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Women's Voice at Work and Family-Friendly Firms

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Women's Voice at Work and Family-Friendly Firms*

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ABSTRACT

Uneven family responsibilities are at the root of gender gaps. Using a new dataset covering all firm-level agreements signed in Spain between 2010 and 2018, we explore whether the presence of female worker representatives can facilitate the negotiation of family-friendly policies with management. We compare firms that operate under the same set of labor regulations but differ in the presence of women among employee representatives. Our findings suggest that having female representatives at the bargaining table can help transform workplaces to better meet women's needs and ultimately close the gender gap.

Keywords: women representation, bargaining, family-friendly firms

JEL codes: J16, J32, J53

1 Introduction

In recent decades there has been considerable convergence between men and women in the labor market. However, women remain at a disadvantage, as they are often responsible for the family (Goldin, 2021; Albanesi et al., 2023).¹ Recent literature puts firms at the center of the gender gap debate (Card et al., 2016; Sorkin, 2017; Casarico and Lattanzio, 2019) and, hence, transforming them into more family-friendly organizations can help reduce gender inequality (Hotz et al., 2018; Azmat and Boring, 2020; Corradini et al., 2022).

Creating more family-friendly workplaces calls for those who design company policies to take into account work-family trade-offs. However, workplace policies are decided among a few worker representatives and the management, and, hence, women’s needs may not be a priority. In this paper, we shed light on whether the presence of women at the bargaining table is associated with the likelihood that female-related job amenities are taken into account in negotiations.

Our analysis leverages a unique dataset that includes all firm-level collective agreements signed by Spanish companies between 2010 and 2018. Crucially for our purposes, the dataset provides detailed information on the gender composition of worker representatives at the bargaining table, as well as the policies negotiated with management. Moreover, the Spanish context provides an interesting framework for our analysis. On the one hand, the collective bargaining system allows us to examine how inclusive workplace representation can improve existing higher-level labor regulations enacted by the government to address gender inequality (Mora-Sanguinetti et al., 2023). On the other hand, existing evidence suggests that in sectors where work schedules can be easily adjusted to accommodate family responsibilities, the costs of childbearing disappear within three years, highlighting the potential of family-friendly policies to narrow the gender gap (de Quinto et al., 2021).

Drawing on the census of agreements, the empirical strategy consists of estimating linear probability models in which we relate the likelihood of a given policy being negotiated in a firm-level agreement with the presence of women among the workers’ representatives. For identification, we exploit variation across firms covered by the

¹Survey evidence from 142 countries indicate that about 25% of women *and* men consider “the balance between work and family” as the main challenge faced by women in salaried employment (Gallup and ILO, 2017).

same sector-province collective bargaining agreement, i.e., firms operating in the same narrowly defined legal environment in terms of labor regulations. In this context, we identify whether women's representation at the bargaining table can transform firms into organizations that are more favorable to women by increasing the likelihood of negotiating family-friendly practices, over and above policies already covered by higher-level agreements or government regulations.

The results indicate that women's representation at the bargaining table is positively correlated with the likelihood that workplace practices that contribute to improving work-family balance are considered during negotiations. We also find that women's voice at the bargaining table can also enhance the implementation of policies to address harassment within organizations, especially where women are under-represented. Interestingly, there is no effect on the likelihood that company-specific policies to promote gender equality are taken into, probably because they are covered by higher-level labor regulations. Notably, our analysis does not indicate any effect of the gender composition of worker representatives on the negotiation of issues such as wage increases or working hours. In addition, alternative empirical strategies, such as inverse probability weighting or the use of within-firm variation, converge to produce similar results. Our heterogeneity analysis shows that our results hold whether or not women are the majority of employee representatives at the bargaining table. In addition, we do not find major differences between small and large firms, but we do document that our findings are more salient in industries that are more likely to exhibit flexible work schedules.

Our paper contributes to two main strands of the literature. An emerging literature is bringing interest in worker representation in corporate decision-making to the academic and policy debates (Gorton and Schmid, 2004; Blandhol et al., 2020; Jäger et al., 2021; Harju et al., 2021; Jäger et al., 2022a,b). Existing studies find little or no positive effect of codetermination on broadly defined worker and firm outcomes such as wages, job security, or productivity, and no impact on the balance of power within organizations. Our study adds to this literature by highlighting that the gender composition of worker representatives may be important because it can influence negotiated policies. In addition, our results suggest that worker voice may affect intangible outcomes, such as job amenities, that are typically overlooked in the literature but are relevant to employee well-being. In this regard, our work also connects with re-

cent quasi-experimental evidence from higher-level worker representation by unions which reveals that when unions make women central to their bargaining agenda negotiated agreements are more likely to include female-friendly clauses (Corradini et al., 2022).

We also add to the literature investigating how female representation can affect policy outcomes in different settings, such as governments (e.g., Hessami and da Fonseca, 2020; Lippmann, 2022; Danzer et al., 2023) or corporations (e.g., Adams and Ferreira, 2009; Smith, 2018; Azmat and Boring, 2020). Our analysis is directly linked to studies analyzing how the presence of women among top managers affects worker and firm outcomes (Cardoso and Winter-Ebmer, 2010; Smith, 2018; Bertrand et al., 2019; Flabbi et al., 2019; Maida and Weber, 2022). We contribute to this line of work by shifting the focus of analysis from managers to employee representatives, to shed light on how women’s representation can help transform companies into workplaces that are more friendly to reconciling work and family life and, hence, contribute to addressing some of the sources of the motherhood penalty (Hotz et al., 2018).

The rest of the paper is organized as follows. Section 2 describes the Spanish bargaining system and introduces the data. Section 3 presents the econometric model and discusses the results. Section 4 concludes.

2 Data and institutional setting

Collective bargaining system. In Spain there are two types of collective bargaining agreements (CBAs): province-sector and firm-level.² Regardless of the level, CBAs regulate a wide range of matters, such as the scope of application of the agreement, remuneration packages, work organization, equality plans, family support policies, training, retirement, etc. Firm-level agreements, when negotiated, enhance (or add to) province-sector agreements and take precedence over them. Importantly, if the firm-level agreement does not cover a clause, higher-level agreements govern and, if a higher-level CBA has not been negotiated, the “workers’ statute” governs labor relations.

For the negotiation of firm-level agreements, there exist two workers’ representative bodies depending on firm size: *personnel delegates* for firms with less than 50

²Appendix A provides a comprehensive description of the collective bargaining system and other features of labor regulations in Spain.

employees who are elected in open lists, and whose decisions are taken jointly; and *work councils* for firms with 50 workers or more, in which workers elect labor unions in closed lists, and whose decisions are taken by majority rule.³ These bodies are in charge of carrying out the negotiations with the management and reaching decisions about workplace policies that result in the CBA regulating firm labor relations until the agreement expires.⁴

Census of firm-level agreements. Our analysis is based on the REGCON (*Registro de convenios y acuerdos colectivos*) a unique dataset including all signed agreements by Spanish companies between 2010 and 2018. Importantly for our purposes, the dataset contains information on the outcomes of firm-level bargaining between workers' representatives and the management to decide compensation packages and other firm-level policies.⁵ Specifically, we observe all negotiated workplace policies that we classify into (i) family-friendly, i.e., items referring to working time flexibility or family responsibilities, (ii) gender-equality, i.e., items related to reducing wage gaps, increasing opportunities for women, or the prevention of harassment, and (iii) gender-neutral, i.e., including wages, hours of work, or holidays. The information on each of these policies refers to whether they have been (or not) negotiated, but we do not observe the full text referring to each policy.

The dataset also provides information on the timing of the negotiations, whether the company had a firm-level agreement before negotiations, the gender composition of employee representatives at the bargaining table, if all representatives signed the agreement, as well as some firm-level characteristics, including private/public ownership, the number of employees by gender, the sector of activity (4-digit), and the location of the workplace. The dataset contains 6,066 firms signing 11,469 agreements.

From the original dataset, we eliminate firms with fewer than 5 employees or lacking workers' representatives, as well as firms where information on the sector of activity, location, and details of the agreement were missing. We also drop agreements that exhibit inconsistencies, e.g., having more women representatives than women in

³This implies that, in companies with fewer than 50 employees, signed agreements are only observed in the data when all representatives reach a consensus.

⁴If the validity of a firm-level agreement expires, there are three possible situations: automatic extensions until a party wants to negotiate, or one year when a party wants to negotiate, or it is extended according to what was agreed in the CA.

⁵See Appendix B for a description of each item.

the firm. The resulting sample comprises 4,840 enterprises that signed 9,029 firm-level agreements between 2010 and 2018. Importantly, about 70% of the companies signed only one agreement throughout the period, so the data set is mostly cross-sectional.

Table 1: Analysis sample statistics

	All agreements	No women's representation	Women's representation
Firm characteristics			
No. employees	260.9	137.7	373.5
Share of women	0.349	0.200	0.484
Private firm	0.883	0.917	0.852
Madrid	0.182	0.154	0.207
Service sector	0.564	0.442	0.675
Bargaining table characteristics			
No. representatives	5.025	3.621	6.307
Share of women	0.271	0	0.519
Consensus among representatives	0.918	0.942	0.896
Negotiated policies			
Family-friendly	0.775	0.709	0.835
Gender-equality	0.524	0.456	0.586
Gender-neutral	0.986	0.986	0.987
No. agreements	9,029	4,309	4,720

Notes: Madrid refers to the whole province, not only the city. The service sector embeds the whole tertiary sector including firms performing activities ranging from commerce to administration, transportation, financial and real estate activities, business and personal services, education, healthcare, and social work. The consensus among representatives stands for the firm-level agreements in which all representatives sign the contract. Negotiated policies refer to the proportion of firm-level agreements that included at least one of the four items about each of the broadest policies, i.e., family-friendly, gender-equality, and gender-neutral. Appendix B defines each of the items.

Characteristics of the analysis sample. Table 1 reports summary statistics of our sample of firm-level agreements.⁶ The numbers indicate that about half of the firm-level agreements had at least a woman among employee representatives. These firms are substantially larger than firms lacking women representatives as well as more gender balance. They are also slightly more likely to be public, being located in the capital region, Madrid, and operating in the service sector.

In terms of women's participation in negotiations, these companies on average have a balanced bargaining table. However, there is substantial heterogeneity across bargaining tables on the number of female representatives (see Figure C.1 in Appendix C). For instance, while among firms with at least a female representative, half of workers at the bargaining table are women, there is about 10% of the agreements for which the bargaining table is composed exclusively of women. This set of agreements corresponds to companies in which women represent more than 50% of the workforce, accounting for almost 30% of the firms that signed the agreements in our sample (see

⁶In Tables C.1 and C.2, we report descriptive statistics on women's representation at the bargaining table and policies negotiated in firm-level agreements as well as in sector-province CBAs.

Figure C.2). Interestingly, although the share of women among representatives increases with the proportion of women among employees, correlation analysis in Figure C.4 shows that this relationship is not one-to-one and weakens once firm-level observable are taken into account.

In terms of negotiated company policies, almost all agreements covered gender-neutral clauses, while only half of them included practices to promote gender equality, and just over two-thirds negotiated family-friendly policies. When comparing agreements with and without women among workers' representatives, there appears to be no difference concerning gender-neutral clauses. However, agreements with women at the bargaining table seem to be more likely to have negotiated gender equality clauses (0.586 vs. 0.456 of the agreements included at least one such clause) and this difference is greater when family-friendly policies are discussed (0.835 vs. 0.456). Thus, the summary statistics suggest that in agreements where women were present at the bargaining table, female-related job amenities were negotiated more frequently. In the next section, we examine this issue more closely in a regression framework.

3 Women's participation and family-friendly policies

Econometric model. To investigate whether the participation of women at the bargaining table can promote family-friendly policies in the workplace, we estimate linear probability models of the following form

$$y_{it} = \beta WRep_{it} + X_{it}\Omega + \delta_{srt} + \epsilon_{it} \quad (1)$$

where y_{it} is an indicator variable for whether a specific workplace policy is factored into the negotiations of an agreement signed at time t in firm i . Our main variable of interest is $WRep_{it}$, an indicator variable taking value one if there is at least a woman among the workers' representatives at the bargaining table. X_{it} refers to firm-level characteristics, including indicator variables for firms with more than 50 employees, firms with more than 50% of the workers are women, ownership, agreement among employee representatives, and whether there was a previous agreement in place. Note that both firm size and the proportion of women within the organization are critical controls. On the one hand, firm size determines both who negotiated with the management over workplace policies as well as the binding nature of the need to implement

equality plans. On the other hand, firms, where women represent the majority of the workforce, might be already offering more female-friendly amenities and, hence, there is no need to negotiate them. δ_{srt} represents year-of-signature \times sector \times province fixed effects capturing common shocks *within* higher-level CBAs. Thus, the association between the presence of women at the bargaining table and the likelihood of negotiating a given workplace policy, β , is estimated by exploiting variation across companies covered by the *same* sector-province agreement.

In this framework, a positive β would indicate that women's voice at the bargaining table increases the likelihood that a firm-specific family-friendly policy (or any other policy) will be negotiated among companies within a given sector-province CBA. Since all firms are affected by clauses negotiated in higher-level agreements, our point estimate refers to the probability that a given policy is negotiated over and above the articles within sector-province CBAs. For inference, we allow for correlation in the shocks among firms operating in the same province *and* sector through clustered standard errors.

Women's voice at work. Table 2 collects the estimates from Equation (1), where we investigate both family-friendly policies as well as practices to promote gender equality or negotiation of general working conditions (gender-neutral). Panel A shows our main estimates of interest, referring to whether the participation of at least a woman at the bargaining table is positively correlated with the likelihood that a family-friendly policy is negotiated with the management. Our results indicate that the presence of at least a woman at the bargaining table increases the likelihood of negotiating such workplace practices. The uncovered effects are stronger for practices aimed at alleviating arguably the main constraints faced by working women: lack of working time flexibility (Goldin, 2014) and breastfeeding (Albanesi and Olivetti, 2016), while they are milder for company-sponsored paid leave.

Panel B reports the estimates corresponding to the negotiation of gender equality policies. The results reveal that the presence of women at the bargaining table has no effect (or only a slight effect) on the likelihood of increasing negotiations on practices to promote gender equality. While surprising at first sight, it is worth noting that in recent years an increasing number of national and regional regulations aimed at reducing gender differences in the Spanish labor market have been enacted, leading several

Table 2: Women’s voice and workplace policies

A. Family-friendly				
	Time balance	Care leave	Breastfeeding	Paid permits
WRep	0.0573 (0.0208)	0.0866 (0.0198)	0.1207 (0.0233)	0.0621 (0.0195)
Observations	9,029	9,029	9,029	9,029
R-squared	0.7857	0.7266	0.7894	0.7598
B. Gender-equality				
	Equality	Opportunities	Positive discrimination	Anti-harassment
WRep	0.0240 (0.0185)	0.0320 (0.0190)	0.0005 (0.0148)	0.0454 (0.0196)
Observations	9,029	9,029	9,029	9,029
R-squared	0.7443	0.7387	0.7020	0.7596
C. Gender-neutral				
	Wages	Working hours	Overtime	Holidays
WRep	-0.0131 (0.0144)	0.0304 (0.0207)	0.0005 (0.0151)	-0.0026 (0.0099)
Observations	9,029	9,029	9,029	9,029
R-squared	0.8061	0.7626	0.7035	0.7343

Notes: All columns refer to linear probability models following Equation (1) using alternative workplace policies as the dependent variable. Appendix B defines each of the policies used as the dependent variable. WRep is an indicator variable identifying firm-level agreements negotiated with at least a woman among workers’ representatives at the bargaining table. All specifications include indicators for firms with 50 or more employees, those with more than 50% of the workforce being women, firm ownership (private vs public), whether all workers’ representatives signed the agreement or not, and whether the firm is negotiating an agreement for the first time or not, as well as year×sector×province fixed effects. Standard errors clustered at the province×sector level in parenthesis.

companies to sign equality plans (Mora-Sanguinetti et al., 2023) and these plans being compulsory for large firms. Thus, our results go over and above these governmental laws, which plausibly explains the scarce role played by women’s representation at the bargaining table in the likelihood of negotiating company policies to promote gender equality. Noteworthy, we do uncover a positive correlation between the presence of women at the bargaining table and the negotiation over policies to prevent (sexual) harassment in the workplace. This finding is particularly relevant, especially for human resource policies in light of recent studies that highlight the widespread occurrence of gender-based violence in the workplace and its unequal consequences for men and women (Batut et al., 2021; Adams-Prassl et al., 2023). In other words, women’s representation at the bargaining table can help tackle the incidence of harassment by promoting the establishment of specialized committees that will likely deter potential perpetrators from acting.

Panel C shows the results when looking at workplace policies related to general working conditions. Consistent with the idea that gender-neutral policies should not be more or less likely to be negotiated based on the sex composition of employee rep-

representatives, our results point to no significant differences in the probability of general working conditions being brought to the bargaining table. This finding suggests that in our context there might be no trade-off between negotiating family-friendly policies (or gender equality practices) and negotiating general working conditions. The absence of a trade-off in negotiated policies is consistent with recent evidence from [Corradini et al. \(2022\)](#), who find no adjustments in wages or employment in firms to finance improvements in female-related amenities in the context of a reform that affected Brazil's largest union to prioritize women's needs in collective bargaining.

Altogether, our findings are consistent with the existing literature on how the presence of women in decision-making can shift policy outcomes to reflect their preferences ([Hessami and da Fonseca, 2020](#); [Lippmann, 2022](#); [Danzon et al., 2023](#)). To the extent that traditional gender roles place family responsibilities primarily on women, their presence at the bargaining table makes the need to reconcile work and family life more salient and therefore more likely to be included in negotiations over workplace policies ([Chattopadhyay and Duflo, 2004](#)). In this respect, unlike the median voter theorem, where candidate orientation and background are irrelevant to policy ([Downs, 1957](#)), our evidence seems consistent with the citizen-candidate voting model, where candidates can represent their preferred policies and identities such as race, religion, and gender ([Osborne and Slivinski, 1996](#); [Besley and Coate, 1997](#)).

Sensitivity of the results. In Appendix [C.2](#) we perform a series of checks to evaluate the robustness of our results. First, in our estimation, we rely on the year in which the agreement was signed and interacted with the sector *and* province to account for regulations above the firm-level agreement. As can be seen in [Table C.4](#), the results remain the same when the year in which the firm-level agreement becomes binding is used instead to define the point in time for identifying higher-level work regulations. Second, the identification strategy exploits variation among firms within the same sector-province CBA. In [Table C.5](#), instead, we rely on a less demanding strategy in which we exploit variation among firms in the same sector and province but potentially covered by different CBAs if they were signed in different years. Our results for family-friendly practices hold, but using this alternative identification strategy, we also find positive effects of women's representation at the bargaining table on

the likelihood of negotiating workplace practices that promote gender equality.⁷ This suggests that when relying on the more demanding strategy in which we compare companies covered by the *same* higher-level agreements, the presence of at least one woman among the workers' representatives does not affect the likelihood of negotiating gender equality policies, as they are likely to be covered by these supra-company regulations.

Our identification strategy accounts for several confounding factors and compares firms covered by the same, narrowly defined, labor regulations. However, our results can still suffer from selection bias. For example, if some firms are already more family-friendly from the start and these organizations are more likely to have women representatives, our effect would be *upward* biased by these unobserved factors. We implement two alternative empirical strategies to assess the selection channel.

On the one hand, we seek to make companies without female representatives more similar to those with women using inverse probability weighting (Hirano et al., 2003). We begin by fitting a logit model for the probability that there is at least a woman at the bargaining table as a function of firm-level characteristics. In addition, we use the information on the membership of *elected* workers' representatives to a specific union as an additional control(s). Although the election of representatives based on union affiliation is not random, the idea is to use employees' revealed preferences for particular unions and their policies as a proxy for unobserved components to predict the presence of a female representative. Using the logit model estimates, we calculate the predicted probability that a firm has at least one woman among the workers' representatives at the bargaining table, $\hat{p}(WRep_i)$, and construct the weights for the other companies as $w_i = \frac{1}{(1-\hat{p}(WRep_i))}$.

On the other hand, we exploit the subset of firms for which we observe more than one signed agreement to apply a fixed effects approach. Thus, the β -coefficient is identified only from those firms that switch between having or not having women's representation at the bargaining table. Although changes in the gender composition of the bargaining table may not be random, we follow this strategy to hold constant firm unobserved heterogeneity and thus compare the same company that signs an agreement when it has at least one woman among the employee representatives and when it does not.

⁷We find similar results if we resort to an even less demanding strategy based on the use of three separate fixed effects for the year, sector of activity, and province (Table C.6).

Tables C.7 and C.8 collect the estimates from these exercises. They converge to offer a similar conclusion: a positive correlation between the presence of women workers' representatives at the bargaining table and the likelihood of negotiating family-friendly labor practices with management that improve higher-level regulations. The stability of the estimates is indicative that selection bias may not be too severe in our framework. Therefore, the results seem to suggest that it is the presence of female representatives at the bargaining table that is the transforming factor, rather than the fact that the firms that would implement family-friendly policies are the same firms that would elect female representatives.

Heterogeneity. To better understand our results, we examine their heterogeneity along three key dimensions. We start by looking at whether the degree of representation matters for our findings. To do this, we split the representation indicator according to whether or not women are the majority at the table. Concerning family-friendly policies in Panel A of Table 3 we find the effects to be broadly similar regardless of the degree of representation. Firm-sponsored paid permits seem to be the only exception, as the results indicate that our benchmark estimates are driven by bargaining tables where women do not represent the majority of workers' representatives. In the case of practices to promote gender equality (Panel B), the estimates still indicate that women's voice do not have a meaningful effect on the probability that practices to promote gender equality are discussed at the bargaining table. Furthermore, this exercise reveals that only when women are not in the majority at the negotiating table is there a greater likelihood that measures to prevent (sexual) harassment within the organization will be taken into account. Panel C confirms our previous findings that women's representation at the bargaining table does not have a significant effect on the probability that general working conditions are more likely to be negotiated. Taken together, the results are consistent with group-specific representation in decision-making influencing policy outcomes even when the group is not in the majority (Pande, 2003).

Recent research has begun to focus on understanding how parental leave policies might affect employers due to the need to replace workers, suggesting that the associated adjustment costs may differ across firms (Brenøe et al., 2023; Ginja et al., 2023; Schmutte and Skira, 2023). We therefore examine whether our results differ between small firms (less than 50 employees) and large firms (50 or more employees). Table 4

Table 3: Women’s voice and workplace policies: Degree of representation

A. Family-friendly				
	Time balance	Care leave	Breastfeeding	Paid permits
WRep \in (0,0.5]	0.0559 (0.0231)	0.0996 (0.0223)	0.1247 (0.0252)	0.0746 (0.0227)
WRep \in (0.5,1]	0.0603 (0.0262)	0.0597 (0.0247)	0.1124 (0.0273)	0.0362 (0.0252)
Observations	9,029	9,029	9,029	9,029
R-squared	0.7857	0.7269	0.7894	0.7599
B. Gender-equality				
	Equality	Opportunities	Positive discrimination	Anti-harassment
WRep \in (0,0.5]	0.0360 (0.0212)	0.0349 (0.0213)	0.0014 (0.0164)	0.0642 (0.0201)
WRep \in (0.5,1]	-0.0009 (0.0233)	0.0260 (0.0289)	-0.0015 (0.0212)	0.0065 (0.0287)
Observations	9,029	9,029	9,029	9,029
R-squared	0.7445	0.7387	0.7020	0.7600
C. Gender-neutral				
	Wages	Working hours	Overtime	Holidays
WRep \in (0,0.5]	-0.0176 (0.0152)	0.0210 (0.0230)	0.0032 (0.0162)	-0.0028 (0.0109)
WRep \in (0.5,1]	-0.0039 (0.0212)	0.0499 (0.0274)	-0.0051 (0.0218)	-0.0022 (0.0128)
Observations	9,029	9,029	9,029	9,029
R-squared	0.8061	0.7627	0.7035	0.7343

Notes: All columns refer to linear probability models following Equation (1) using alternative workplace policies as the dependent variable. Appendix B defines each policy used as the dependent variable. WRep is an indicator variable identifying firm-level agreements negotiated with at least a woman among workers’ representatives at the bargaining table, discretized into two groups according to whether women are or not in the majority. All specifications include indicators for firms with 50 or more employees, those with more than 50% of the workforce being women, firm ownership (private vs public), whether all workers’ representatives signed the agreement or not, and whether the firm is negotiating an agreement for the first time or not, as well as year \times sector \times province fixed effects. Standard errors clustered at the province \times sector level in parenthesis.

collects the estimates from our benchmark model extended to include an interaction term between the women’s representation indicator and a dummy variable identifying small firms. The estimates show that our findings regarding the negotiation of family-friendly policies are similar between firm types, as none of the effects for small firms are either economically or statistically meaningful. Interestingly, the heterogeneity analysis uncovers a positive effect of working hours for large firms, while this effect is of the same magnitude but with a different sign for small firms. Although this effect is muted in our benchmark model, this finding is still consistent with the idea that women’s representation at the bargaining table is positively correlated with the likelihood of negotiated work schedules, but only in large firms. This exercise suggests that the adjustment costs of providing employees with more flexibility to adjust their working hours may be lower in large firms, which might therefore be more likely to implement family-friendly policies.

Table 4: Women’s voice and workplace policies: Small vs large firms

A. Family-friendly				
	Time balance	Care leave	Breastfeeding	Paid permits
WRep	0.0486 (0.0265)	0.1136 (0.0236)	0.1175 (0.0318)	0.0564 (0.0277)
WRep×Small firm	0.0193 (0.0321)	-0.0595 (0.0312)	0.0071 (0.0386)	0.0126 (0.0398)
Observations	9,029	9,029	9,029	9,029
R-squared	0.7858	0.7270	0.7894	0.7598
B. Gender-equality				
	Equality	Opportunities	Positive discrimination	Anti-harassment
WRep	0.0300 (0.0282)	0.0150 (0.0269)	-0.0036 (0.0201)	0.0434 (0.0269)
WRep×Small firm	-0.0133 (0.0409)	0.0374 (0.0402)	0.0091 (0.0250)	0.0046 (0.0319)
Observations	9,029	9,029	9,029	9,029
R-squared	0.7443	0.7388	0.7020	0.7596
C. Gender-neutral				
	Wages	Working hours	Overtime	Holidays
WRep	-0.0253 (0.0178)	0.0578 (0.0261)	0.0094 (0.0209)	0.0095 (0.0125)
WRep×Small firm	0.0268 (0.0227)	-0.0605 (0.0303)	-0.0196 (0.0299)	-0.0268 (0.0171)
Observations	9,029	9,029	9,029	9,029
R-squared	0.8061	0.7629	0.7035	0.7345

Notes: All columns refer to linear probability models following Equation (1) using alternative workplace policies as the dependent variable. Appendix B defines each policy used as the dependent variable. WRep is an indicator variable identifying firm-level agreements negotiated with at least a woman among workers’ representatives at the bargaining table. Small firm is a dummy variable that takes value 1 if the firm has less than 50 employees. All specifications include indicators for firms with 50 or more employees, those with more than 50% of the workforce being women, firm ownership (private vs public), whether all workers’ representatives signed the agreement or not, and whether the firm is negotiating an agreement for the first time or not, as well as year×sector×province fixed effects. Standard errors clustered at the province×sector level in parenthesis.

Flexible work schedules (or lack thereof) and how long and unexpected hours are rewarded in different workplaces are considered to be an important source of the gender pay gap, as women tend to prefer more flexibility (Mas and Pallais, 2017; Cortes and Pan, 2018). To shed light on how our results relate to job flexibility, we classify industries using the 2010 Spanish Structure of Earnings Survey. Specifically, for each firm with at least 5 employees in the survey, we compute the standard deviation of the normal hours worked in a week by its employees and categorize firms with hours constraints or coordinated schedules as those with no dispersion in hours (Labanca and Pozzoli, 2022; Cubas et al., 2023). Non-flexible sectors are then defined as those above the median in the proportion of firms with homogeneous working hours.⁸ Table 5 collects the estimates from our benchmark model extended to incorporate an interaction term between non-flexible sectors and the presence of women at the bargaining table.

⁸Table C.3 in Appendix C reports the sectors classified as flexible and non-flexible.

The results suggest that the positive correlation between the presence of women at the bargaining table and the negotiation of family-friendly policies (and anti-harassment practices) is more salient in sectors with a greater variety of work schedules. This may signal that while women’s voice may play a role in making some firms more family-friendly, the environment in which these firms operate may constrain such transformative power.

Table 5: Women’s voice and workplace policies: Flexible vs non-flexible schedules

A. Family-friendly				
	Time balance	Care leave	Breastfeeding	Paid permits
WRep	0.0770 (0.0235)	0.0839 (0.0239)	0.1508 (0.0252)	0.0727 (0.0239)
WRep×No-flexibility	-0.0724 (0.0439)	0.0100 (0.0373)	-0.1111 (0.0480)	-0.0393 (0.0372)
Observations	9,029	9,029	9,029	9,029
R-squared	0.7860	0.7266	0.7899	0.7598
B. Gender-equality				
	Equality	Opportunities	Positive discrimination	Anti-harassment
WRep	0.0315 (0.0209)	0.0404 (0.0218)	0.0195 (0.0162)	0.0567 (0.0237)
WRep×No-flexibility	-0.0279 (0.0402)	-0.0309 (0.0430)	-0.0702 (0.0319)	-0.0415 (0.0392)
Observations	9,029	9,029	9,029	9,029
R-squared	0.7443	0.7388	0.7026	0.7597
C. Gender-neutral				
	Wages	Working hours	Overtime	Holidays
WRep	-0.0057 (0.0168)	0.0260 (0.0261)	0.0022 (0.0174)	-0.0036 (0.0122)
WRep×No-flexibility	-0.0273 (0.0279)	0.0162 (0.0394)	-0.0061 (0.0303)	0.0035 (0.0204)
Observations	9,029	9,029	9,029	9,029
R-squared	0.8061	0.7626	0.7035	0.7343

Notes: All columns refer to linear probability models following Equation (1) using alternative workplace policies as the dependent variable. Appendix B defines each policy used as the dependent variable. WRep is an indicator variable identifying firm-level agreements negotiated with at least a woman among workers’ representatives at the bargaining table. Non-flexible is a dummy variable that takes value 1 if the sector is above the median in the proportion of firms with homogeneous working hours. All specifications include indicators for firms with 50 or more employees, those with more than 50% of the workforce being women, firm ownership (private vs public), whether all workers’ representatives signed the agreement or not, and whether the firm is negotiating an agreement for the first time or not, as well as year×sector×province fixed effects. Standard errors clustered at the province×sector level in parenthesis.

4 Conclusions

This paper sheds light on whether the presence of women among employee representatives at the bargaining table can transform firms into more family-friendly workplaces. For this purpose, we exploit the population of firm-level agreements signed by Spanish firms between 2010 and 2018 to relate negotiated company policies to the

gender composition of employee representatives.

Our analysis indicates that women's representation in the negotiation of workplace practices with management is positively correlated with the likelihood that family-related amenities are taken into account. We do not, however, find significant effects on gender equality practices or the negotiation of general working conditions. The same picture emerges if one compares negotiating tables with and without a majority of women. Importantly, our heterogeneity analysis suggests that the results are somewhat more pronounced in sectors with more flexible work arrangements.

Consistent with the idea that voice at work can improve the flow of information, coordination, and cooperation between workers and management (Malcomson, 1983; Freeman and Lazear, 1995; Harju et al., 2021), our results suggest that *women's voice at work* can promote the transformation of workplaces into more family-friendly organizations and thereby ameliorate a critical source of gender inequality: work-family balance. Thus, policies aimed at promoting women's participation in the negotiation of labor regulations can contribute to reducing gender gaps in the labor market.

References

- Adams, R. B. and Ferreira, D. (2009). Women in the boardroom and their impact on governance and performance. *Journal of Financial Economics*, 94(2):291–309.
- Adams-Prassl, A., Huttunen, K., Nix, E., and Zhang, N. (2023). Violence against women at work. *The Quarterly Journal of Economics*, page qjad045.
- Albanesi, S. and Olivetti, C. (2016). Gender roles and medical progress. *Journal of Political Economy*, 124(3):650–695.
- Albanesi, S., Olivetti, C., and Petrongolo, B. (2023). Families, labor markets, and policy. In Lundberg, S. and Voena, A., editors, *Handbook of the Economics of the Family*, volume 1, pages 255–326. Elsevier.
- Azmat, G. and Boring, A. (2020). Gender diversity in firms. *Oxford Review of Economic Policy*, 36(4):760–782.
- Batut, C., Coly, C., and Schneider-Strawczynski, S. (2021). It's a man's world: Culture of abuse, #MeToo and worker flows. *mimeo*.

- Bertrand, M., Black, S. E., Jensen, S., and Lleras-Muney, A. (2019). Breaking the glass ceiling? The effect of board quotas on female labour market outcomes in Norway. *The Review of Economic Studies*, 86(1):191–239.
- Besley, T. and Coate, S. (1997). An economic model of representative democracy. *The Quarterly Journal of Economics*, 112(1):85–114.
- Blandhol, C., Mogstad, M., Nilsson, P., and Vestad, O. L. (2020). Do employees benefit from worker representation on corporate boards? *NBER Working Paper No. 28269*.
- Brenøe, A. A., Canaan, S., Harmon, N., and Royer, H. (2023). Is parental leave costly for firms and coworkers? *Journal of Labor Economics*, forthcoming.
- Card, D., Cardoso, A. R., and Kline, P. (2016). Bargaining, sorting, and the gender wage gap: Quantifying the impact of firms on the relative pay of women. *The Quarterly Journal of Economics*, 131(2):633–686.
- Cardoso, A. R. and Winter-Ebmer, R. (2010). Female-led firms and gender wage policies. *ILR Review*, 64(1):143–163.
- Casarico, A. and Lattanzio, S. (2019). What firms do: Gender inequality in linked employer-employee data. *Journal of Labor Economics*, forthcoming.
- Chattopadhyay, R. and Duflo, E. (2004). Women as policy makers: Evidence from a randomized policy experiment in India. *Econometrica*, 72(5):1409–1443.
- Corradini, V., Lagos, L., and Sharma, G. (2022). Collective bargaining for women: How unions can create female-friendly jobs. *IZA Discussion Paper No. 15552*.
- Cortes, P. and Pan, J. (2018). Occupation and gender. In Averett, S. L., Argys, L. M., and Hoffman, S. D., editors, *The Oxford Handbook of Women and the Economy*. Oxford University Press.
- Cubas, G., Juhn, C., and Silos, P. (2023). Coordinated work schedules and the gender wage gap. *The Economic Journal*, 133(651):1036–1066.
- Danzer, N., Garcia-Torres, S., Steinhardt, M. F., and Stella, L. (2023). Women in political power and school closure during COVID times. *IZA Discussion Paper No. 15975*.

- de Quinto, A., Hospido, L., and Sanz, C. (2021). The child penalty: Evidence from Spain. *SERIEs*, 12:585–606.
- Downs, A. (1957). An economic theory of political action in a democracy. *Journal of Political Economy*.
- Flabbi, L., Macis, M., Moro, A., and Schivardi, F. (2019). Do female executives make a difference? The impact of female leadership on gender gaps and firm performance. *The Economic Journal*, 129(622):2390–2423.
- Freeman, R. B. and Lazear, E. P. (1995). An economic analysis of works councils. In Rogers, J. and Streeck, W., editors, *Works councils: Consultation, representation, and cooperation in industrial relations*, pages 27–52. University of Chicago Press, Chicago, IL.
- Gallup, I. and ILO (2017). Towards a better future for women and work: Voices of women and men. *Gallup and the International Labour Organization, Technical report*.
- Ginja, R., Karimi, A., and Xiao, P. (2023). Employer responses to family leave programs. *American Economic Journal: Applied Economics*, 15(1):107–135.
- Goldin, C. (2014). A grand gender convergence: Its last chapter. *American Economic Review*, 104(4):1091–1119.
- Goldin, C. (2021). *Career and family: Women’s century-long journey toward equity*. Princeton University Press.
- Gorton, G. and Schmid, F. A. (2004). Capital, labor, and the firm: A study of German codetermination. *Journal of the European Economic Association*, 2(5):863–905.
- Harju, J., Jäger, S., and Schoefer, B. (2021). Voice at work. *NBER Working Paper No. 28522*.
- Hessami, Z. and da Fonseca, M. L. (2020). Female political representation and substantive effects on policies: A literature review. *European Journal of Political Economy*, 63:101896.
- Hirano, K., Imbens, G. W., and Ridder, G. (2003). Efficient estimation of average treatment effects using the estimated propensity score. *Econometrica*, 71(4):1161–1189.

- Hotz, V. J., Johansson, P., and Karimi, A. (2018). Parenthood, family friendly workplaces, and the gender gaps in early work careers. *NBER Working Paper No. 24173*.
- Jäger, S., Noy, S., and Schoefer, B. (2022a). Codetermination and power in the workplace. *Journal of Law and Political Economy*, 3(1).
- Jäger, S., Noy, S., and Schoefer, B. (2022b). What does codetermination do? *ILR Review*, 75(4):857–890.
- Jäger, S., Schoefer, B., and Heining, J. (2021). Labor in the boardroom. *The Quarterly Journal of Economics*, 136(2):669–725.
- Labanca, C. and Pozzoli, D. (2022). Constraints on hours within the firm. *Journal of Labor Economics*, 40(2):473–503.
- Lippmann, Q. (2022). Gender and lawmaking in times of quotas. *Journal of Public Economics*, 207:104610.
- Maida, A. and Weber, A. (2022). Female leadership and gender gap within firms: Evidence from an Italian board reform. *ILR Review*, 75(2):488–515.
- Malcomson, J. M. (1983). Trade unions and economic efficiency. *The Economic Journal*, 93(Supplement):51–65.
- Mas, A. and Pallais, A. (2017). Valuing alternative work arrangements. *American Economic Review*, 107(12):3722–59.
- Mora-Sanguinetti, J. S., Hospido, L., and Atienza-Maeso, A. (2023). Gender equality regulations: Quantifying non-discrimination regulations in Spain and their relationship with gender gaps in the labour market. *Banco de Espana Working Paper No. 2320*.
- Osborne, M. J. and Slivinski, A. (1996). A model of political competition with citizen-candidates. *The Quarterly Journal of Economics*, 111(1):65–96.
- Pande, R. (2003). Can mandated political representation increase policy influence for disadvantaged minorities? Theory and evidence from India. *American economic review*, 93(4):1132–1151.
- Schmutte, I. M. and Skira, M. M. (2023). The response of firms to maternity leave and sickness absence. *Journal of Human Resources*.

Smith, N. (2018). Gender quotas on boards of directors. *IZA World of Labor*.

Sorkin, I. (2017). The role of firms in gender earnings inequality: Evidence from the United States. *American Economic Review*, 107(5):384–387.

Online Appendix

A Institutional setting

In this section, we describe key features of the Spanish institutional setting that are relevant to our analysis. We focus on (i) how labor relationships are regulated in Spain, (ii) the collective bargaining system, (iii) how firm-level agreements are negotiated, and (iv) other laws aimed at addressing gender inequality.

A.1 Regulation of labor relationships

The higher-level regulation in charge of ordering labor relations in Spain is the *Workers' Statute*, first introduced in 1980 and modified on several occasions since then.⁹ The statute covers the most basic workers' rights such as the right to work and to free choice of profession, the right to freedom of association to form or join a labor union, the right to strike, and the right to collective bargaining, of the representatives of workers and employers, and whose main manifestation is the conclusion of *collective bargaining agreements*, rules of first magnitude in the labor relationship. The text also regulates the rights that emerge from signing a labor contract between a worker and an employer (e.g., right to receive a receipt of wages, maximum working hours, right to holidays, physical integrity, and an adequate occupational risk prevention policy, no discrimination, etc.) as well as obligations with the employer (e.g., following the employer's orders, as well as performing job-specific tasks, contributing to improved productivity and complying with health and safety measures).

In addition to rights and obligations, the Statute rules over the specifics of labor contracts such as the type of contract and the length as well as the firing procedures and severance payments. Moreover, it also establishes the situations when an individual can be absent from work without experiencing any substantial changes in their contract, i.e., parental leave, sickness, union, or employee representation functions, among others.

The workers' statute applies equally to all workers and employers in Spanish territory, without going into the detail of individual cases. In addition to this general law, collective bargaining agreements regulate the relations between companies and

⁹The statute was modified in 1984, 1994, 1997, 2001, 2006, 2010, 2012, and 2022.

their workers in specific sectors of geographical or functional areas. When negotiated, these agreements prevail over the workers' statute, since they tend to improve the conditions established in the former. It is important to note, that in 2012 the workers' statute experienced a substantial reform that critically affected collective agreements.¹⁰ In particular, collective bargaining agreements could no longer be extended for more than one year (no *ultraactivity*), and companies could, in extenuating circumstances, opt out and negotiate firm-level agreements that override higher-level ones.

¹⁰This reform also had a significant impact on employment protection legislation, reducing severance payments and making the rules for collective dismissals more flexible.

A.2 Collective bargaining agreements

A *collective bargaining agreement* (CBA) is the collective contract resulting from negotiations between workers' and employers' representatives. CBAs regulate the labor relations between workers and employers within the scope (or level) of the agreement. The representation of each party depends on the level of the agreement in higher-level agreements labor unions negotiate with employer associations, while in firm-level agreements the employer directly negotiates with employee representatives.

The duration of a CBA is agreed by the parties during the negotiations. Importantly, unless otherwise stated in the agreement, the CBA is automatically extended for periods of one year until a party wants to *denounce* the agreement.¹¹ Once one of the parties denounces the CBA, negotiations for a new agreement begin and they have one year to reach an understanding; if they fail to do so, the current CBA loses its validity, and a higher level CBA is in force.

A CBA may cover regions, sectors, periods, professions, etc., and combinations thereof. The Spanish labor market is characterized by two levels of CBAs: province-sector and firm-level. Importantly, more than one province-sector CBA can co-exist. However, while a firm can have its own CBA and be covered by province-sector CBA simultaneously, the firm cannot be covered by two different CBAs at the province-sector level. Since 2012, firms have had the option to opt out of parts of the CBA, especially those related to wages, hours, shifts, or the organization of labor. Circumstances in which they may opt out include economic and organizational reasons that affect the company's performance and may jeopardize its long-term economic prospects. However, the process is not immediate, as companies need to reach an agreement with workers' representatives, and, in case of discrepancy, an arbitrator can mediate to impose a binding agreement.

The CBA that applies depends on the subject and is regulated by law. The general rule is that higher-level agreements prevail over lower-level ones since they establish minimum labor standards to be complied with by all affected companies. However, for variables related to the remuneration package, such as salary, working hours, night shifts, professional classification, or organization, the company agreement takes precedence over the rest. It is important to note that, for the implementation of family-friendly policies, the firm-level agreement also prevails over higher-level CBAs.

¹¹In this context denunciation means that a party wants to negotiate a new agreement.

A.3 Representation in firm-level agreements

Two bodies are in charge of representing workers at the firm level depending on the size. In firms with less than 50 employees, *personnel delegates (PD)* are elected directly by the workforce in open lists and exercise representation jointly (i.e., there is veto power) on behalf of workers. On larger firms, *works councils (WC)* represent workers, whose members are elected by the workforce in close lists and exercise representation by majority rule. Once elected, works councils and personnel delegates are shielded by guaranties against actions on behalf of the employers. The most salient ones include the priority of permanency, no dismissal, or credit of hours.

How are representatives elected? Only trade unions or the majority of workers can promote elections to worker representatives, not the employer. Promoters have to give notice to the firm and the administration to start the process, once this is done, trade unions have access to administrative records to be able to move the elections forward. The mandate of elected representatives is for four years. If a representative leaves the company and produces a vacancy, then the vacancy is filled with the next one on the list in the case of works councils, or the vacancy is filled with the next worker with the most votes in the case of personnel delegates.

Apart from representing the workers, works councils and personnel delegates have the right to access information and be consulted. In particular, employee representatives

- has the right to be informed and consulted in managerial decisions that affect workers.
- has the right to know the balance sheet, income statement, and financial report. Also, it can access the contracts signed by the firm, and the penalties imposed on employees.
- can emit reports over workforce structure, workday reductions, location movement, training, organization, etc.
- execute tasks of invigilation of rules and norms, health and safety, equality treatment, etc.

The size of the works council depends on the size of the firm. Table A.1 shows the relation for each bin in the firm size distribution. Once the WC is set, it can be

increased, if the firm reaches a different bin and workers agree to it. Potentially, it can decrease as well, but it needs an agreement between the employer and the WC.

Table A.1: Number of representatives as a function of firm size

Firm size	Number of representatives
[50, 100]	5
[101, 250]	9
[251, 500]	13
[500, 750]	17
[751, 1000]	21
>1000	+21

Notes: The number of representatives in WC cannot vary for a given bin, so firms with 50 workers have the same number of representatives as those with 100, which is 5. For firms with more than 1000 workers, the size of the works council increases by 2 per each thousand or fraction. So, a firm with 2001 workers that has just set up a WC has 25 representatives. The maximum number of representatives is 75.

A.4 Government regulations related to families and women

In the period we analyzed, there is a nationwide law in place, that was enacted by the government in 2007, for the effective equality between women and men enacted in 2007 (*Ley 3/2007, de 22 de marzo*). The law establishes the minimum practices that firms need to comply with to promote gender equality. The law makes explicit the goal to achieve equality between women and men and provides precise mechanisms for firms to achieve such goals. The law also obliges firms of more than 50 workers to design, together with workers, binding equality plans to curb possible sources of discrimination. Related to family-friendly policies the law refers to other pieces of legislation such as the workers' statute, without directly addressing issues related to work-family balance. This means that while this law addresses gender equality family-balance policies are left to employers and trade unions to negotiate. Beyond this law, several regional governments also implemented laws to promote gender equality and work-family balance (see [Mora-Sanguinetti et al. \(2023\)](#) for more details on these regulations and their evolution over time). However, as discussed above, firm-level agreements can enhance (or add to) higher-level regulations established either in the workers' statute or sector-province CBAs. This suggests that if there is room for improvement, women's representation at the bargaining table can be critical to tackling gender inequality that is the consequence of a lack of work-family flexibility.

B Definition of negotiated policies

Below, we describe the workplace policies included in the dataset, along with the labels (in parentheses) we use in the main text.

Family-friendly clauses

Work-family balance (*time balance*). This variable identifies the introduction of work-family time balance measures such as granting leave days for the birth of a child, the death of a family member, paternity leave, wedding, house move, medical assistance, exams, renovation of documentation, etc.

Family care leave (*care leave*). Introduction of unpaid family care leaving measures. For instance, in cases of a child caring or a dependency of a family member.

Breastfeeding time (*breastfeeding*). Measures to facilitate breastfeeding either by allowing for working time flexibility, e.g. one-hour reduction during the working day, or the possibility to accumulate hours.

Paid permits for family circumstances (*paid permits*). Possibility of introducing paid leave or working day reduction (sponsored by the firm) for family circumstances among employees. For instance, in cases of a child caring or a dependency of a family member.

Gender-equality clauses

Equality at work (*equality*). Negotiation of policies to ensure the equality of men and women in the workplace. For example, the definition of an equality plan.

Equality of opportunities (*opportunities*). Measures to promote equality of opportunities for women in terms of payment, hiring, and promotions.

Preferential treatment of the minority sex (*positive discrimination*). Refers to the introduction of preferential measures in favor of the less represented sex, e.g. follow-up of the women ratio in hirings or promotions.

Prevention of sexual harassment (*anti-harassment*). Corresponds to any measure aimed at preventing sexual harassment at the workplace or protecting workers who were victims of gender violence. For example, by introducing specialized committees.

Gender-neutral clauses

Wage changes (*wages*). Indicator variable that reveals if wage variations have been negotiated.

Annual working hours (*working hours*). Parties have negotiated the official annual amount of working hours.

Overtime work (*overtime*). Situations in which overtime work has been negotiated such as reduction of overtime, maximum number of hours, the value of overtime, compensation of overtime, etc.

Paid holidays (*holidays*). Situations in which clauses related to holidays have been negotiated. For example, number of holidays in a year, bank holidays, etc.

C Supplementary material

C.1 Additional descriptive statistics

Table C.1: Women in collective agreements

A. Firm		
	Women's representation	Women's covered
2010	54.9	32.4
2011	50.9	32.9
2012	52.7	33.0
2013	55.4	35.9
2014	54.1	36.7
2015	51.6	36.2
2016	51.7	34.6
2017	52.7	35.3
2018	53.2	35.4
Total	53.0	35.1
B. Sector		
	Women's representation	Women's covered
2010	72.2	44.2
2011	66.8	40.4
2012	67.3	39.4
2013	70.1	42.3
2014	65.9	39.0
2015	68.6	42.6
2016	70.1	43.8
2017	74.0	40.8
2018	67.3	41.9
Total	69.2	41.5

Notes: The table describes the agreements with women representation as well as covered women over time. Panel A refers to firm-level agreements, while Panel B corresponds to sector(-province) agreements.

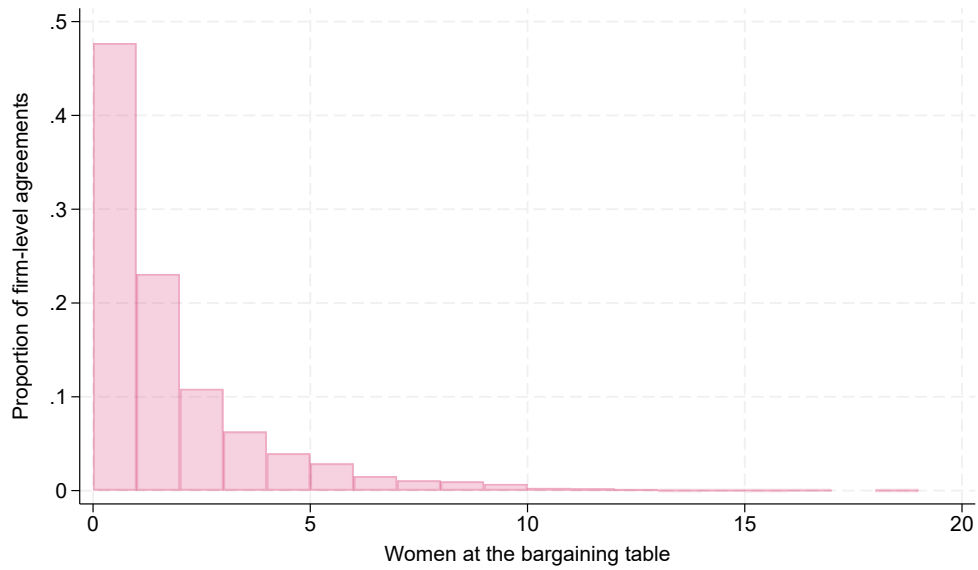
Table C.2: Collective agreements and negotiated policies

A. Firm													
	Family-friendly				Gender-equality				Gender-neutral				
	Time balance	Care leave	Breastfeeding	Paid permits	Equality	Opportunities	Positive discrimination	Anti-harassment	Wages	Working hours	Overtime	Holidays	
2010	33.3	22.2	48.1	50.0	25.9	20.4	9.3	33.3	75.9	77.8	24.1	94.4	
2011	31.6	15.8	38.5	51.8	23.9	20.2	6.1	26.3	97.6	76.1	26.7	93.5	
2012	36.8	17.0	47.8	51.9	28.9	18.2	2.8	29.9	98.4	82.1	19.2	95.0	
2013	31.7	17.5	45.1	50.1	21.9	20.3	6.1	33.3	98.6	81.5	19.8	95.2	
2014	32.5	15.4	41.6	49.8	24.3	26.6	6.2	31.8	97.7	80.3	21.6	95.1	
2015	35.0	18.0	51.6	51.3	31.0	30.7	6.9	38.9	93.5	81.4	24.8	95.1	
2016	37.9	19.7	53.8	54.7	32.5	27.6	6.6	34.8	92.9	84.6	19.4	96.9	
2017	33.0	18.0	53.8	52.5	31.3	25.5	5.5	41.3	91.0	85.8	20.5	97.3	
2018	34.3	18.6	53.6	54.9	29.1	28.4	7.2	39.2	88.2	86.9	22.9	97.1	
Total	34.0	17.7	48.4	52.0	27.6	24.4	6.0	34.7	94.5	82.4	21.5	95.7	
B. Sector													
	Family-friendly				Gender-equality				Gender-neutral				
	Time balance	Care leave	Breastfeeding	Paid permits	Equality	Opportunities	Positive discrimination	Anti-harassment	Wages	Working hours	Overtime	Holidays	
2010	43.8	24.6	46.4	59.4	20.1	25.0	9.8	26.8	81.7	68.8	24.1	92.0	
2011	42.9	21.0	45.4	60.2	24.0	27.1	11.0	29.0	96.5	72.7	20.0	95.3	
2012	43.5	20.2	45.3	58.6	28.6	28.8	9.6	33.1	97.8	68.6	17.4	93.9	
2013	44.1	18.5	46.0	54.1	29.0	28.6	10.4	30.9	95.8	71.6	16.5	93.1	
2014	44.1	19.2	46.4	54.9	28.6	28.5	10.1	32.8	94.0	73.2	15.8	94.2	
2015	43.3	21.1	48.7	54.8	30.3	31.0	10.5	36.2	65.0	74.0	15.6	94.3	
2016	43.6	20.0	47.9	60.7	32.9	35.0	13.8	37.9	63.3	74.0	12.9	96.4	
2017	43.6	20.0	49.2	60.0	33.2	33.7	12.0	39.6	62.8	73.9	15.1	95.4	
2018	43.1	21.5	50.5	59.2	30.8	32.5	11.2	36.9	64.8	73.8	17.1	95.1	
Total	43.6	20.1	47.3	57.5	29.8	30.6	11.1	34.5	80.3	72.6	16.2	94.6	

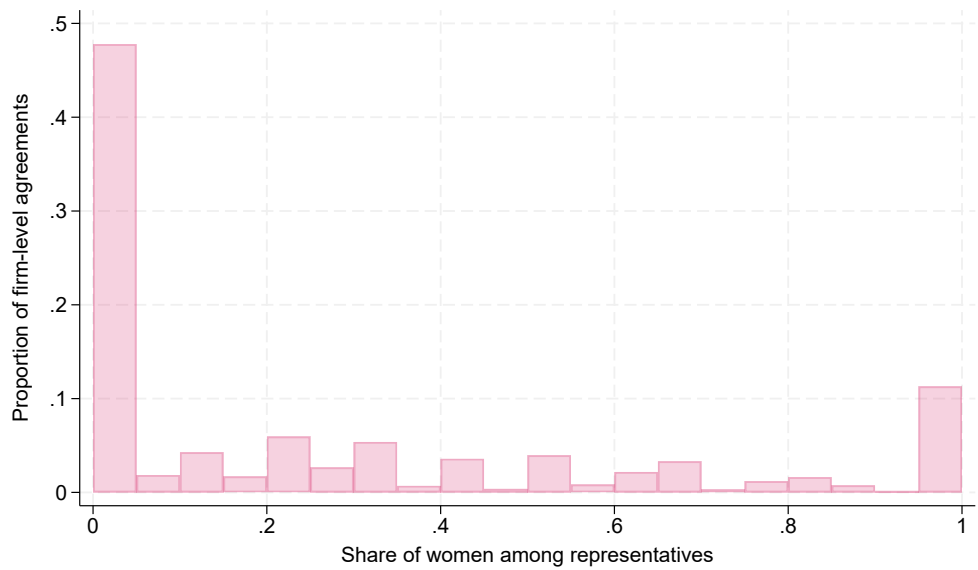
Notes: The table shows negotiated policies in each year by type of agreement. Panel A refers to firm-level agreements, while Panel B corresponds to sector(-province) agreements. Each column represents the share of agreements that have negotiated a specific policy in a given year. Appendix B defines each of the policies.

Figure C.1: Distribution of women at the bargaining table

(A) Number of women among representatives

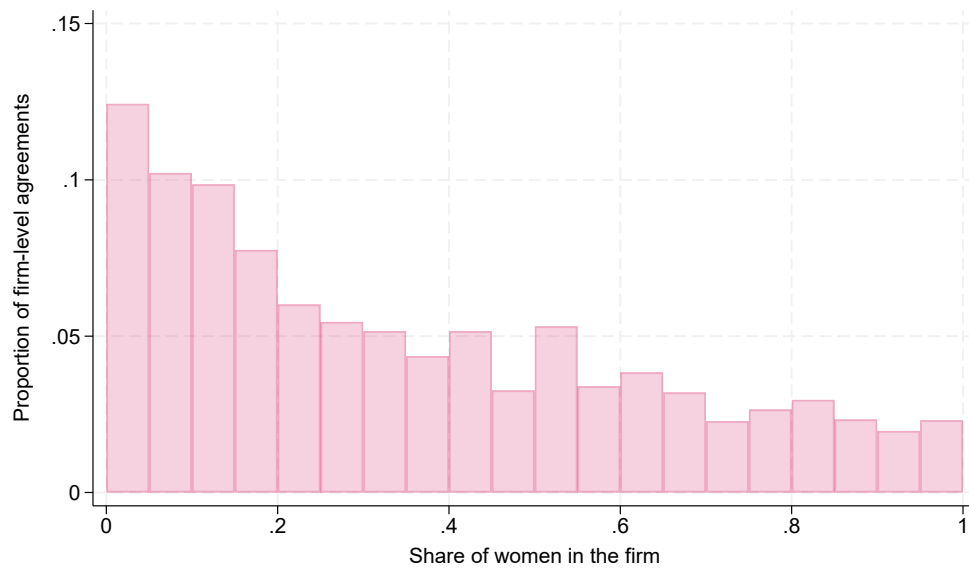


(B) Sex ratio at the bargaining table



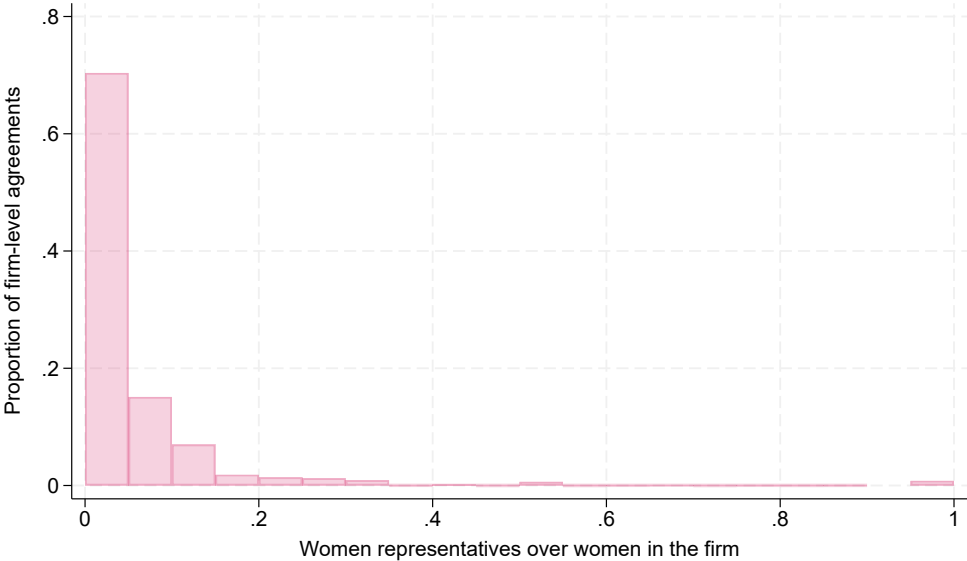
Notes: Panel A shows the distribution of the number of women at the bargaining table among firms signing a specific agreement. Panel B displays the the distribution among firm-level agreements of the share of women among employee representatives.

Figure C.2: Distribution of the share of women in the firm



Notes: The figure shows the distribution of the proportion of women in the total workforce among firms signing a specific agreement.

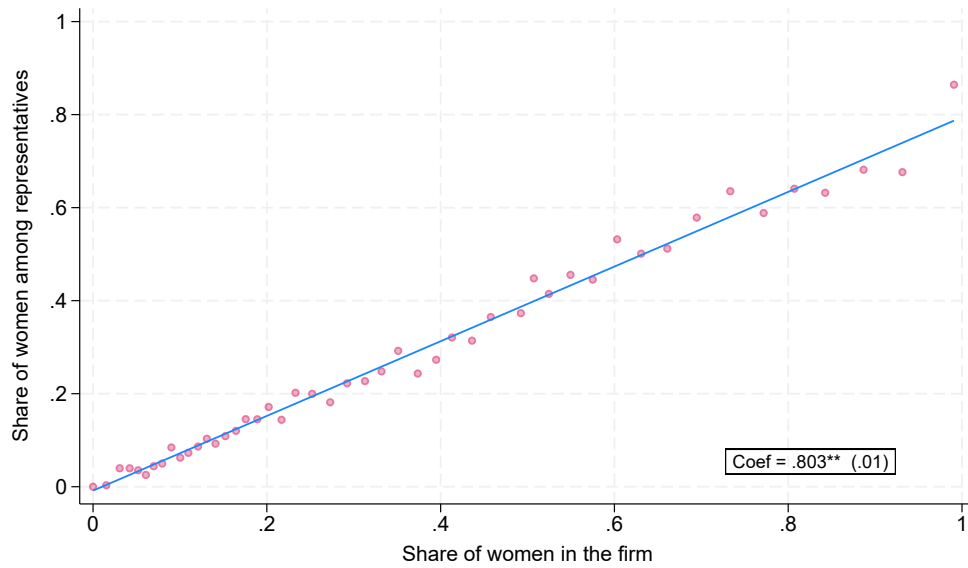
Figure C.3: Distribution of women representatives over women in the firm



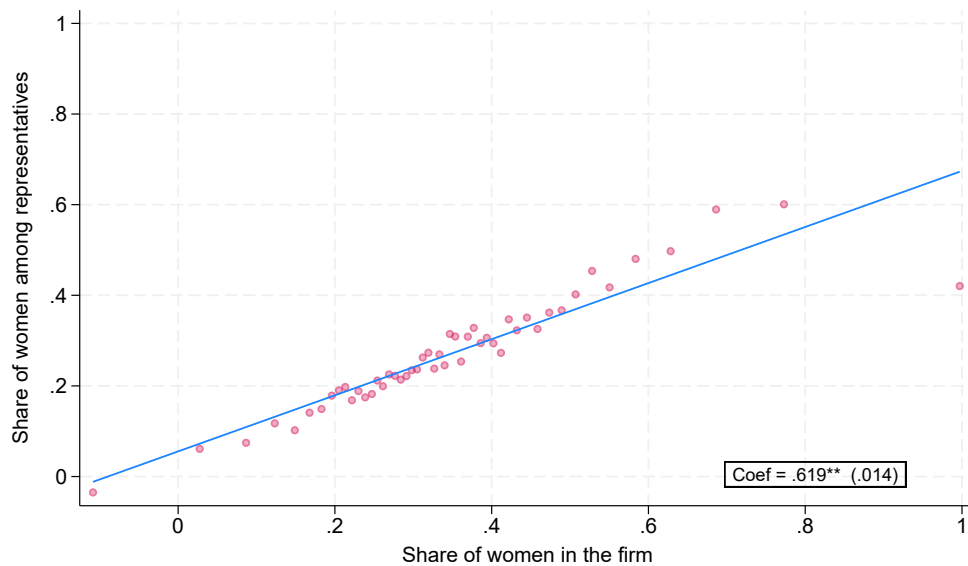
Notes: The figure shows the distribution across firm-level agreements of the ratio of women representatives to total women in the firm.

Figure C.4: Sex ratios at the bargaining table and in the workplace

(A) Unconditional correlation



(B) Conditional correlation



Notes: Panel A shows the unconditional correlation between the share of women among worker representatives at the bargaining table and the share of women in the workplace. Panel B shows the correlation between those two variables conditional on firm-level characteristics, i.e., ownership, size, location, and sector of activity.

Table C.3: Classification of sectors based on hours constraints within firms

Industry	Women	Hours constraints	Share of fix hours	Hours by employee	SD of employee hours
B0	0.10	Yes	0.68	1.83	0.68
C1	0.42	Yes	0.54	3.48	0.54
C2	0.18	Yes	0.57	3.69	0.57
C3	0.27	Yes	0.59	2.95	0.59
C4	0.31	Yes	0.55	3.52	0.55
C5	0.15	Yes	0.63	3.27	0.63
C6	0.12	No	0.51	4.51	0.51
C7	0.22	Yes	0.57	3.36	0.57
C8	0.22	Yes	0.59	3.39	0.59
D0	0.16	Yes	0.66	1.39	0.66
E0	0.20	No	0.49	3.64	0.49
F0	0.12	Yes	0.75	1.88	0.75
G1	0.34	Yes	0.56	3.13	0.56
G2	0.68	No	0.15	6.44	0.15
H1	0.21	No	0.47	4.15	0.47
H2	0.37	No	0.31	5.02	0.31
I0	0.60	No	0.30	5.98	0.30
J0	0.39	Yes	0.55	2.71	0.55
K0	0.47	Yes	0.52	2.50	0.52
L0	0.48	No	0.50	3.65	0.50
M0	0.51	No	0.48	3.36	0.48
N0	0.57	No	0.27	6.13	0.27
O0	0.52	No	0.48	2.39	0.48
P0	0.61	No	0.16	7.12	0.16
Q0	0.75	No	0.30	4.54	0.30
R0	0.44	No	0.35	6.08	0.35
S0	0.53	No	0.41	4.52	0.41

Source: 2010 Spanish Structure of Earnings Survey. Notes: Hours refers to normal weekly working hours in the reference week of October 2010. Share of fixed hours is the proportion of firms with coordinated work schedules, i.e. the standard deviation of hours worked by their employees is zero. SD of employee hours represents the average firm-level standard deviation of hours worked. Hours per employee refers to the average number of hours worked per employee.

Industry codes composition

- **B0:** Extractive Industries - Anthracite, coal, lignite extraction; crude oil and natural gas extraction; metallic mineral extraction; other extractive industries; support activities for extractive industries.
- **C1:** Manufacturing Industry - Food, beverage, tobacco industry; textile, clothing, leather, and footwear industry.
- **C2:** Manufacturing Industry - Wood and cork industry, except furniture; basketry and wickerwork; paper industry.
- **C3:** Manufacturing Industry - Graphic arts and reproduction of recorded media.
- **C4:** Manufacturing Industry - Coking, petroleum refining; chemical industry; pharmaceutical industry; rubber and plastic products manufacturing.
- **C5:** Manufacturing Industry - Manufacturing of other non-metallic mineral products.

- **C6:** Manufacturing Industry - Metallurgy; manufacturing of iron, steel, ferroalloys; manufacturing of metallic products, except machinery and equipment.
- **C7:** Manufacturing Industry - Manufacturing of computer, electronic, and optical products; manufacturing of electrical equipment; manufacturing of machinery and equipment not elsewhere classified.
- **C8:** Manufacturing Industry - Manufacturing of motor vehicles, trailers, and semitrailers; manufacturing of other transport equipment; manufacturing of furniture; other manufacturing industries; repair and installation of machinery and equipment.
- **D0:** Supply of Electricity, Gas, Steam, and Air Conditioning.
- **E0:** Supply of Water, Sanitation Activities, Waste Management, and Decontamination - Water extraction, purification, distribution; wastewater collection, treatment, and disposal; waste recovery, decontamination activities; other waste management services.
- **F0:** Construction - Building construction; civil engineering; specialized construction activities.
- **G1:** Wholesale and Retail Trade; Repair of Motor Vehicles and Motorcycles - Sale and repair of motor vehicles and motorcycles; wholesale and intermediaries of trade, except for motor vehicles and motorcycles.
- **G2:** Wholesale and Retail Trade; Repair of Motor Vehicles and Motorcycles - Retail trade, except for motor vehicles and motorcycles.
- **H1:** Transport and Storage - Land and pipeline transport; maritime and inland waterway transport; air transport.
- **H2:** Transport and Storage - Storage and activities related to transport; postal and courier activities.
- **I0:** Hospitality - Accommodation services; food and beverage services.
- **J0:** Information and Communications - Publishing, film, video, television program activities; sound recording, music editing; programming, consultancy, and other computer-related activities; information services.

- **K0:** Financial and Insurance Activities - Financial services, except insurance and pension funds; insurance, reinsurance, and pension funds, except mandatory social security; auxiliary activities to financial services and insurance.
- **L0:** Real Estate Activities.
- **M0:** Professional, Scientific, and Technical Activities - Legal and accounting activities; headquarters activities; business management consultancy; architectural and engineering technical services; testing and technical analysis; research and development; advertising and market research; other professional, scientific, and technical activities; veterinary activities.
- **N0:** Administrative and Support Service Activities - Rental activities; employment-related activities; travel agency activities; security and investigation activities; building and gardening activities; office administrative activities; other auxiliary business activities.
- **O0:** Public Administration and Defense; Compulsory Social Security.
- **P0:** Education.
- **Q0:** Health and Social Services Activities - Health activities; assistance in residential facilities; social services activities without accommodation.
- **R0:** Arts, Entertainment, and Recreation - Artistic and entertainment activities; library, archive, museum, and other cultural activities; gambling and betting activities; sports, recreational, and entertainment activities.
- **S0:** Other Services - Associative activities; computer repair; repair of personal and household goods; other personal services.

C.2 Robustness checks

Table C.4: Women’s voice and workplace policies: Using year of validity

A. Family-friendly				
	Time balance	Care leave	Breastfeeding	Paid permits
WRep	0.0537 (0.0216)	0.0689 (0.0201)	0.0996 (0.0246)	0.0414 (0.0204)
Observations	9,029	9,029	9,029	9,029
R-squared	0.7850	0.7358	0.7890	0.7633
B. Gender-equality				
	Equality	Opportunities	Positive discrimination	Anti-harassment
WRep	0.0261 (0.0197)	0.0331 (0.0193)	0.0038 (0.0159)	0.0357 (0.0207)
Observations	9,029	9,029	9,029	9,029
R-squared	0.7545	0.7501	0.7221	0.7656
C. Gender-neutral				
	Wages	Working hours	Overtime	Holidays
WRep	0.0119 (0.0152)	0.0241 (0.0211)	0.0162 (0.0158)	-0.0039 (0.0101)
Observations	9,029	9,029	9,029	9,029
R-squared	0.8047	0.7781	0.7091	0.7369

Notes: All columns refer to linear probability models following Equation (1) using alternative workplace policies as the dependent variable. Appendix B defines each of the policies used as the dependent variable. WRep is an indicator variable identifying firm-level agreements negotiated with at least a woman among workers’ representatives at the bargaining table. All specifications include indicators for firms with 50 or more employees, those with more than 50% of the workforce being women, firm ownership (private vs public), whether all workers’ representatives signed the agreement or not, and whether the firm is negotiating an agreement for the first time or not, as well as year×sector×province fixed effects. Standard errors clustered at the province×sector level in parenthesis.

Table C.5: Women’s voice and workplace policies: CBA scope

A. Family-friendly				
	Time balance	Care leave	Breastfeeding	Paid permits
WRep	0.0617 (0.0154)	0.0561 (0.0137)	0.0881 (0.0164)	0.0441 (0.0150)
Observations	9,029	9,029	9,029	9,029
R-squared	0.5191	0.4299	0.5399	0.4709
B. Gender-equality				
	Equality	Opportunities	Positive discrimination	Anti-harassment
WRep	0.0343 (0.0133)	0.0516 (0.0153)	-0.0021 (0.0110)	0.0465 (0.0148)
Observations	9,029	9,029	9,029	9,029
R-squared	0.4816	0.4433	0.4141	0.4938
C. Gender-neutral				
	Wages	Working hours	Overtime	Holidays
WRep	0.0214 (0.0113)	0.0101 (0.0141)	0.0021 (0.0122)	0.0008 (0.0067)
Observations	9,029	9,029	9,029	9,029
R-squared	0.4976	0.5479	0.4055	0.4097

Notes: All columns refer to linear probability models following Equation (1) using alternative workplace policies as the dependent variable. Appendix B defines each of the policies used as the dependent variable. WRep is an indicator variable identifying firm-level agreements negotiated with at least a woman among workers’ representatives at the bargaining table. All specifications include indicators for firms with 50 or more employees, those with more than 50% of the workforce being women, firm ownership (private vs public), whether all workers’ representatives signed the agreement or not, and whether the firm is negotiating an agreement for the first time or not, as well as year and sector×province fixed effects. Standard errors clustered at the province×sector level in parenthesis.

Table C.6: Women's voice and workplace policies: Three-way FE

A. Family-friendly				
	Time balance	Care leave	Breastfeeding	Paid permits
WRep	0.0745 (0.0139)	0.0487 (0.0114)	0.0909 (0.0145)	0.0543 (0.0132)
Observations	9,029	9,029	9,029	9,029
R-squared	0.2480	0.1733	0.2454	0.1983
B. Gender-equality				
	Equality	Opportunities	Positive discrimination	Anti-harassment
WRep	0.0431 (0.0118)	0.0548 (0.0133)	-0.0001 (0.0093)	0.0525 (0.0134)
Observations	9,029	9,029	9,029	9,029
R-squared	0.2142	0.1631	0.1579	0.2016
C. Gender-neutral				
	Wages	Working hours	Overtime	Holidays
WRep	0.0104 (0.0096)	0.0241 (0.0123)	0.0094 (0.0107)	0.0021 (0.0064)
Observations	9,029	9,029	9,029	9,029
R-squared	0.2940	0.2810	0.1277	0.1016

Notes: All columns refer to linear probability models following Equation (1) using alternative workplace policies as the dependent variable. Appendix B defines each of the policies used as the dependent variable. WRep is an indicator variable identifying firm-level agreements negotiated with at least a woman among workers' representatives at the bargaining table. All specifications include indicators for firms with 50 or more employees, those with more than 50% of the workforce being women, firm ownership (private vs public), whether all workers' representatives signed the agreement or not, and whether the firm is negotiating an agreement for the first time or not, as well as *three separate* fixed effects for year, sector of activity, and province. Standard errors clustered at the province×sector level in parenthesis.

Table C.7: Women’s voice and workplace policies: IPW

A. Family-friendly				
	Time balance	Care leave	Breastfeeding	Paid permits
WRep	0.0570 (0.0257)	0.0640 (0.0232)	0.1345 (0.0292)	0.0658 (0.0203)
Observations	8,470	8,470	8,470	8,470
R-squared	0.8039	0.7675	0.8084	0.7948
B. Gender-equality				
	Equality	Opportunities	Positive discrimination	Anti-harassment
WRep	0.0152 (0.0237)	0.0315 (0.0223)	0.0004 (0.0155)	0.0324 (0.0237)
Observations	8,470	8,470	8,470	8,470
R-squared	0.7766	0.7687	0.7474	0.7855
C. Gender-neutral				
	Wages	Working hours	Overtime	Holidays
WRep	-0.0122 (0.0155)	0.0413 (0.0283)	0.0027 (0.0149)	0.0003 (0.0090)
Observations	8,470	8,470	8,470	8,470
R-squared	0.8371	0.7904	0.7557	0.7602

Notes: Inverse probability weighting regressions. The weights are predicted probabilities from a logit regression for the likelihood of having a woman representative at the bargaining table as a function of firm-level characteristics (firm size, sex ratio, ownership, sector, and location) together with the labor union affiliation of elected representatives. All columns refer to linear probability models following Equation (1) using alternative workplace policies as the dependent variable. Appendix B defines each of the policies used as the dependent variable. WRep is an indicator variable identifying firm-level agreements negotiated with at least a woman among workers’ representatives at the bargaining table. All specifications include indicators for firms with 50 or more employees, those with more than 50% of the workforce being women, firm ownership (private vs public), whether all workers’ representatives signed the agreement or not, and whether the firm is negotiating an agreement for the first time or not, as well as year \times sector \times province and firm fixed effects. Standard errors clustered at the province \times sector level in parenthesis.

Table C.8: Women’s voice and workplace policies: Within firm variation

A. Family-friendly				
	Time balance	Care leave	Breastfeeding	Paid permits
WRep	0.0610 (0.0330)	0.0516 (0.0284)	0.1534 (0.0365)	0.0621 (0.0280)
Observations	9,029	9,029	9,029	9,029
R-squared	0.9090	0.8953	0.9131	0.8964
B. Gender-equality				
	Equality	Opportunities	Positive discrimination	Anti-harassment
WRep	0.0333 (0.0282)	0.0308 (0.0226)	0.0039 (0.0228)	0.0363 (0.0279)
Observations	9,029	9,029	9,029	9,029
R-squared	0.8875	0.8898	0.8461	0.9078
C. Gender-neutral				
	Wages	Working hours	Overtime	Holidays
WRep	0.0045 (0.0172)	0.0667 (0.0260)	0.0013 (0.0184)	0.0097 (0.0092)
Observations	9,029	9,029	9,029	9,029
R-squared	0.9374	0.8957	0.8773	0.9138

Notes: Firm fixed-effects regressions. All columns refer to linear probability models following Equation (1) using alternative workplace policies as the dependent variable. Appendix B defines each of the policies used as the dependent variable. WRep is an indicator variable identifying firm-level agreements negotiated with at least a woman among workers’ representatives at the bargaining table. All specifications include indicators for firms with 50 or more employees, those with more than 50% of the workforce being women, firm ownership (private vs public), whether all workers’ representatives signed the agreement or not, and whether the firm is negotiating an agreement for the first time or not, as well as year×sector×province and firm fixed effects. Standard errors clustered at the province×sector level in parenthesis.