0.113	0.110	0.103	0.112
	(0.314)	(0.317)	(0.313)	(0.304)	(0.316)
Years of Schooling	3.827	3.897	3.807	3.797	3.810
	(1.646)	(1.700)	(1.630)	(1.627)	(1.632)
Number of Children under 18	1.805	0	2.314	2.727	2.174
	(1.436)	(0)	(1.211)	(1.410)	(1.102)
Panel B: Time Allocation					
Does housework	0.982	0.974	0.984	0.989	0.982
	(0.133)	(0.158)	(0.125)	(0.102)	(0.131)
Husband does housework	0.238	0.238	0.238	0.234	0.239
	(0.426)	(0.426)	(0.426)	(0.424)	(0.427)
Takes care of children/elderly	0.465	0.221	0.534	0.750	0.461
	(0.499)	(0.415)	(0.499)	(0.433)	(0.499)
Husband takes care of children/elderly	0.166	0.0618	0.196	0.323	0.153
	(0.372)	(0.241)	(0.397)	(0.468)	(0.360)
Hours spent on housework per week	25.36	22.67	26.12	26.57	25.97
	(14.32)	(13.35)	(14.49)	(14.74)	(14.41)
Hours husband spends on housework per week	1.331	1.459	1.295	1.112	1.357
	(4.229)	(5.052)	(3.966)	(3.039)	(4.233)
Hours spent on care per week	15.64	4.810	18.69	30.89	14.56
	(23.61)	(13.34)	(24.94)	(28.00)	(22.37)
Hours husband spends on care per week	2.195	0.724	2.610	4.481	1.976
	(7.287)	(4.412)	(7.862)	(10.02)	(6.870)
Panel C: Husband and Household Characteristics					
Husband's Schooling	3.695	3.817	3.660	3.650	3.664
	(1.667)	(1.745)	(1.644)	(1.656)	(1.640)
Indigenous Husband	0.131	0.124	0.133	0.128	0.135
	(0.338)	(0.329)	(0.340)	(0.334)	(0.342)
Extended Family living in Household	0.156	0.258	0.127	0.0731	0.146
	(0.363)	(0.438)	(0.333)	(0.260)	(0.353)
Floor in House made of Soil	0.0997	0.0684	0.109	0.158	0.0919
	(0.300)	(0.253)	(0.311)	(0.365)	(0.289)
Floor in House made of firm Material	0.900	0.932	0.891	0.842	0.908
	(0.300)	(0.253)	(0.311)	(0.365)	(0.289)
Makeshift roof	0.161	0.119	0.173	0.214	0.159
	(0.367)	(0.324)	(0.378)	(0.410)	(0.365)
Firm roof	0.839	0.881	0.827	0.786	0.841
	(0.367)	(0.324)	(0.378)	(0.410)	(0.365)
Urban	0.411	0.425	0.407	0.380	0.416
	(0.492)	(0.495)	(0.491)	(0.486)	(0.493)
Observations	4,783	1,052	3,731	944	2,787

Note: Data is obtained from the Mexican Family Life Survey (MxFLS). Women without children are defined as women with no children under 18. Mean values are displayed with standard deviations below in parentheses.

3.2 Intimate Partner Violence

For the analysis of intimate partner violence, I use data from Mexico's National Survey on the Dynamics of Household Relationships (Encuesta Nacional sobre la Dinámica de las Relaciones en los Hogares [ENDIREH]). ENDIREH is a nationally representative survey that collects detailed information on incidence and intensity of physical, economic, sexual, emotional and patrimonial violence. The survey has been conducted four times, in 2003, 2006, 2011 and 2016, and has sampled over 400,000 households. In each household one woman aged 15 years or older is randomly selected to answer the set of questions on violence in her partnership and abuse experienced in childhood, school, at work and in her community. The module on IPV includes questions about physical, emotional and sexual violence perpetrated by their partners, its intensity and reoccurrence. The survey furthermore distinguishes between overall incidences of abuse in the current relationship and abuse that has taken place in the 12 months preceding the interview. For my analysis of the impact of EI on domestic violence I use the surveys conducted in 2003, 2006 and 2011, resulting in a cross-sectional dataset with three survey rounds[11].

In order to identify the impact of childcare availability on domestic abuse I investigate differences in the occurrence of IPV over the past 12 months. I follow Bobonis et al. (2013) in the exact definition of my measures of violence. Binary variables capture whether the respondent has been a victim of physical, sexual or emotional abuse. Physical abuse includes kicking, pushing, throwing objects, hitting with hands or objects, choking, assaults with a knife and shooting. Reports of rape, forced sexual acts and demanding sex are defined as sexual violence. Constructing an indicator for emotional abuse is more complex. Since reports thereof are shaped by the subjective perception of the respondent, it requires careful consideration which type of behavior constitutes psychological violence. Nevertheless, the unique richness of the ENDIREH survey allows for an analysis that encompasses types of intangible abuse that are rarely captured in other household surveys. Following Bobonis et al. (2013) my measure of emotional abuse includes the following incidents: the partner destroying or hiding things belonging to the woman or the household, the partner locking her in, forbidding her to leave the house or preventing her from having visitors, her partner threatening to kill himself, her or their children and the partner threatening her with a weapon, such as a knife, blade, gun or rifle.

[11] I do not use the last survey round since I only have administrative data on EI expansion until 2015. Since treatment is on municipality level, I limit my sample to municipalities that have been sampled at least once before and once after the introduction of EI.

I exclude reports of behaviors such as making the respondent feel afraid, ignoring her or turning her children and family against her because those are more likely to be influenced by the woman's perception. I also specify the two explicit threats of violence in a separate variable.

An advantage of ENDIREH is the plethora of socioeconomic and demographic data it contains, which makes it possible to obtain an extensive set of background information for each interviewed woman. A subset of these characteristics is shown in Table 3. Panel A demonstrates the prevalence of spousal abuse against women in Mexico. Over one in four women in my sample report having experienced some form of physical, sexual or emotional abuse by their current partner. Incidence rates vary significantly among types of violence, with sixteen percent of women reporting physical violence, and six percent sexual abuse, but only two percent reporting having been threatened with violent behavior. Instead, seven percent of women report other forms of emotional abuse. Women with children appear to be marginally more at risk to suffer physical violence from their partners than women with no children.

A substantial share of women and partners in my sample witnessed spousal violence between their parents in childhood[12]. There is compelling evidence from psychology and sociology on the transmission of spousal behavior and abuse from parents to their children. Women who experienced IPV towards their mothers may therefore be more likely to enter and stay in a relationship with a violent partner (Pollak, 2004; Bobonis et al., 2013).

This sample differs from the MxFLS population in several ways. Twice as many households are located in urban areas and only six percent of women are indigenous. Women also appear to come from higher socioeconomic status households, as most women have completed middle school and only five percent of houses have soil floors. Moreover, 22% of women eligible for the EI program live with their extended family. As before, partners appear similar to their wives in terms of ethnicity and educational attainment.

[12] This question is only included in survey rounds one and two, meaning that observations from round three are excluded in these averages.

TABLE 3
DESCRIPTIVE STATISTICS - ENDIREH

Variable	All Women	Without Children	With Children	Eligible	Ineligible
Panel A: Domestic Violence					
Occurrence of physical or sexual abuse	0.175	0.161	0.180	0.173	0.183
	(0.380)	(0.368)	(0.384)	(0.378)	(0.387)
Occurrence of physical abuse	0.155	0.139	0.160	0.156	0.162
	(0.361)	(0.345)	(0.367)	(0.363)	(0.369)
Occurrence of sexual abuse	0.0642	0.0668	0.0632	0.0514	0.0681
	(0.245)	(0.250)	(0.243)	(0.221)	(0.252)
Occurrence of emotional abuse	0.0927	0.0873	0.0947	0.0889	0.0971
	(0.290)	(0.282)	(0.293)	(0.285)	(0.296)
Occurrence of abuse threats	0.0210	0.0200	0.0213	0.0175	0.0229
	(0.143)	(0.140)	(0.145)	(0.131)	(0.150)
Spousal violence in woman's childhood	0.259	0.240	0.266	0.265	0.266
	(0.438)	(0.427)	(0.442)	(0.441)	(0.442)
Spousal violence in husband's childhood	0.294	0.267	0.303	0.304	0.302
	(0.456)	(0.442)	(0.459)	(0.460)	(0.459)
Panel B: Woman's Characteristics					
Woman's age	38.11	45.45	35.41	29.86	37.67
	(10.88)	(12.07)	(9.006)	(7.661)	(8.519)
Indigenous Woman	0.0582	0.0495	0.0614	0.0657	0.0596
	(0.234)	(0.217)	(0.240)	(0.248)	(0.237)
Educational Attainment	3.144	3.012	3.192	3.255	3.167
	(1.496)	(1.624)	(1.443)	(1.395)	(1.461)
Number of Children under 18	1.512	0	2.070	2.338	1.960
	(1.295)	(0)	(1.068)	(1.207)	(0.985)
Panel C: Husband and Household Characteristics					
Indigenous Husband	0.0618	0.0544	0.0645	0.0684	0.0629
	(0.241)	(0.227)	(0.246)	(0.252)	(0.243)
Husband's Educational Attainment	3.328	3.245	3.358	3.351	3.361
	(1.604)	(1.755)	(1.544)	(1.455)	(1.579)
Extended Family living in Household	0.173	0.180	0.170	0.225	0.148
	(0.378)	(0.384)	(0.376)	(0.418)	(0.355)
Transfers from Oportunidades Program	0.129	0.0665	0.153	0.141	0.157
	(0.336)	(0.249)	(0.360)	(0.348)	(0.364)
Floor in House made of Soil	0.0463	0.0346	0.0506	0.0609	0.0464
	(0.210)	(0.183)	(0.219)	(0.239)	(0.210)
Floor in House made of firm Material	0.954	0.965	0.949	0.939	0.954
	(0.210)	(0.183)	(0.219)	(0.239)	(0.210)
Urban	0.829	0.862	0.817	0.790	0.828
	(0.377)	(0.345)	(0.387)	(0.407)	(0.378)
Observations	143,260	38,601	104,659	30,312	74,347

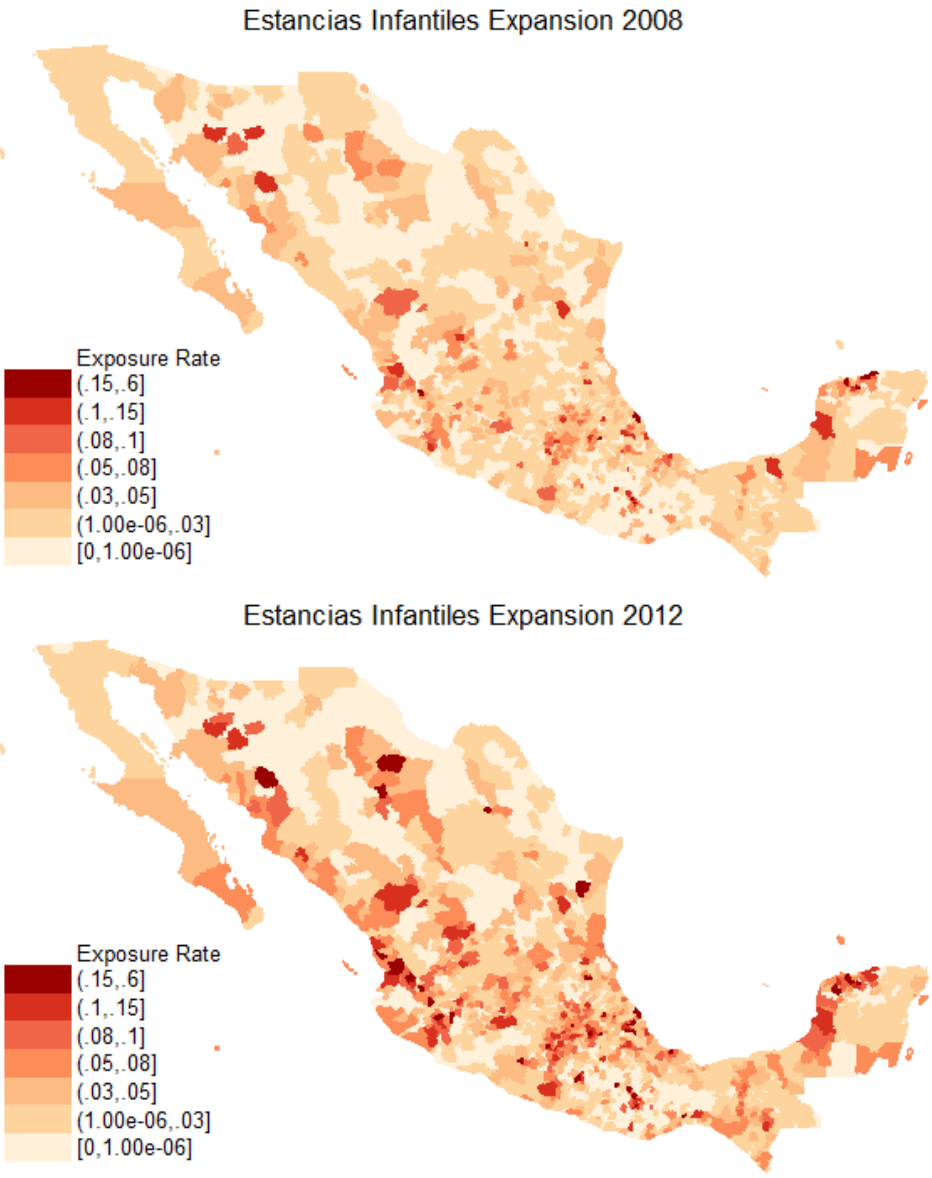
Note: Data is obtained from the National survey on the Dynamics of Household Relationships. Women without children are defined as women with no children under 18. The number of observations for variables on IPV in childhood are 70,953 (all), 17,513 (without children), 53,440 (with children), 15,469 (eligible), 37,971 (ineligible). Educational attainment is coded as follows: 0=no schooling, 1=preschool, 2=primary school, 3=middle school, 4=high school, 5=normal school, 6= bachelor's degree, 7=masters's or doctoral degree. Mean values are displayed with standard deviations below in parentheses.

3.3 Treatment status

In order to investigate how childcare availability affects household decision-making and spousal violence I combine the household survey data from MxFLS and ENDIREH at municipality level with administrative data obtained from the Ministry of Social development. The records contain detailed information about EI's expansion across the country over time, including the number of children registered at an EI daycare center per month and municipality[13]. This information, together with data on the municipality of residence from the surveys allows me to identify which mothers had access to public childcare. Given that I do not observe which families take up the program the extent to which EI affects an eligible woman's opportunities in my analysis depends on two factors. First, on the availability of an EI daycare center in her municipality, and second on the degree of competition for the limited number of childcare places provided. In other words, individual exposure depends on the scope of the program in each municipality. Following Calderón (2014) I construct a measure for treatment intensity defined as the number of daycare spots over the number of eligible children in a given municipality. The number of eligible children per municipality is retrieved from census data, where eligibility is defined as being older than one and younger than 4 years old. I obtain the number of eligible children each year through forward and backward calculation from the census rounds in 2010 and 2015. Figure 1 illustrates the variation in EI's expansion across Mexico over time.

[13] Since I have annual survey data, I average over the number of children enrolled per month to obtain a yearly indicator.

Figure 1



Evidently, some municipalities introduced the program earlier than others. Within the first year, daycare centers opened across 935 municipalities. By the end of 2014 this number rose to 1453. Thus, within seven years EI was operating in more than half of Mexico's 2454 municipalities. Among those municipalities that implemented the daycare program the scope of expansion varied substantially. In 2008, the least treated municipalities had exposure rates below one percent whereas the most treated reached almost 30% availability. By 2011 the median treatment intensity lay approximately at 3% with highest exposure reaching almost 38%. It should be noted that the variation in availability is not the result of a random process. While the federal government did not impose a strategical expansion plan and left the implementation of

EI to municipality administrations, those that introduced the program early differed from those that introduced the program later or not at all in important ways (Sjöholm, 2019). EI was introduced earlier in urban areas and municipalities with higher socioeconomic levels. However, since my identification strategy does not rely exclusively on geographic variation, it is unlikely that the endogeneity of program implementation will affect my results.

4 Empirical Strategy

There are three sources of variation that allow the isolation of the causal effect of EI on household bargaining and intimate partner violence. First, the gradual expansion of EI across Mexico's municipalities creates variation in treatment status over time and space. Some municipalities introduced the daycare service earlier, others later. Moreover, among those treated, the availability of public childcare varies as exposure changes with the composition of the population and the scope of the program. Secondly, treatment intensity varies within a municipality over time as the scope of the program is expanded. The third type of variation in access to EI daycare is created by the age-threshold of the program. At a given point in time in a given municipality, mothers of children aged 1 to 3 may enroll their children in an EI daycare center, whereas mothers of children that are at least 4 years old cannot. This creates exogenous variation in eligibility for childcare services among women in the same municipality at the same time. Moreover, this creates variation in eligibility within individuals over time.

Following Calderón (2014) and Sjöholm (2019), I exploit these sources of variation simultaneously using a triple difference-in-differences (DDD) model, which is estimated according to the following empirical specification:

$$Y_{imt} = \beta_0 + \beta_1 e_{it} + \beta_2 EI_{mt} + \beta_3 e_i * EI_{mt} + \gamma_t + \mu_m + \alpha_i + X_{it} + \varepsilon_{imt}$$

Y_{imt} is the outcome of interest for individual i in municipality m at time t. The various outcome variables are described in more detail below. e_i is a dummy variable reflecting the woman's eligibility at time t. β_1 therefore captures structural program-independent differences in outcomes between the treatment and the control group. The degree of exposure is captured by EI_{mt} which, as mentioned before, is calculated according to

$$EI_{mt} = \frac{Number\ of\ childcare\ spots\ in\ municipality\ m\ at\ time\ t}{Number\ of\ eligible\ children\ in\ municipality\ m\ at\ time\ t}$$

The key variable of interest is the interaction term $e_{it} * EI_{mt}$. It varies by time, space and eligibility, and determines the treatment status of each woman. Hence, β_3 captures the treatment effect of the childcare program on the outcome of mothers of eligible children. As actual enrollment is unobserved, I am unable to estimate the treatment effect on the treated (TOT). Instead, the coefficient presents the intention to treat (ITT) effect of the EI program. Importantly, for the scope of this paper the ITT estimate is of higher significance than the TOT.

As explained in section 2.2, a woman's bargaining power depends to a large extent on her potential economic power, rather than her actual income. Therefore, access to public childcare should not only affect women who respond to EI by enrolling their children and finding employment. Instead, the program should enhance the bargaining positions of all eligible women by improving their potential economic power. Both effects are of interest to my research question and to policy makers and are jointly captured by the ITT coefficient β_3.

The specification additionally includes survey round fixed-effects γ_t to account for unobserved time-specific effects that may drive changes in the outcome variables for all women, such as overall trends in female empowerment or a general shift in the tolerance for spousal abuse. Moreover, this ensures that differences in outcomes are not driven by changes in survey design or execution. I add municipality fixed effects μ_m in order to eliminate a large source of endogeneity caused by underlying heterogeneity in institutions, norms or socioeconomic development across municipalities. Furthermore, I thereby address the endogeneity of the program's geographical expansion. Age fixed effects are represented by α_i, and X_{it} is a vector of time-varying controls on individual and household level. These include the woman's and her husband's educational attainment and ethnicity, an income proxy, an indicator for cohabiting with relatives, and a dummy for urban areas. Since labor income is a potential outcome of the treatment, and therefore a bad control, I capture differences in wealth using floor material in the household.

Each regression is weighted by sampling weights reflecting the respondent's inverse probability of selection and standard errors are clustered to allow for correlation within and heteroscedasticity across municipalities.

The examination of the effect of EI on household decision-making consists of a general analysis as a first step and a disaggregated analysis thereafter. Specifically, I test the effect of EI on poor households in order to capture potential heterogeneous effects across income groups. In both cases the dependent variable of household bargaining is the woman's relative decision-making power over twelve questions contained in the MxFLS module. Since this entails testing a large number of hypotheses, estimates are at risk of being overly significant. I account for this by creating indices of bargaining power, as described in section 3.1. Besides reducing the number of hypotheses tested, and thereby the risk of type 1 errors, indices have the advantage of providing a more comprehensive understanding of the general effect of the program. Moreover, in the case of marginally significant individual outcomes, indices may increase precision, in particular when outcomes are related (Mühlrad, 2018). However, bargaining outcomes are also

tested individually. In these specifications I account for false discovery rates (FDR), the ratio of false positives over all significant estimates, by using corrected p-values obtained from the step-up method by Benjamini and Hochberg (1995). Besides the covariates listed earlier, I add a control variable for the number of non-adult children in order to account for the reduced influence on child-related matters among mothers of adult children.

EI's impact on IPV is measured by changes in the occurrence of abuse over the past twelve months. Binary indicator variables reflecting the incidence of physical, sexual and emotional abuse, as well as abuse threats, serve as dependent variables in the main specification. As in the analysis of household decision-making, I test the effect of public childcare on IPV for a subsample of poor households. Due to the risk of false positives and overestimated significance I again correct for FDR using Hochberg-corrected p-values. In addition to the covariates listed earlier, I control for participation in Mexico's Oportunidades program. Oportunidades, formerly known as Progresa, is a conditional cash transfer program in which money is given to mothers with the aim to improve children's education and health outcomes. I take this CCT into account since the program has been found to significantly reduce incidences of physical and sexual spousal abuse (Bobonis et al., 2013).

My empirical strategy builds on the assumption that the extent of EI childcare availability is not correlated with another factor that affects household bargaining or IPV. In other words, I assume the program was not introduced more rapidly or extensively in municipalities that, for instance, have better protection and intervention services, or other characteristics associated with higher female welfare[14]. However, by taking into account the exogenous variation in eligibility among women in the same municipality at the same time, the empirical strategy adds another level to the identification of treatment status. Thereby, the key threat to identification is reduced to an omitted factor with similar temporal and geographical variation as EI, that has heterogeneous effects on the relative outcomes of eligible and ineligible women. As mentioned before, I include municipality fixed effects to control for constant underlying heterogeneity among municipalities.

[14] To show that high levels of bargaining power or IPV in the treatment period are not predictive of EI exposure, I regress the year of introduction of EI in a municipality on IPV and bargaining outcomes. The results are shown in Tables A3 and A4 in Appendix A.

5 Results

5.1 Main Specification

5.1.1 Household Decision-Making

Table 4 shows the results of the regression of EI on women's relative decision-making power. The estimates reveal a considerable negative effect of the program on women's participation in household decisions. According to the results in column, 1 a 10% increase in treatment intensity is associated with a drop in the aggregate bargaining index by more than one. This implies that treatment causes women to lose say over one of twelve household matters relative to their husband. In contrast, both exposure and eligibility separately appear to have smaller but positive effects on women's bargaining power. This suggests the program may trigger severe, unobserved repercussions in eligible households.

TABLE 4
TRIPLE DIFFERENCE-IN-DIFFERENCES REGRESSION ON HOUSEHOLD DECISION-MAKING

	(1) Index All	(2) Index Private	(3) Index Children
Eligibility	0.0810	0.0682	0.0350
	(0.210)	(0.115)	(0.0650)
Exposure	0.668*	0.241*	0.145
	(0.340)	(0.123)	(0.134)
Treatment	-1.079*	-0.485*	-0.103
	(0.591)	(0.287)	(0.193)
Constant	7.406***	1.148***	2.653***
	(0.482)	(0.257)	(0.265)
Observations	4,589	4,589	4,589
R-squared	0.099	0.095	0.088
Municipality FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Age FE	Yes	Yes	Yes
Mean of dependent variable	0.354	-0.0887	0.336
Number of clusters	152	152	152

Robust standard errors in parentheses, clustered at municipality level; all specifications control for women's and husband's ethnicity and educational attainment, the number of non-adult children, cohabiting relatives, income level and urban areas. *** p<0.01, ** p<0.05, * p<0.1.

The estimates on decisions regarding women's private matters are shown in column 2. The index covers the decisions about a woman's clothes, her labor force participation, the use of contraceptives and about money for her relatives. Again, both eligibility and program intensity are found to individually improve women's bargaining power. Treatment by EI, however, leads

to a decrease in women's say. A 10% rise in the exposure rate induces a decline in the index of 0.49. The same pattern is observed when considering child-related decisions (column 3). The child-specific index includes decisions regarding their education, clothes and health expenditures. Although the coefficients are smaller and show no statistical significance, the EI program appears to negatively affect eligible women's influence on child outcomes.

The results of the regressions on each question individually are shown in Table A2 in the appendix. Overall, the intention to treat estimates jointly confirm a negative impact of childcare access on women's influence on household decisions.

5.1.2 Intimate Partner Violence

Table 5 shows the intention-to-treat estimate of EI on the probability of different types of spousal abuse. Overall, the results suggest a negative relationship between childcare availability and violent behavior, except for violent threats. The program appears to have the largest impact on physical abuse. According to the estimates in column 1, increased access to childcare reduces the incidence of physical abuse by 1.53 percentage points for eligible women. This corresponds to a decrease in the probability of suffering physical violence by her husband by approximately 19%. The estimates in columns 2 and 3 show that the effect of the program on sexual and emotional violence is negative as well, although much smaller and statistically insignificant. Conversely, the results in column 4 suggest a small and positive, but insignificant effect of EI on the probability of threats of violent behavior.

TABLE 5
TRIPLE DIFFERENCE-IN-DIFFERENCES REGRESSION ON IPV

	(1) Physical Violence	(2) Sexual Violence	(3) Emotional Violence	(4) Threats of Violence
Eligibility	0.0127**	0.00271	0.000310	0.00116
	(0.00520)	(0.00437)	(0.00429)	(0.00306)
Exposure	0.00268	-0.00550	0.00214	0.000460
	(0.00731)	(0.00594)	(0.00782)	(0.00449)
Treatment	-0.0153*	-0.000825	-0.00319	0.000652
	(0.00885)	(0.00757)	(0.00801)	(0.00488)
Constant	0.157***	0.0931***	0.141***	0.0296***
	(0.0288)	(0.0257)	(0.0279)	(0.00948)
Observations	171,074	170,913	170,222	170,498
R-squared	0.033	0.032	0.029	0.022
Municipality FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Age FE	Yes	Yes	Yes	Yes
Mean of dependent variable	0.0815	0.0471	0.0549	0.0193
Number of clusters	881	881	881	881

Robust standard errors in parentheses, clustered at municipality level; all specifications control for women's and husband's ethnicity and educational attainment, the oportunidades program, cohabiting relatives, income level and urban areas. *** p<0.01, ** p<0.05, * p<0.1.

5.1.3 Heterogeneous Effects

Estancias Infantiles para Apoyar a Madres Trabajadoras was primarily intended for low-income families. By relieving women's childcare responsibilities and enabling them to participate in the labor force the program aimed to decrease poverty and improve welfare of the most vulnerable. Although the income limit was not strictly enforced, it is still of particular interest to evaluate the program's impact on its target population. Moreover, previous research suggests that empowerment programs may have heterogeneous effects on household dynamics. Using floor material as a proxy for income I identify the poorest households in both samples and re-estimate the main specification on these subsamples[15]. Tables 6 and 7 display the results of this analysis for household bargaining and IPV, respectively.

[15] All women in this subsample live in housing with soil floors.

TABLE 6
TRIPLE DIFFERENCE-IN-DIFFERENCES REGRESSION
ON HOUSEHOLD DECISION-MAKING - POOR HOUSEHOLDS

	(1) Index All	(2) Index Private	(3) Index Children
Eligibility	-0.239	-0.184	-0.15
	(0.386)	(0.300)	(0.153)
Exposure	1.567	0.453	1.016
	(1.323)	(0.723)	(0.749)
Treatment	2.13	0.14	0.485
	(2.345)	(1.267)	(1.015)
FDR p-value (Treat)	0.912	0.912	0.912
Observations	458	458	458
R-squared	0.499	0.473	0.547
Mean of dependent variable	-0.0489	-0.21	0.162

Robust standard errors in parentheses, clustered at municipality level; all specifications include round, municipality and age fixed effects, as well as women's and husband's ethnicity and educational attainment, the number of non-adult children, an indicator for cohabiting relatives and a dummy for urban areas. FDR corrected (Hochberg) p-values are reported for each estimate. *** p<0.01, ** p<0.05, * p<0.1.

Table 6 reveals a dramatic shift in the result pattern. In contrast to the previous estimates, the treatment effect of EI on women's bargaining power is now positive across all indices. In addition, eligibility itself is associated with less involvement in household decision-making. This suggests that exposure to EI disproportionately empowers eligible women from low-income backgrounds to participate in decision-making processes. As mean bargaining power is particularly low for this subgroup of women, an empowering impact of access to childcare becomes even more relevant.

Table 7 reveals that heterogeneity in the effects of the EI program are not limited to bargaining power. Poor, eligible women exposed to the EI program appear to experience increases in all types of spousal abuse. Importantly, while physical violence is most common, emotional violence is most affected by the program. A 10% increase in EI exposure approximately leads to a 60% rise in the probability of emotional abuse. Again, the mean incidence rates among this sample are higher than in the full sample, suggesting that women from poor backgrounds are generally more exposed to spousal abuse.

TABLE 7
TRIPLE DIFFERENCE-IN-DIFFERENCES REGRESSION ON IPV - POOR HOUSEHOLDS

	(1) Physical Violence	(2) Sexual Violence	(3) Emotional Violence	(4) Threats of Violence
Eligibility	-0.009	0.008	-0.013	-0.008
	(0.014)	(0.014)	(0.012)	(0.007)
Exposure	0.043	-0.044	-0.015	-0.038
	(0.038)	(0.031)	(0.032)	(0.025)
Treatment	0.001	0.006	0.051	0.015
	(0.045)	(0.033)	(0.054)	(0.020)
FDR p-value (Treat)	0.98	0.98	0.912	0.912
Observations	9215	9196	9162	9166
R-squared	0.179	0.17	0.213	0.228
Mean of dependent variable	0.118	0.0829	0.0842	0.0353

Robust standard errors in parentheses, clustered at municipality level; all specifications include round, municipality and age fixed effects, as well as women's and husband's ethnicity and educational attainment, the oportunidades program, an indicator for cohabiting relatives and a dummy for urban areas. FDR corrected (Hochberg) p-values are reported for each estimate. *** p<0.01, ** p<0.05, * p<0.1

.

Due partly to the substantial reduction in the number of observations and Hochberg adjusted p-values the effects are imprecisely estimated. Despite the lack in statistical significance, however, these results provide some evidence that EI affects low-income households very differently than wealthier families. Moreover, the results suggest increasingly abusive male behavior in presence of strengthened female decision making among low-income households, a pattern predicted by the male backlash theory.

5.2 Robustness

To test the robustness of my baseline findings, I explore three alternatives to the main approach taken above. First, I redefine eligibility for the EI program to include children under the age of 1. Mothers of such young children may be affected by the EI program by responding to increased daycare availability before using it. By arranging private childcare in anticipation of enrolling their kid once it turns one, these women may exploit future access in order to enter the labor force earlier. Secondly, a significant share of women in my samples lives with their extended family, many including eligible grandchildren, nieces or nephews. Since childcare responsibilities may be shared among relatives in one household access to public childcare could affect the time allocation of women who are not the child's mother. Therefore, I extend the eligibility condition to include all children of eligible age living in the respondent's

household. Finally, following the approach in Sjöholm (2019), I trim my sample to contain only women with children under the age of seven in order to increase comparability between the treatment and the control group. Since public pre-school only provides daycare for 4 hours daily, it is likely that women with children aged 4 to 6 have similar childcare and housework responsibilities as mothers of eligible children. Compared to my baseline identification, the first two approaches are broader and are thus expected to decrease the precision of the ITT estimates. The third procedure, on the other hand, should lower variation in our estimates.

Moreover, in order to evaluate whether the main results capture the actual effect of the program rather than an unobserved trend in the outcome variables, I estimate the impact of exposure on a sample of women who should not be affected by it, namely women who have no non-adult children. Given that these women's childcare responsibilities should not be affected by the availability of EI daycare centers in their municipality, the exposure should have no impact on their outcomes. Results are shown in Appendix B.

5.2.1 Household Decision-Making

Panels A and B in Table B1 present the ITT estimates for both alternative eligibility approaches. The estimates confirm the negative impact of childcare access on women's household bargaining power for all indices. As expected, extending eligibility decreases the magnitude of the estimates and increases overall variation.

The results of the subsample analysis are shown in Table B2. Estimates further corroborate the negative impact of the childcare program on women's say in aggregate household decision-making and child-related matters, although results remain insignificant. Nevertheless, access to childcare appears to have a small positive effect on women's bargaining in private decisions, contrary to my previous findings. Together with the decreased magnitude and statistical insignificance of the estimates, the subsample analysis implies that the relationship between EI and women's empowerment may not be as large and negative as my main estimates indicate.

The placebo regression presented in table B3 adds to this conjecture. Exposure to the childcare program appears to cause a significant increase in the private bargaining index for women with no children. This points to the existence of unobserved factors correlated with EI exposure that affect women's bargaining power, a potential source of bias in my main results. If such unobserved factors have a different impact on eligible women, this could imply that my results are biased downwards.

5.2.2 Intimate Partner Violence

The results of the extended eligibility regression on IPV can be found in Table B3. As for the bargaining analysis all coefficients are statistically insignificant. Panels A and B indicate that the EI program reduces incidences of physical violence against eligible women even when the range of eligibility is increased. Overall, however, estimates appear less conclusive than the main specifications and seem to be highly sensitive to the definition of eligibility. For example, treatment appears to cause an increase in emotional violence among mothers of infants, but leads to a decrease when considering all eligible children in the household. Moreover, in contrast to the baseline results, treatment now seems to lead to a rise in sexual violence.

Table B4 presents the subsample investigation. Again, the results show no statistical significance. The estimates confirm the violence-reducing effect of childcare availability on physical, sexual and emotional abuse. Moreover, among women with children younger than 7 treatment appears to also reduce the probability of violent threats. The placebo test shows no significant effect on women with no children, which provides further support for my main estimates.

6 Discussion

The analysis presented in the previous section demonstrates that the EI program affects eligible women both in their decision-making power and in their exposure to violence at home. The results suggest that exposure to EI has led to a reduction in abusive behavior towards eligible women, in line with the bargaining theory of IPV.

However, my findings also point towards an aggravating causal impact of EI on women's decision-making power. This stands in stark contrast to the household bargaining theory discussed in section 2.2, and furthermore contradicts previous evidence (Kagy, 2014; Majlesi, 2016). These results are surprising, especially in combination with the decline in IPV incidence rates. It appears that the EI program leads to severe, unobserved repercussions in the households that are yet to be considered in theoretical models.

One possible explanation is that the threat to leave the relationship is not perceived as credible. Since median exposure rates remained below 5% at the time of questioning, the probability of getting a spot in the childcare center may have seemed too low to raise potential outside utility to a feasible level. While the marginal shift in women's threat point may be sufficient to reduce violent behavior towards them, partners could attempt to maintain the domestic hierarchy by excluding their wives from decision-making and denying them autonomy over personal matters. Further research is required to uncover the distinct channels at work. In the light of these unanticipated effects, it would furthermore be insightful to obtain data on actual enrollment, such that treated women can be compared to those merely exposed to the potential availability of childcare.

Moreover, the presented evidence underlines the importance of considering heterogeneous effects. Disaggregation by income level shows that the program appears to empower women from low-income households to claim more involvement in household decision-making. At the same time, these women face higher risk of domestic abuse, especially through higher prevalence of emotional violence. These findings provide evidence for the relevance of male backlash in Mexican contexts. They furthermore corroborate previous research that emphasizes the importance of income levels and initial bargaining power for the analysis of IPV (Heath, 2014; Bueno and Henderson, 2017).

These findings carry important policy implications. Overall, this paper showcases that households form interrelated networks in which members react to changes in each other's behavior. It thereby emphasizes the importance of considering targeted groups in the context of their families when designing policies. Failure to recognize these repercussions may lead to inefficiencies or even adverse impacts. Moreover, the results demonstrate that reforms facilitating labor market entry for women do not necessarily lead to female empowerment. Careful analysis is required to understand how and why households respond to enhanced economic opportunities for women.

7 Conclusion

This paper investigates the impact of childcare availability on female empowerment. To that end, it exploits the rapid implementation of a public daycare program, *Estancias Infantiles Para Apoyar a Madras Trabajadoras*, in Mexico, to capture the causal effect of access to childcare on women's household bargaining power and the prevalence of intimate partner violence. The program offers subsidized childcare to women with children under the age of four who are working, studying or seeking employment. It thereby aims to improve mothers' access to the labor market and promote gender equality.

My empirical strategy relies on a triple difference-in-differences model based on municipality-level treatment intensity to isolate the intention-to-treat estimate of the program. Estimates suggest that women's decision-making power is aggravated by childcare availability, while the prevalence of IPV against them is also reduced. These results challenge current bargaining theory and existing empirical evidence and point towards yet unexplained household dynamics. Heterogeneous analysis by income level reveals behavioral patterns among low-income households that are best predicted by male backlash. Childcare availability appears to enhance women's bargaining power in poor households, while at the same time triggering violent behavior of their partners.

Future research may draw on the implications of this study. My contradicting results call for further investigations into the impact of childcare availability on women's empowerment. First and foremost, additional empirical evidence is required to substantiate or contradict the findings of this paper. Moreover, uncovering unobserved channels that might lead to a disempowerment of women in decision-making processes presents an interesting area for future research.

Secondly, the analysis of spousal abuse should become an integral part of future studies that examine female empowerment. As the evidence presented in this paper clearly demonstrates, the interrelated nature of decision-making power and IPV is not yet thoroughly understood, and omitting IPV from the analysis of women's positions in the household could lead to inaccurate inferences. Hence, dichotomous investigations will be able to capture the comprehensive impact on female empowerment.

Finally, my results point towards multi-layered, heterogeneous analyses as the key approach to capture the true changes in women's empowerment across a large number of dissimilar

households. Recognizing and investigating differences in responses and household dynamics will allow a more in-depth and comprehensive understanding of the repercussions caused by family policy in the future.

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APPENDIX A

TABLE A1
AVERAGE BARGAINING POWER – INDIVIDUAL QUESTIONS

Variable	All Women	Without Children	With Children	Eligible	Ineligible
The food that is eaten in the house	0.553	0.566	0.549	0.489	0.569
	(0.531)	(0.541)	(0.528)	(0.529)	(0.526)
Your clothes	0.126	0.138	0.122	0.0920	0.132
	(0.427)	(0.430)	(0.425)	(0.409)	(0.430)
Your spouse's clothes	0.122	0.139	0.117	0.0855	0.127
	(0.577)	(0.548)	(0.584)	(0.581)	(0.585)
Your children's clothes	0.198	0.0336	0.246	0.274	0.237
	(0.537)	(0.412)	(0.559)	(0.537)	(0.566)
The education of your children	0.0686	0.0489	0.0743	0.0632	0.0780
	(0.439)	(0.501)	(0.419)	(0.352)	(0.438)
Health services and medicine of your children	0.0628	0.0373	0.0702	0.0560	0.0749
	(0.445)	(0.515)	(0.423)	(0.381)	(0.435)
Large expenditures for the house	-0.254	-0.239	-0.258	-0.276	-0.253
	(0.514)	(0.519)	(0.512)	(0.514)	(0.511)
Money that is given to your parents/relatives	-0.0357	-0.0104	-0.0430	-0.0862	-0.0288
	(0.551)	(0.573)	(0.544)	(0.511)	(0.553)
Money that is given to your spouse's parents/relatives	-0.0787	-0.0599	-0.0841	-0.0948	-0.0806
	(0.587)	(0.565)	(0.593)	(0.571)	(0.601)
If you should work or not	-0.173	-0.161	-0.176	-0.208	-0.165
	(0.465)	(0.457)	(0.468)	(0.485)	(0.461)
If your spouse should work or not	-0.232	-0.210	-0.238	-0.287	-0.222
	(0.632)	(0.618)	(0.635)	(0.621)	(0.639)
If you or your spouse/couple use contraceptives	0.00290	-0.0367	0.0145	0.00575	0.0174
	(0.468)	(0.513)	(0.453)	(0.394)	(0.471)
Observations	7,234	1,635	5,599	1,392	4,207

Note: Data is obtained from the Mexican Family Life Survey (MxFLS). Women without children are defined as women with no children under 18. Mean values are displayed with standard deviations below in parentheses.

TABLE A2
TRIPLE DIFFERENCE-IN-DIFFERENCES REGRESSION ON HOUSEHOLD DECISION-MAKING - INDIVIDUAL QUESTIONS

	(1) Food	(2) Own Clothes	(3) Partner's Clothes	(4) Children's Clothes	(5) Child Education	(6) Child Health	(7) Large Expenditures	(8) Money own family	(9) Money partner's family	(10) Own labor supply	(11) Partner's labor supply	(12) Contraceptives
Eligibility	-0.094**	-0.02	-0.015	0.015	0.033	-0.013	0.025	0.070*	0.049	-0.008	0.012	0.025
	[0.038]	[0.033]	[0.035]	[0.031]	[0.032]	[0.029]	[0.035]	[0.039]	[0.046]	[0.034]	[0.035]	[0.041]
Exposure	0.033	0.029	0.017	0.001	0.107	0.037	0.169	0.081	0.08	0.043	-0.016	0.088
	[0.068]	[0.060]	[0.071]	[0.069]	[0.070]	[0.067]	[0.106]	[0.060]	[0.068]	[0.063]	[0.127]	[0.062]
Treatment	-0.024	-0.027	-0.001	-0.077	-0.063	0.037	-0.121	-0.381**	-0.08	0.07	-0.264*	-0.147
	[0.156]	[0.104]	[0.145]	[0.123]	[0.092]	[0.093]	[0.145]	[0.191]	[0.161]	[0.142]	[0.153]	[0.104]
FDR p-value (Treat)	0.955	0.953	0.996	0.919	0.919	0.919	0.919	0.504	0.919	0.919	0.504	0.634
Observations	4589	4589	4589	4589	4589	4589	4589	4589	4589	4589	4589	4589
R-squared	0.124	0.107	0.093	0.094	0.079	0.076	0.079	0.099	0.076	0.099	0.085	0.076
Mean of dependent variable	0.558	0.131	0.108	0.187	0.0643	0.0589	-0.261	-0.0213	-0.0727	-0.165	-0.251	-0.00283

Robust standard errors in parentheses, clustered at municipality level; all specifications include round, municipality and age fixed effects, as well as women's and husband's ethnicity and educational attainment, the number of non-adult children, an indicator for cohabiting relatives, an income proxy, and a dummy for urban areas. FDR corrected (Hochberg) p-values are reported for each estimate. *** p<0.01, ** p<0.05, * p<0.1

TABLE A3
PREDICTIVE ABILITY OF BARGAINING POWER FOR SCOPE OF EI IN MUNICIPALITY

	(1)	(2)	(3)
Index All	-0.00202		
	(0.00298)		
Index Private		-0.00116	
		(0.00710)	
Index Children			-0.00319
			(0.00683)
Constant	0.139***	0.138***	0.140***
	(0.0280)	(0.0279)	(0.0283)
Observations	2,750	2,750	2,750
R-squared	0.000	0.000	0.000

Robust standard errors in parentheses, clustered at municipality level. *** p<0.01, ** p<0.05, * p<0.1.

TABLE A4
PREDICTIVE ABILITY OF IPV FOR SCOPE OF EI IN MUNICIPALITY

	(1)	(2)	(3)	(4)
Physical Violence	-0.00294			
	(0.00359)			
Sexual Violence		-0.00475		
		(0.00488)		
Emotional Violence			-0.0109***	
			(0.00356)	
Violence Threats				-0.00194
				(0.00653)
Constant	0.0458***	0.0457***	0.0461***	0.0456***
	(0.00574)	(0.00572)	(0.00576)	(0.00571)
Observations	75,636	75,650	75,633	75,668
R-squared	0.000	0.000	0.000	0.000

Robust standard errors in parentheses, clustered at municipality level. *** p<0.01, ** p<0.05, * p<0.1.

APPENDIX B

TABLE B1
TRIPLE DIFFERENCE-IN-DIFFERENCES REGRESSION ON HOUSEHOLD DECISION-MAKING - ALTERNATIVE ELIGIBILITY DEFINITIONS

	(1) Index All	(2) Index Private	(3) Index Children
Panel A: Eligibility at age 0			
Eligibility	-0.0943	0.0419	-0.00505
	(0.207)	(0.132)	(0.0626)
Exposure	0.638*	0.246**	0.138
	(0.348)	(0.123)	(0.133)
Treatment	-0.876	-0.501	-0.0548
	(0.600)	(0.310)	(0.188)
Constant	7.406***	1.146***	2.654***
	(0.481)	(0.258)	(0.265)
Panel B: All eligible children in household			
Eligibility	0.0952	0.0329	0.0621
	(0.146)	(0.0718)	(0.0597)
Exposure	0.630*	0.220*	0.156
	(0.342)	(0.125)	(0.140)
Treatment	-0.615	-0.263	-0.127
	(0.502)	(0.195)	(0.213)
Constant	7.414***	1.152***	2.654***
	(0.483)	(0.253)	(0.265)
Observations	4,589	4,589	4,589
R-squared	0.098	0.094	0.089
Municipality FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Age FE	Yes	Yes	Yes
Mean of dependent variable	0.354	-0.0887	0.336
Number of clusters	152	152	152

Robust standard errors in parentheses, clustered at municipality level; all specifications control for women's and husband's ethnicity and educational attainment, the number of non-adult children, cohabiting relatives, income level and urban areas. *** p<0.01, ** p<0.05, * p<0.1.

TABLE B2
TRIPLE DIFFERENCE-IN-DIFFERENCES REGRESSION ON HOUSEHOLD DECISION-MAKING - WOMEN WITH CHILDREN YOUNGER THAN 7

	(1) Index All	(2) Index Private	(3) Index Children
Eligibility	-0.0425	-0.00805	0.0464
	(0.187)	(0.0855)	(0.0697)
Exposure	0.122	-0.0335	0.0729
	(0.842)	(0.286)	(0.369)
Treatment	-0.261	0.00811	-0.0870
	(0.734)	(0.245)	(0.289)
Constant	-0.442	0.838	-0.883**
	(0.869)	(0.518)	(0.386)
Observations	1,702	1,702	1,702
R-squared	0.172	0.183	0.163
Municipality FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Age FE	Yes	Yes	Yes
Mean of dependent variable	0.249	-0.157	0.410
Number of clusters	143	143	143

Robust standard errors in parentheses, clustered at municipality level; all specifications control for women's and husband's ethnicity and educational attainment, the number of non-adult children, cohabiting relatives, income level and urban areas. *** p<0.01, ** p<0.05, * p<0.1.

TABLE B3
PLACEBO TEST HOUSEHOLD DECISION-MAKING - WOMEN WITH NO CHILDREN

	(1) Index All	(2) Index Private	(3) Index Children
Exposure	1.145	0.383*	0.481
	(0.796)	(0.222)	(0.463)
Constant	0.185	0.936***	-0.403
	(0.785)	(0.224)	(0.371)
Observations	991	991	991
R-squared	0.325	0.359	0.297
Municipality FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Age FE	Yes	Yes	Yes
Mean of dependent variable	0.236	-0.0797	0.104
Number of clusters	130	130	130

Robust standard errors in parentheses, clustered at municipality level; all specifications control for women's and husband's ethnicity and educational attainment, cohabiting relatives, income level and urban areas.
*** p<0.01, ** p<0.05, * p<0.1.

TABLE B4
TRIPLE DIFFERENCE-IN-DIFFERENCES REGRESSION ON IPV
- ALTERNATIVE ELIGIBILITY DEFINITIONS

	(1) Physical Violence	(2) Sexual Violence	(3) Emotional Violence	(4) Threats of Violence
Panel A: Eligibility at age 0				
Eligibility	0.00450	-0.00246	-0.00839**	-0.00337
	(0.00488)	(0.00425)	(0.00419)	(0.00279)
Exposure	0.00237	-0.00659	0.000652	-0.000328
	(0.00737)	(0.00612)	(0.00804)	(0.00461)
Treatment	-0.0108	0.00370	0.00348	0.00371
	(0.00831)	(0.00730)	(0.00759)	(0.00451)
Constant	0.158***	0.0940***	0.143***	0.0305***
	(0.0288)	(0.0257)	(0.0279)	(0.00948)
Panel B: All eligible children in household				
Eligibility	0.0109**	0.000610	0.00122	0.00244
	(0.00426)	(0.00400)	(0.00380)	(0.00256)
Exposure	0.00104	-0.00655	0.00280	0.000651
	(0.00732)	(0.00602)	(0.00785)	(0.00453)
Treatment	-0.00653	0.00380	-0.00568	-0.000306
	(0.00833)	(0.00738)	(0.00767)	(0.00452)
Constant	0.156***	0.0933***	0.141***	0.0291***
	(0.0287)	(0.0257)	(0.0278)	(0.00951)
Observations	171,074	170,913	170,222	170,498
R-squared	0.033	0.032	0.029	0.022
Municipality FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Age FE	Yes	Yes	Yes	Yes
Mean of dependent variable	0.0815	0.0471	0.0549	0.0193
Number of clusters	881	881	881	881

Robust standard errors in parentheses, clustered at municipality level; all specifications control for women's and husband's ethnicity and educational attainment, the oportunidades program, income level, cohabiting relatives and urban areas. *** p<0.01, ** p<0.05, * p<0.1

TABLE B5
TRIPLE DIFFERENCE-IN-DIFFERENCES REGRESSION ON IPV
- WOMEN WITH CHILDREN YOUNGER THAN 7

	(1) Physical Violence	(2) Sexual Violence	(3) Emotional Violence	(4) Threats of Violence
Eligibility	0.00626	-1.52e-05	0.000378	0.00296
	(0.00586)	(0.00444)	(0.00485)	(0.00325)
Exposure	0.00546	0.00165	0.00249	0.00550
	(0.0137)	(0.00976)	(0.0109)	(0.00688)
Treatment	-0.000986	-0.00385	-0.000160	-0.00120
	(0.0127)	(0.00868)	(0.00936)	(0.00542)
Constant	0.202***	0.0920***	0.147***	0.0359
	(0.0457)	(0.0246)	(0.0375)	(0.0225)
Observations	70,448	70,379	70,032	70,242
R-squared	0.064	0.058	0.056	0.052
Municipality FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Age FE	Yes	Yes	Yes	Yes
Mean of dependent variable	0.0931	0.0457	0.0574	0.0195
Number of clusters	880	880	880	880

Robust standard errors in parentheses, clustered at municipality level; all specifications control for women's and husband's ethnicity and educational attainment, the oportunidades program, income level, cohabiting relatives and urban areas. *** p<0.01, ** p<0.05, * p<0.1

TABLE B6
PLACEBO TEST IPV - WOMEN WITH NO CHILDREN

	(1) Physical Violence	(2) Sexual Violence	(3) Emotional Violence	(4) Threats of Violence
Exposure	-0.00244	0.00566	0.0103	0.00830
	(0.00998)	(0.00913)	(0.0106)	(0.00544)
Constant	0.142***	0.0979***	0.135***	0.0247**
	(0.0382)	(0.0359)	(0.0355)	(0.0109)
Observations	44,706	44,670	44,540	44,579
R-squared	0.072	0.076	0.069	0.076
Municipality FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Age FE	Yes	Yes	Yes	Yes
Mean of dependent variable	0.0640	0.0398	0.0475	0.0159
Number of clusters	880	880	880	880

Robust standard errors in parentheses, clustered at municipality level; all specifications control for women's and husband's ethnicity and educational attainment, the oportunidades program, income level, cohabiting relatives and urban areas. *** p<0.01, ** p<0.05, * p<0.1