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# Lawful Progress: Unveiling the Laws That Reshape Women's Work Decisions

Anna Fruttero, Diego B. P. Gomes, and Nishtha Sharma

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WORKING PAPER

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Strategy, Policy and Review Department

**Lawful Progress: Unveiling the Laws That Reshape Women's Work Decisions**

Prepared by Anna Fruttero\*, Diego B. P. Gomes†, and Nishtha Sharma‡

Authorized for distribution by Stefania Fabrizio

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**ABSTRACT:** This paper examines the impact of women's legal rights on labor force participation decisions made by women and men through a granular analysis of 35 gendered laws. Building on previous literature, it departs from the analysis using aggregate indices due to concerns about (i) the usability of an index for policymaking purposes, (ii) the economic interpretation of an index's average marginal effects, (iii) and the implicit assumption of homogeneous effects underlying regressions with an index. The findings identify nine key laws that can foster female labor force participation. Notably, laws related to household dynamics and women's agency within the family, such as divorce and property rights laws, and laws regarding the ability of women to travel outside the home, are especially important in influencing their decision to work. The paper also shows that improving women's legal rights does not improve their labor force participation through a substitution effect as it has no systematic negative effect on men's labor force participation.

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WORKING PAPERS

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Prepared by Anna Fruttero, Diego B. P. Gomes, and Nishtha Sharma<sup>1</sup>

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# I. Introduction

According to the World Bank's Women, Business and the Law (WBL) 2023 report (World Bank Group, 2023), around 2.4 billion working-age women live in economies that do not grant them the same rights as men. Legal barriers in 176 countries hinder their full participation in the economy. Comparatively, women globally enjoy only 77 percent of the legal rights that men do, indicating that achieving complete legal equality is still a distant goal. According to the report, at the current pace of reform, it would take at least 50 years to reach legal gender equality everywhere.

The global scenario has prompted extensive research on the relationship between gendered laws and economic outcomes.<sup>1</sup> Most studies commonly employ indices, such as the overall WBL index, to measure legal gender inequality. Hyland and others (2020) document statistically significant and positive correlations between the overall WBL index and more equitable labor market outcomes, including higher female labor force participation (LFP) and a smaller gender wage gap. Hyland and others (2021) further document that greater legal gender equality is associated with a smaller gender gap in opportunities and outcomes, fewer female workers in vulnerable jobs, and increased political representation for women. Sever (2022a) shows that legal gender equality helps countries bridge the gender gap in LFP, increasing it overall. Additionally, Sever (2022b) finds that greater gender equality in the law fosters income convergence across countries over time. Tertilt and others (2022) summarize the political-economy mechanisms that link economic development to changes in women's rights using four indices derived from the WBL database and show empirically that these mechanisms account for a large share of the variation in women's rights across countries and over time.

While these findings are valuable in highlighting the significance of legal gender equality, this paper departs from using indices for three reasons. First, results from indices lack specificity regarding the effectiveness of specific laws. The overall WBL index combines 35 legal indicators related to women's rights, making it challenging to determine which laws positively impact economic outcomes and to what extent. Second, the average marginal effects of an index lack economic interpretation. In an empirical setting, it is essential to consider not only the sign of the estimates but also their magnitude and the lessons that can be drawn from their value. Third, there is an implicit assumption of homogeneous effects from its components in regressions with an index. This strong premise can be tested and is unlikely to be true. These limitations pose important questions for lawmakers, as indices themselves are not actionable, whereas targeted changes to specific laws can yield tangible effects on gender equality and economic empowerment.

Consequently, this paper conducts a comprehensive analysis of all legal indicators in the WBL database. Using a unified empirical framework, it assesses the impact of each law on female LFP rates. Furthermore, our research also delves into the correlation between legal gender indicators and male LFP rates. The aim is to identify laws that enhance female LFP while preserving male LFP, ultimately narrowing the gender gap in the labor force and an overall increase in LFP. In addition to gaining from the untapped human capital potential, higher female LFP can yield positive social and health outcomes for them and the next generation (Cuberes and Teignier, 2016; Duflo, 2012).

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<sup>1</sup> The term "gendered laws" refers to legislation that promotes gender equality by strengthening women's legal rights in comparison to men.

Data come from the WBL database, the International Labour Organization (ILO), and the World Bank's World Development Indicators (WDI). The WBL database is a comprehensive resource offering legal information on gender disparities in rights across 190 countries, spanning aspects like mobility, workplace conditions, pay, marriage, parenthood, entrepreneurship, assets, and pensions. It is a valuable tool for objectively measuring global progress towards gender legal equality and understanding the relationship between female LFP and gender legal discrimination. The ILO data provide LFP rates of individuals aged 25 to 54, utilizing both modeled and national estimates. Data on real GDP per capita come from the WDI. To ensure consistency and avoid anomalies related to the COVID-19 pandemic, the analysis uses data up to 2019.

Methodologically, the paper employs fixed-effects panel regression models estimated by ordinary least squares (OLS) to examine the relationship between LFP rates of women and men and gender-related laws. The main variables of interest are the 35 law indicators in the WBL database. Controls for potential confounding factors are done through country-fixed effects, year-fixed effects, and log of real GDP per capita. Our primary objective is to better understand the impact of specific laws by performing a more granular analysis of the effects of each law. The recommendations prioritize laws that promote equality, positively influencing female LFP while not adversely affecting male LFP.

The relationship between different laws and female LFP is heterogeneous. Among the 35 laws examined, only 9 showed statistically significant and positive associations with female LFP. Women's agency and role within the family can significantly hinder their participation in the labor market. Among the nine laws, five related to household dynamics were positively correlated with female LFP rates. Notably, the laws with the highest coefficient were the right to obtain a divorce and the right to remarry. These rights have gradually become more gender-equal worldwide, although some countries (around 30 percent and 40 percent, respectively) still do not grant women these rights.

The results in this paper provide global evidence highlighting promising laws that can enhance female LFP, serving as a starting point for countries aiming to achieve this goal. Consistent with previous research, our results show that improving women's legal rights reduces the gender gap in LFP rates through improved female participation only, without reducing men's participation (Sever, 2022a; Gonzales and others, 2015). However, governments should assess these laws based on their country-specific norms and their associated implementation costs. Moreover, while this paper focuses on the labor market impact of legal gender equality, there are other valuable considerations as well to improve women's rights. For example, a lack of laws protecting women from workplace harassment and domestic violence are human rights violation and arguably have welfare implications warranting policymakers' attention regardless of their direct impact on labor market or other economic outcomes.

The insights in this paper are derived from an analysis of legal measures (*de jure*); however, it is essential to recognize that the real-world implementation (*de facto*) may pose challenges. Previous research has delved into strategies for implementing legal gender equality, taking cultural norms into account, and examining case studies from six countries that have effectively narrowed the gender gap in their laws, either by reducing previously existing legal impediments or introducing new laws that strengthen the rights of women (Christopherson and others, 2022). Additionally, to gain a comprehensive global understanding of the relationship between women's legal rights and their economic participation, the World Bank is actively collecting additional data on the implementation of gender equality laws. This ongoing effort will significantly enhance our knowledge and insights in this domain.

The rest of this paper is structured as follows. Section 2 describes the data used, Section 3 details our empirical methods, and Section 4 discusses the results. Section 5 discusses legal considerations and directions for future research on the global issue of women's economic opportunities and outcomes. Section 6 concludes.

## II. Data Description

The WBL database is the primary source of legal information about women's rights. The WBL data measure laws and regulations across 190 countries in eight areas impacting women's economic participation: mobility, workplace, pay, marriage, parenthood, entrepreneurship, assets, and pensions. The data range from 1971 to 2022 (calendar years 1970 to 2021) and provide objective and measurable benchmarks for global progress toward gender legal equality. By providing a comprehensive and balanced panel dataset of indicators on women's rights, the WBL database is an essential source of information for researching the interaction between women's LFP and legal gender discrimination. For additional and more detailed information, the reader can consult the official WBL website: <https://wbl.worldbank.org/en/wbl>.

The ILO provides data on labor force participation rates. The analysis focuses on individuals in the prime age range (ages 25 to 54), who are most likely to be attached to the labor force. From 1990 onwards, the data come from the ILO Modelled Estimates, which provide an annual balanced panel comprised of a diverse group of countries. This sample is supplemented with national estimates data for years prior to 1990. To avoid dealing with labor market anomalies related to the COVID-19 pandemic, the analysis uses data up to 2019. Finally, real GDP per capita data come from the WDI database.

## III. Empirical Methods

The paper uses fixed-effects panel regression models estimated by OLS to study the relationship between labor force participation rates and gender-related laws. The primary goal is to identify relevant laws for labor force participation and to decompose the effects of the overall WBL index into the effects of its specific law components. Therefore, the main independent variables of interest are the overall WBL index and the 35 law indicators available in the WBL dataset. Controls for potential confounding factors are (i) country fixed effects to capture unobservable factors that vary across countries but that remain constant over time; (ii) year fixed effects to account for possible global trends that may affect the dependent variables; and (iii) the logarithm of real GDP per capita to capture countries' level of development over time.<sup>2</sup> The independent variables and the GDP control are measured with a three-year lag to allow for a plausible slow transition from *de jure* measures to *de facto* outcomes and to minimize concerns about simultaneity bias.<sup>3</sup> Finally, standard errors in all regressions have been clustered at the country level to avoid potential issues due to heteroskedasticity or within-panel serial correlation in the residuals.

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<sup>2</sup> GDP per capita is well recognized to correlate with a wide range of important variables and is quite well populated in the data. Using it as the sole control that varies across both countries and years is a suitable compromise between robust controlling and large sample size.

<sup>3</sup> A sensitivity analysis was performed to ensure the lag selection did not influence the results, using lags of one and two years. The outcomes did not change significantly.

Let  $P_{k,i,t}$  denote the indicator that is equal to one if law  $k$  is implemented in country  $i$  in year  $t$ , and is equal to zero otherwise. Let  $I_{i,t}$  denote the overall index calculated as the mean of all law indicators for each country-year pair. Then, the index can be formally defined as

$$I_{i,t} = \frac{1}{35} \sum_{k=1}^{35} P_{k,i,t}. \quad (1)$$

Let  $y_{i,t}$  denote the outcome variable of interest (LFP rates for women, men, and the gender gap) at country  $i$  in year  $t$ ,  $X_{i,t}$  the logarithm of real GDP per capita,  $\lambda_i$  country fixed effects, and  $\theta_i$  year fixed effects. Then, the regression specifications can be written as

$$y_{i,t} = \alpha + \beta I_{i,t-3} + \gamma X_{i,t-3} + \lambda_i + \theta_i + e_{i,t}, \quad (2)$$

$$y_{i,t} = \alpha_k + \beta_k P_{k,i,t-3} + \gamma_k X_{i,t-3} + \lambda_{k,i} + \theta_{k,i} + e_{k,i,t}, \quad (3)$$

where  $e_{i,t}$  and  $e_{k,i,t}$  are the error terms. The second regression is estimated separately for each law indicator, so its coefficients are indexed by the respective law. Let  $\hat{\beta}$  and  $\hat{\beta}_k$  denote the estimated coefficients by OLS. Annex I contains the explanation of how the index estimate equals a weighted sum of the estimates of the specific laws, that is,

$$\hat{\beta} = \sum_{k=1}^{35} w_k \hat{\beta}_k, \quad (4)$$

where  $w_k$  are positive weights that do not necessarily sum to one. We refer to  $\hat{\beta}_k$  as the “legal betas” and to  $w_k \hat{\beta}_k$  as the “weighted betas” for each law.

## IV. Empirical Findings

The associations between the aggregate WBL Index and female and male LFP rates, as well as the gap between them, are reported in Subsection 4.1. Subsequently, an indicator-by-indicator analysis is conducted to identify the most relevant legal rights for women’s decision to work (Subsection 4.2).

### A. Index Level Analysis

Table 1 reports the estimated association between the aggregate WBL index and LFP rates. The index is positively associated with female LFP, and this association is highly statistically significant. The index’s relationship with male LFP is also positive, though its estimate is much lower than that of women’s and highly uncertain. As a result, the gender gap, measured as male LFP rate minus female LFP rate, is negatively associated with the index, and this association is statistically significant. In summary, female LFP rates respond more strongly to changes in the WBL index than male LFP rates, and as the index rises, the gender gap narrows.



**Table 1. Regression Results for the WBL Index**

	Women	Men	Gender Gap
WBL index	0.110*** (0.042)	0.018 (0.017)	-0.092** (0.041)
<i>N</i>	5,512	5,512	5,512
<i>R</i> <sup>2</sup>	0.536	0.156	0.609

Notes: The gender gap is calculated as the male LFP rate minus the female LFP rate. All regressions control for the three-year lag of the logarithm of real GDP per capita and include country and year fixed-effects. Robust standard errors are reported in parentheses and are clustered at the country level. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

However, these estimates are not economically significant at face value because the average marginal effect of an index composed of the average of multiple indicators has no direct economic interpretation. A more useful metric is the average marginal effect of passing one more law. The estimates in Table 1 can be used to calculate this. By dividing these estimates by 35, the number of law indicators in the index, we get the average marginal effect on the LFP rates (or gender gap) of enacting one additional law, though we don't know which one.<sup>4</sup> In other words, this calculation implicitly assumes that all laws are equally associated with the outcome variables (homogeneous effects), a strong assumption that will be tested in the following subsection.

Applying this logic to the results of Table 1, we get that enacting one additional law increases female LFP rates by only 0.31 percentage points and decreases gender gaps by only 0.26 percentage points on average. Although these findings are statistically significant, their magnitudes are small, not conveying an encouraging message about the gendered laws' pass-through to higher female LFP and, as a result, reduced gender gaps in LFP rates. This raises the concern of how useful and accurate it is to use the index to understand the relationship between gendered laws and labor market outcomes for women.

## B. Analysis of Specific Laws

This section shows the results from taking a more granular approach and looking at the specific effects of each of the WBL index's 35 laws. Figure 1 presents the estimated coefficients of all 35 law indicators when regressed on female LFP rates (Annex II contains detailed regression results). The laws are sorted by the point estimates, with the highest at the top and the lowest at the bottom. The results are color and shape coded as follows: (i) gray squares represent estimates that are not statistically significant; (ii) blue dots represent estimates that are significant and positively related to female LFP rate; and (iii) red triangles represent estimates that are significant and negatively related to female LFP rate. The statistical significance criterion used is the 95 percent confidence interval not crossing zero.

<sup>4</sup> Using the index definition from equation (1) and the index estimates from regression (2), the average marginal effect of having one additional law  $k$  is calculated as follows:

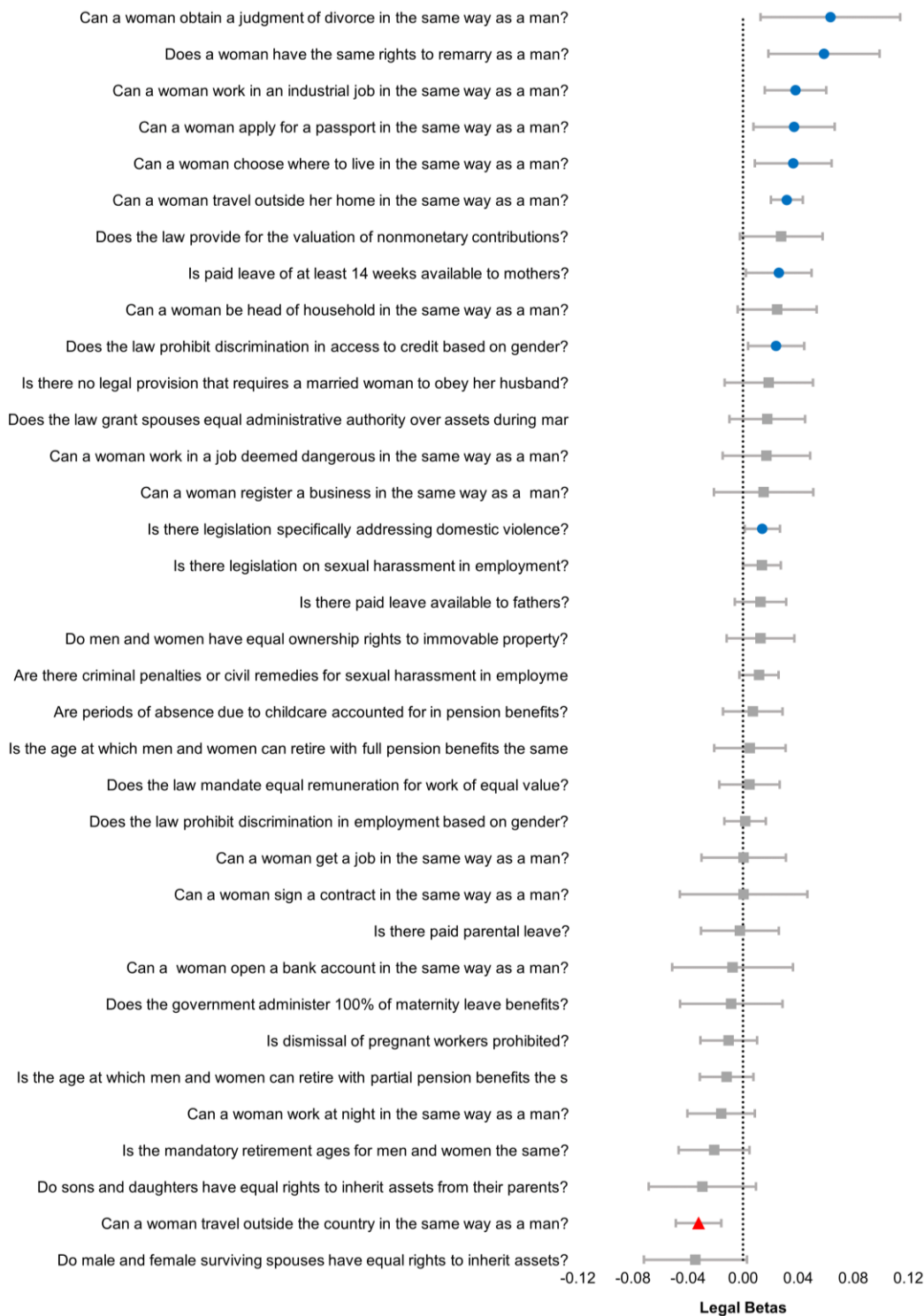
$$AME_k = E(\hat{y}_{i,t} | P_{k,i,t-3} = 1) - E(\hat{y}_{i,t} | P_{k,i,t-3} = 0) = E(\hat{\beta} I_{i,t-3} | P_{k,i,t-3} = 1) - E(\hat{\beta} I_{i,t-3} | P_{k,i,t-3} = 0) = \hat{\beta} / 35,$$

where the first equality comes from the definition of average marginal effects, the second equality comes from the definition of the fitted values for the outcome variable, and the third and last equality comes from the index definition and the conditional expectations conditionalities.

The heterogeneity of estimates is remarkable. The point estimates range from -3.5 to 6.3 percentage points, with significant uncertainty surrounding many coefficients. Of the 35 laws, 25 are not significantly related to female LFP rates, although many of these laws present reasonable positive or negative estimates. Among the ten significant laws, 9 are positively related to female LFP rates. For example, the most positively correlated law is allowing women to obtain a judgment of divorce in the same way as men (the first blue dot). The passage of such legislation is expected to increase female LFP rates by 6.3 percentage points on average. On the other hand, having legislation explicitly addressing domestic violence is the least positively correlated law (last blue dot). Passing this law is associated with an average increase in female LFP rates of 1.4 percentage points. Interestingly, allowing women to travel outside the country in the same way as men is negatively correlated with female LFP rates (the only red triangle). We discuss the likely mechanisms underlying these results in the next section.

The analysis at the legislation level is essential to comprehending why the WBL index results are so mild. Result (4) demonstrates that the index estimates are influenced not only by the wide range of law estimates but also by the way these law estimates are intrinsically weighted. Figure 2 plots all the 35 estimated law coefficients (horizontal axis) versus their respective weights (vertical axis). The regression line clearly shows no systematic relationship between the estimated coefficients and their weights. In other words, it is impossible to conclude, for instance, that the WBL index estimate will be more heavily weighted toward laws with higher and positive estimates. For example, allowing women to obtain a judgment of divorce in the same way as men has the highest point estimate (red diamond on the right), but its weight is very small compared to the others. As a result, the law that appears to be the most relevant regarding female LFP contributes very little to the final estimate of the WBL index. On the other hand, having a law that prohibits employment discrimination based on gender (red diamond on the top) has a near-zero point estimate but is heavily weighted on the final WBL index estimate. Overall, the index's final estimates do not always accurately reflect the impact of the most important laws.

**Figure 1. Legal Betas, Female LFP Rate**



Notes: Gray squares represent estimates that are not statistically significant. Blue dots represent estimates that are significant and positively related to female LFP rate. Red triangles represent estimates that are significant and negatively related to female LFP rate. Horizontal gray bars represent the 95 percent confidence interval.

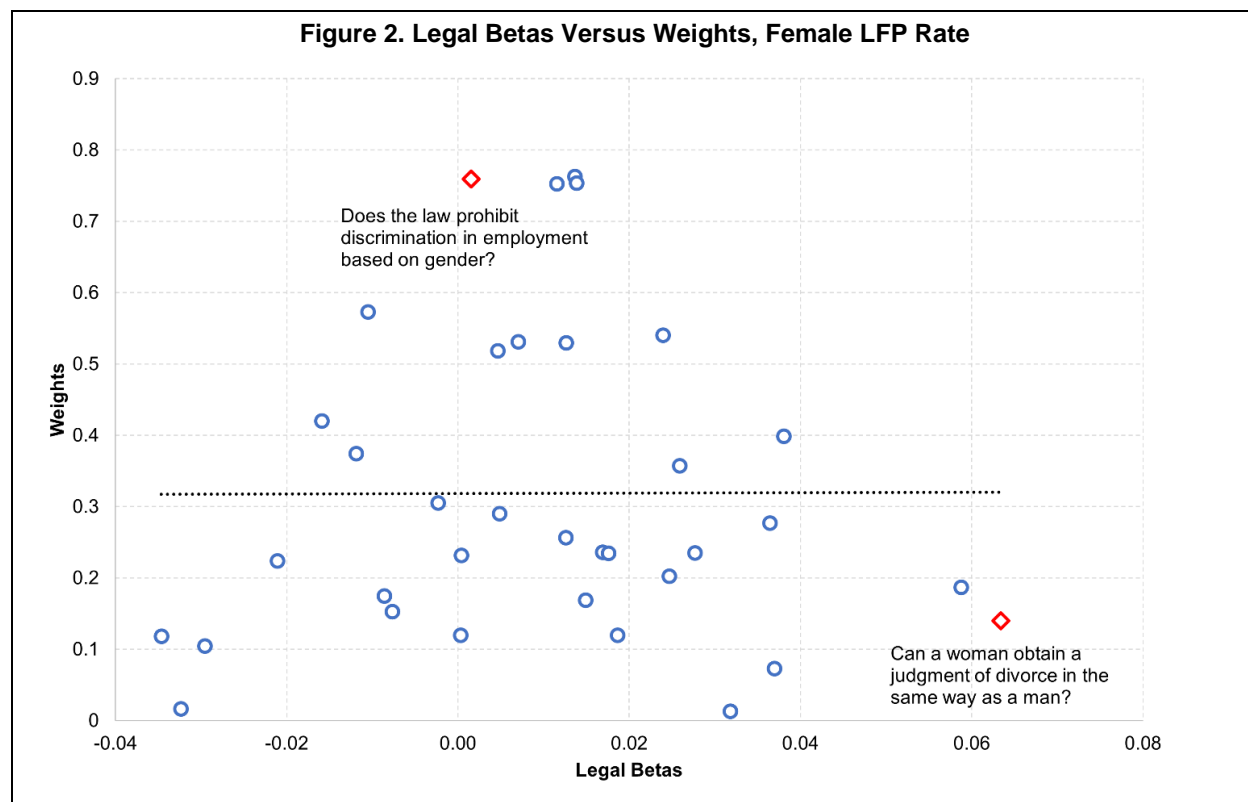


Figure 3 presents the regression results for male LFP rates and maintains the same law order as the women's graph for consistency and ease of comparison. Most estimates are close to zero and not statistically significant. Only three of the 35 laws have a significant relationship with male LFP rates. This indicates that, in general, improving women's legal rights has no effect on men's decision to enter the labor force. This is encouraging because it shows that increasing legal gender equality has no negative spillover effects on the male labor force.

Finally, Figure 4 shows the regression results for the gender gap in LFP rates defined as the male LFP rate minus the female LFP rate. The figure adheres to the same aesthetic standards as the women and men figures. Any law associated with an increase (decrease) in female LFP rate is also associated with a decrease (increase) in the gender gap in LFP rates. Only one law positively correlates to female LFP rates but not to the gender gap.

Robustness tests were performed by adding more controls to the regressions, including (i) the squared term of the GDP per capita control to account for a possible U-shape relationship between development level and female LFP; (ii) the fertility rate measured as total births per woman; and (iii) the age dependency ratio measured as a percentage of working-age population. The sample size remains nearly identical after integrating these new controls (only 7 observations are lost due to data availability).<sup>5</sup> The results are consistent with the baseline approach and are provided in Annex III.

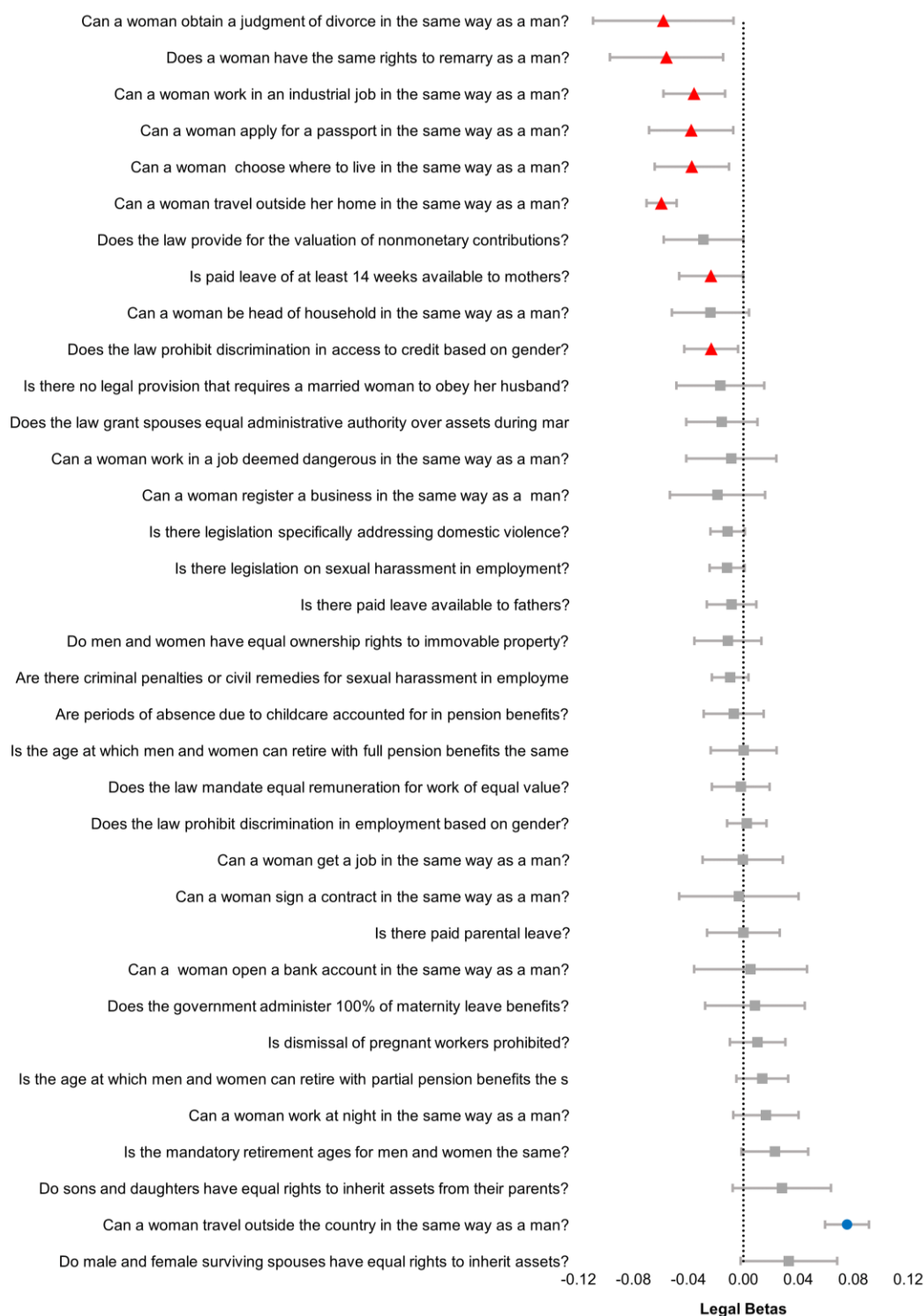
<sup>5</sup> We did not include education variables due to data availability, sample reduction, and sample selection. By adding primary and secondary completion rates from the WDI for boys and girls, the sample size is reduced from 5,512 to 2,089 country-year observations. Such a substantial shift in sample size, in our opinion, cannot be termed a robustness test. Furthermore, the remaining sample becomes concentrated with countries with greater capacity to monitor educational outcomes, introducing bias into the sample. In addition, education is highly correlated with GDP per capita, which is already accounted for in the analysis.

**Figure 3. Legal Betas, Male LFP Rate**



Notes: Gray squares represent estimates that are not statistically significant. Blue dots represent estimates that are significant and positively related to male LFP rate. Red triangles represent estimates that are significant and negatively related to male LFP rate. Horizontal gray bars represent the 95 percent confidence interval.

**Figure 4. Legal Betas, Gender Gap in LFP Rate**



Notes: Gray squares represent estimates that are not statistically significant. Blue dots represent estimates that are significant and positively related to gender gap in LFP rate. Red triangles represent estimates that are significant and negatively related to gender gap in LFP rate. Horizontal gray bars represent the 95 percent confidence interval.

## C. Discussion

The relationship between legal rights and female LFP is multifaceted, and no single explanation is likely to account for the mechanisms driving our findings. However, below we present a more detailed explanation of how each of the most relevant laws might positively improve women's LFP.

While the relationship between equal rights to divorce, remarry, and women's LFP is complex and influenced by a variety of factors including cultural and social norms, as well as economic conditions, having equal rights to divorce and remarry can facilitate women's LFP in several ways. First, when women have the right to divorce, they gain more control over their personal and financial lives. They are less likely to remain in unhappy or abusive marriages due to financial dependence on their spouses. This increased autonomy can encourage women to seek employment and become economically self-reliant. Second, the knowledge that they have the option to divorce and remarry can motivate women to invest in their education and skills. They are more likely to pursue higher education and vocational training, which can lead to better job opportunities and increased LFP. Third, equal rights to divorce and remarry can enable women to focus on their careers without the fear of marital status being an obstacle to professional growth. Fourth, equal rights to divorce and remarry can help challenge and change traditional gender roles and societal norms. This can lead to greater acceptance of women in the workforce and a reduction in the stigma associated with working women.

Equal rights in industrial jobs, which involve providing equal opportunities and treatment to both men and women in the industrial sector, can have a significant positive impact on women's LFP through various channels. It provides women access to a broader range of career opportunities in traditionally male-dominated fields. This expansion of options can encourage more women to consider industrial jobs as a viable career path, reducing occupational segregation. It can also lead to equal access to training and skill development programs, allowing women to acquire the skills needed for these jobs, enhancing their competitiveness in the labor market.

Equal rights to a passport, to travel, and to choose where to live can improve women's LFP in a variety of ways. They allow women to travel for work or education without undue restrictions, broadening their educational prospects and career beyond their immediate locality. This opens a broader range of employment options, which can be particularly important for women in areas with limited job prospects. Equal rights in this regard allow women to access educational and skill development programs, which can enhance their qualifications and competitiveness in the labor force.

Paid maternity leave provides financial support to women during the critical period of childbirth and the early stages of childcare. This financial assistance eases the economic burden associated with having a child, making it more feasible for women to remain in or return to the workforce. It helps women balancing work and family responsibilities.<sup>6</sup>

Prohibition of gender-based credit discrimination expands women's access to credit. This enables them to start and grow their businesses, ultimately contributing to greater labor force attachment. It can also empower women to achieve financial independence and reduce their reliance on a partner's income, which can encourage them to enter or remain in the workforce.

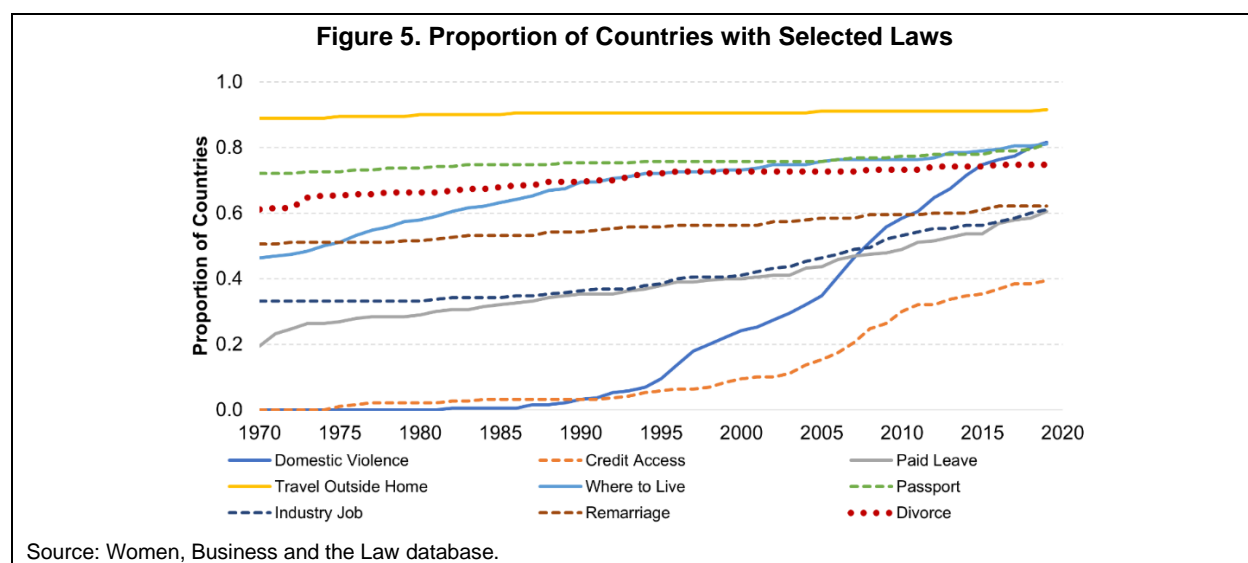
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<sup>6</sup> It should be noted that maternity leave can induce women to lose skills faster than men, particularly if paternity leave does not exist or is excessively short in comparison to maternity leave, so damaging women's career prospects. However, our findings suggest that the positive effects of maternity leave on women's LFP outweigh the negative effects on average.

Legislation addressing domestic violence provides legal protections and support to victims, creating a safer environment for them to work and participate in the labor force without the fear of harm or retaliation at home. Domestic violence legislation can help women break free from abusive relationships, empowering them to become financially independent. This independence can motivate women to seek employment to support themselves and their families.

Allowing women to travel outside the country in the same way as men is negatively correlated with female LFP rates. This could be due to the fact that equal travel rights enable women to access job opportunities in other countries, which can lead to higher-paying and more competitive positions, thus reducing LFP in the country of origin.

Over the years, significant progress has been made. However, more work needs to be done, as between 10 percent of countries in the case of the right to travel outside the home and 60 percent of countries in the case of gender discrimination in access to credit have yet to achieve full gender equality in these areas. Figure 5 illustrates the gradual advancement towards gender equality in these important laws, revealing variations in levels and rates of change. For instance, restrictions on women's right to travel outside the home were rare in 1970, and this situation has remained largely unchanged up to 2019, indicating a relatively stagnant evolution. In contrast, the share of countries that require at least 14 days of paid paternity leave has increased significantly, rising from 20 percent in 1970 to around 60 percent in 2019.<sup>7</sup> Notably, women's rights to credit and legal protection from domestic violence began to emerge in the early 1990s, when almost no countries had such laws. However, there has been a significant global uptake of these laws since the 1990s. Around 40 percent of countries now guarantee equal legal access to credit for both men and women, while approximately 80 percent have domestic violence laws, compared to only about 3 percent in 1990. In summary, Figure 5 highlights areas that have improved as well as the remaining opportunities for achieving greater female LFP rates through legal gender equality.

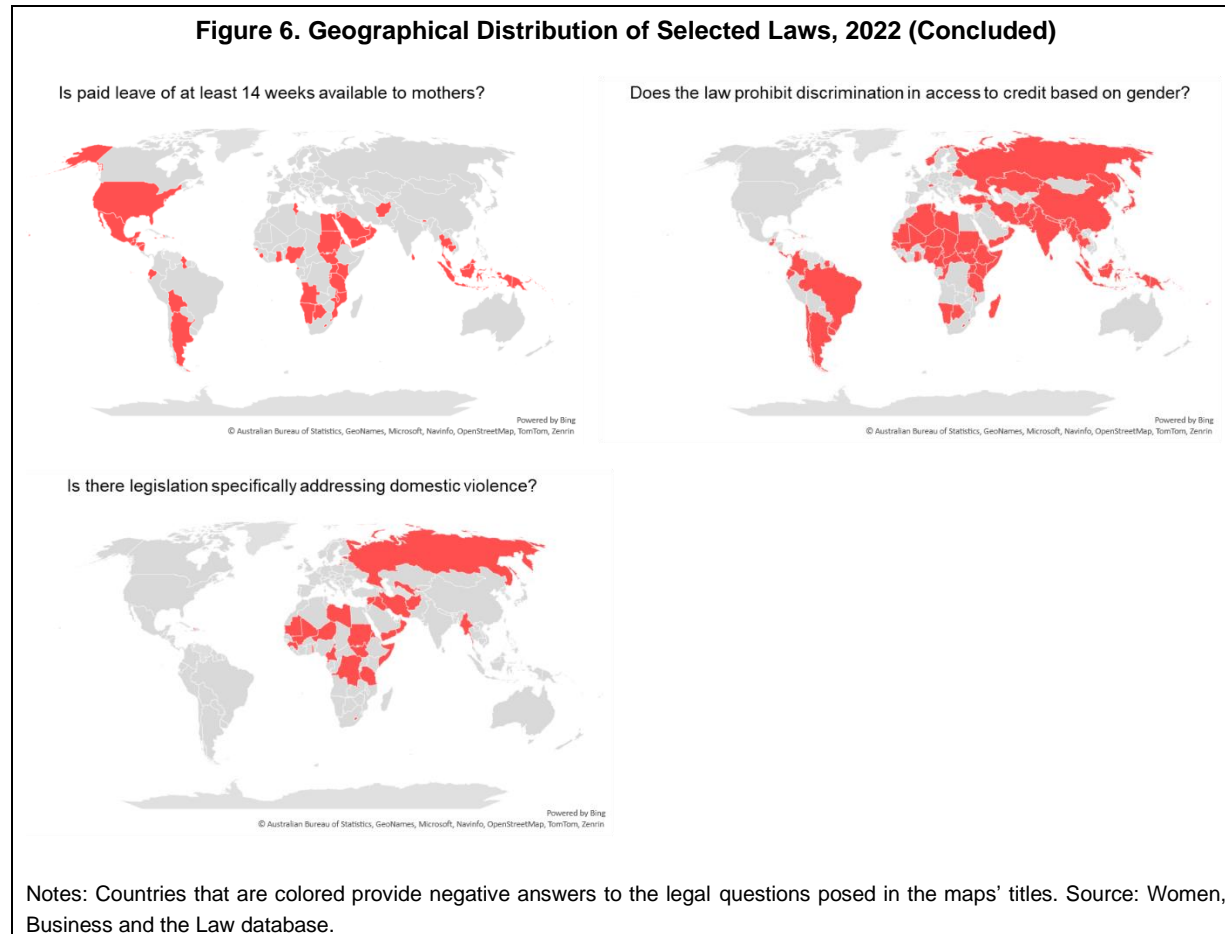


<sup>7</sup> The increase in the share of countries that mandate a minimum of 14 days of paid paternity leave can be attributed to evolving societal attitudes and recognition of the importance of gender equality, as well as changes in family dynamics and labor force participation. Some countries have recognized the economic benefits of paid paternity leave, as it can lead to increased female workforce participation and help alleviate some of the gender-related wage gaps. In addition, international organizations like the ILO have encouraged countries to adopt policies that promote work-family balance, including paternity leave.



Furthermore, we examine the geographical distribution of these laws to identify regions in the world that could benefit from potential changes. Figure 6 depicts the countries where women continue to lack equal legal rights, even in 2022, in terms of relevant legislation for female LFP. For instance, countries in the Middle East and Northern Africa can benefit from making many of these laws more gender equal, while many countries need to eliminate gender discrimination in access to credit.



**Figure 6. Geographical Distribution of Selected Laws, 2022 (Concluded)**

## V. Conclusion

This paper underscores the significance of conducting detailed analyses of specific laws to comprehend the connection between gender-related legislation and LFP. It takes an important step forward in providing benchmark estimates and a starting point for countries seeking to promote female LFP and lower its gender gaps. While previous research using the WBL index indicated that improving women's legal rights has the potential to influence their decision to join the labor force, this paper highlights how laws concerning intra-household bargaining power, such as women's right to divorce and remarry, appear to create more incentives for women to enter the labor market. This information is critical because changing laws is often politically complex, and governments must make value judgments about the most promising legal changes. Finally, while analyzing how *de-jure* gender disparities in laws affect female LFP is a critical first step in informing legal policymaking, a comprehensive understanding requires an investigation into the implementation of these laws and how long it takes to observe *de-facto* changes.

## Annex I. Technical Results

Note that regressions (2) and (3) can be estimated using a two-stage process. In the first stage, the effects of the controls are purged from the main independent variables by regressing the independent variables over the controls. This involves estimating the following regressions:

$$I_{i,t-3} = \delta + \phi X_{i,t-3} + \lambda_i + \theta_i + u_{i,t}, \quad (5)$$

$$P_{k,i,t-3} = \delta_k + \phi_k X_{i,t-3} + \lambda_{k,i} + \theta_{k,i} + u_{k,i,t}, \quad (6)$$

where  $u_{i,t}$  and  $u_{k,i,t}$  are the error terms. In the second stage, the residuals of these regressions, denoted by  $R_{i,t}$  and  $R_{k,i,t}$ , are regressed on the dependent variables, i.e., estimating the following regressions:

$$y_{i,t} = \rho + \beta R_{i,t} + v_{i,t}, \quad (7)$$

$$y_{i,t} = \rho_k + \beta_k R_{k,i,t} + v_{k,i,t}, \quad (8)$$

where  $v_{i,t}$  and  $v_{k,i,t}$  are the error terms. The estimated coefficients  $\hat{\beta}$  and  $\hat{\beta}_k$  from regressions (7) and (8) are identical to the ones estimated from regressions (2) and (3).

To prove result (4), denote  $\hat{I}_{i,t-3}$  and  $\hat{P}_{k,i,t-3}$  as the fitted values from the first stage regressions (5) and (6), respectively. Then, from the definition of the residuals, we have that

$$R_{i,t} = I_{i,t-3} - \hat{I}_{i,t-3} = \frac{1}{35} \sum_{k=1}^{35} (P_{k,i,t-3} - \hat{P}_{k,i,t-3}) = \frac{1}{35} \sum_{k=1}^{35} R_{k,i,t}, \quad (9)$$

where the first and third equalities come from the residuals definitions and the second equality comes from the index definition in equation (1). In other words, the index residuals are equal to the simple average of the specific law residuals. The estimation of the second stage regressions (7) and (8) gives:

$$\hat{\beta} = \frac{\text{cov}(y_{i,t}, R_{i,t})}{\text{var}(R_{i,t})}, \quad (10)$$

$$\hat{\beta}_k = \frac{\text{cov}(y_{i,t}, R_{k,i,t})}{\text{var}(R_{k,i,t})}, \quad (11)$$

where the variances and covariances are calculated over countries and years. Using equation (9), it is possible to see that the numerators of (10) and (11) are related according to

$$\text{cov}(y_{i,t}, R_{i,t}) = \text{cov}\left(y_{i,t}, \frac{1}{35} \sum_{k=1}^{35} R_{k,i,t}\right) = \frac{1}{35} \sum_{k=1}^{35} \text{cov}(y_{i,t}, R_{k,i,t}), \quad (12)$$

where the second equality comes from the properties of the covariance operator. Then, combining results (10), (11), and (12), we get that

$$\hat{\beta} = \frac{\text{cov}(y_{i,t}, R_{i,t})}{\text{var}(R_{i,t})} = \frac{1}{35} \sum_{k=1}^{35} \frac{\text{cov}(y_{i,t}, R_{k,i,t})}{\text{var}(R_{i,t})} = \sum_{k=1}^{35} \frac{1}{35} \times \frac{\text{var}(R_{k,i,t})}{\text{var}(R_{i,t})} \times \frac{\text{cov}(y_{i,t}, R_{k,i,t})}{\text{var}(R_{k,i,t})} = \sum_{k=1}^{35} w_k \hat{\beta}_k, \quad (13)$$

where the weights are, by definition, determined by the variances of the residuals and can be calculated as

$$w_k \equiv \frac{1}{35} \times \frac{\text{var}(R_{k,i,t})}{\text{var}(R_{i,t})}. \quad (14)$$

## Annex II. Regression Results

**Table 2. Female LFP Rate**

Policy	$\hat{\beta}_k$	S.E.	<i>p</i> -value	$R^2$	$w_k$	$w_k \hat{\beta}_k$	<i>N</i>
Can a woman apply for a passport in the same way as a man?	0.037	0.015	0.015	0.531	0.073	0.003	5,512
Can a woman travel outside the country in the same way as a man?	-0.032	0.008	0.000	0.529	0.017	-0.001	5,512
Can a woman travel outside her home in the same way as a man?	0.032	0.006	0.000	0.529	0.013	0.000	5,512
Can a woman choose where to live in the same way as a man?	0.036	0.014	0.011	0.536	0.277	0.010	5,512
Can a woman get a job in the same way as a man?	0.000	0.016	0.980	0.529	0.232	0.000	5,512
Does the law prohibit discrimination in employment based on gender?	0.002	0.008	0.840	0.529	0.759	0.001	5,512
Is there legislation on sexual harassment in employment?	0.014	0.007	0.051	0.532	0.763	0.010	5,512
Are there criminal penalties or civil remedies for sexual harassment in employment	0.012	0.007	0.111	0.531	0.752	0.009	5,512
Does the law mandate equal remuneration for work of equal value?	0.005	0.011	0.679	0.529	0.518	0.002	5,512
Can a woman work at night in the same way as a man?	-0.016	0.012	0.200	0.531	0.420	-0.007	5,512
Can a woman work in a job deemed dangerous in the same way as a man?	0.017	0.016	0.296	0.530	0.236	0.004	5,512
Can a woman work in an industrial job in the same way as a man?	0.038	0.011	0.001	0.540	0.399	0.015	5,512
Is there no legal provision that requires a married woman to obey her husband?	0.019	0.016	0.254	0.530	0.120	0.002	5,512
Can a woman be head of household in the same way as a man?	0.025	0.015	0.092	0.531	0.202	0.005	5,512
Is there legislation specifically addressing domestic violence?	0.014	0.006	0.034	0.532	0.753	0.010	5,512
Can a woman obtain a judgment of divorce in the same way as a man?	0.063	0.026	0.015	0.540	0.140	0.009	5,512
Does a woman have the same rights to remarry as a man?	0.059	0.020	0.005	0.542	0.187	0.011	5,512

Is paid leave of at least 14 weeks available to mothers?	0.026	0.012	0.034	0.534	0.357	0.009	5,512
Does the government administer 100% of maternity leave benefits?	-0.009	0.019	0.648	0.529	0.175	-0.002	5,512
Is there paid leave available to fathers?	0.013	0.009	0.186	0.530	0.530	0.007	5,512
Is there paid parental leave?	-0.002	0.014	0.871	0.529	0.305	-0.001	5,512
Is dismissal of pregnant workers prohibited?	-0.010	0.010	0.317	0.530	0.573	-0.006	5,512
Can a woman sign a contract in the same way as a man?	0.000	0.023	0.988	0.529	0.119	0.000	5,512
Can a woman register a business in the same way as a man?	0.015	0.018	0.416	0.530	0.169	0.003	5,512
Can a woman open a bank account in the same way as a man?	-0.008	0.022	0.731	0.529	0.153	-0.001	5,512
Does the law prohibit discrimination in access to credit based on gender?	0.024	0.010	0.022	0.535	0.540	0.013	5,512
Do men and women have equal ownership rights to immovable property?	0.013	0.012	0.316	0.530	0.257	0.003	5,512
Do sons and daughters have equal rights to inherit assets from their parents?	-0.030	0.020	0.136	0.531	0.104	-0.003	5,512
Do male and female surviving spouses have equal rights to inherit assets?	-0.035	0.019	0.069	0.532	0.118	-0.004	5,512
Does the law grant spouses equal administrative authority over assets during mar	0.018	0.014	0.208	0.530	0.235	0.004	5,512
Does the law provide for the valuation of nonmonetary contributions?	0.028	0.015	0.070	0.532	0.235	0.007	5,512
Is the age at which men and women can retire with full pension benefits the same	0.005	0.013	0.712	0.529	0.290	0.001	5,512
Is the age at which men and women can retire with partial pension benefits the s	-0.012	0.010	0.229	0.530	0.375	-0.004	5,512
Is the mandatory retirement ages for men and women the same?	-0.021	0.013	0.107	0.531	0.224	-0.005	5,512
Are periods of absence due to childcare accounted for in pension benefits?	0.007	0.011	0.522	0.529	0.531	0.004	5,512

Table 3. Male LFP Rate

Policy	$\hat{\beta}_k$	S.E.	p-value	$R^2$	$w_k$	$w_k \hat{\beta}_k$	$N$
Can a woman apply for a passport in the same way as a man?	-0.001	0.005	0.827	0.154	0.073	0.000	5,512
Can a woman travel outside the country in the same way as a man?	0.043	0.002	0.000	0.160	0.017	0.001	5,512
Can a woman travel outside her home in the same way as a man?	-0.028	0.002	0.000	0.156	0.013	0.000	5,512
Can a woman choose where to live in the same way as a man?	-0.001	0.004	0.791	0.154	0.277	0.000	5,512
Can a woman get a job in the same way as a man?	0.000	0.005	0.989	0.154	0.232	0.000	5,512
Does the law prohibit discrimination in employment based on gender?	0.004	0.003	0.128	0.156	0.759	0.003	5,512
Is there legislation on sexual harassment in employment?	0.002	0.003	0.555	0.154	0.763	0.001	5,512
Are there criminal penalties or civil remedies for sexual harassment in employment?	0.002	0.003	0.497	0.154	0.752	0.001	5,512
Does the law mandate equal remuneration for work of equal value?	0.003	0.003	0.356	0.155	0.518	0.001	5,512
Can a woman work at night in the same way as a man?	0.000	0.003	0.881	0.154	0.420	0.000	5,512
Can a woman work in a job deemed dangerous in the same way as a man?	0.008	0.004	0.032	0.157	0.236	0.002	5,512
Can a woman work in an industrial job in the same way as a man?	0.002	0.003	0.473	0.154	0.399	0.001	5,512
Is there no legal provision that requires a married woman to obey her husband?	0.002	0.006	0.767	0.154	0.120	0.000	5,512
Can a woman be head of household in the same way as a man?	0.001	0.005	0.896	0.154	0.202	0.000	5,512
Is there legislation specifically addressing domestic violence?	0.002	0.002	0.302	0.155	0.753	0.002	5,512
Can a woman obtain a judgment of divorce in the same way as a man?	0.005	0.004	0.153	0.154	0.140	0.001	5,512
Does a woman have the same rights to remarry as a man?	0.003	0.004	0.434	0.154	0.187	0.001	5,512
Is paid leave of at least 14 weeks available to mothers?	0.002	0.003	0.445	0.154	0.357	0.001	5,512

Does the government administer 100% of maternity leave benefits?	0.000	0.004	0.968	0.154	0.175	0.000	5,512
Is there paid leave available to fathers?	0.004	0.003	0.169	0.156	0.530	0.002	5,512
Is there paid parental leave?	-0.002	0.004	0.521	0.154	0.305	-0.001	5,512
Is dismissal of pregnant workers prohibited?	0.000	0.003	0.970	0.154	0.573	0.000	5,512
Can a woman sign a contract in the same way as a man?	-0.003	0.008	0.710	0.154	0.119	0.000	5,512
Can a woman register a business in the same way as a man?	-0.004	0.005	0.481	0.154	0.169	-0.001	5,512
Can a woman open a bank account in the same way as a man?	-0.002	0.006	0.701	0.154	0.153	0.000	5,512
Does the law prohibit discrimination in access to credit based on gender?	0.001	0.004	0.893	0.154	0.540	0.000	5,512
Do men and women have equal ownership rights to immovable property?	0.001	0.004	0.730	0.154	0.257	0.000	5,512
Do sons and daughters have equal rights to inherit assets from their parents?	-0.002	0.006	0.813	0.154	0.104	0.000	5,512
Do male and female surviving spouses have equal rights to inherit assets?	-0.002	0.006	0.792	0.154	0.118	0.000	5,512
Does the law grant spouses equal administrative authority over assets during marriage?	0.002	0.004	0.617	0.154	0.235	0.000	5,512
Does the law provide for the valuation of nonmonetary contributions?	-0.001	0.003	0.698	0.154	0.235	0.000	5,512
Is the age at which men and women can retire with full pension benefits the same?	0.005	0.005	0.272	0.155	0.290	0.001	5,512
Is the age at which men and women can retire with partial pension benefits the same?	0.002	0.004	0.658	0.154	0.375	0.001	5,512
Is the mandatory retirement ages for men and women the same?	0.002	0.005	0.717	0.154	0.224	0.000	5,512
Are periods of absence due to childcare accounted for in pension benefits?	0.000	0.003	0.987	0.154	0.531	0.000	5,512



Table 4. Gender Gap in LFP Rate

Policy	$\hat{\beta}_k$	S.E.	<i>p</i> -value	$R^2$	$w_k$	$w_k \hat{\beta}_k$	<i>N</i>
Can a woman apply for a passport in the same way as a man?	-0.038	0.016	0.016	0.606	0.073	-0.003	5,512
Can a woman travel outside the country in the same way as a man?	0.076	0.008	0.000	0.606	0.017	0.001	5,512
Can a woman travel outside her home in the same way as a man?	-0.060	0.006	0.000	0.605	0.013	-0.001	5,512
Can a woman choose where to live in the same way as a man?	-0.037	0.014	0.007	0.611	0.277	-0.010	5,512
Can a woman get a job in the same way as a man?	0.000	0.015	0.975	0.604	0.232	0.000	5,512
Does the law prohibit discrimination in employment based on gender?	0.002	0.007	0.733	0.604	0.759	0.002	5,512
Is there legislation on sexual harassment in employment?	-0.012	0.006	0.067	0.606	0.763	-0.009	5,512
Are there criminal penalties or civil remedies for sexual harassment in employment?	-0.010	0.007	0.160	0.605	0.752	-0.007	5,512
Does the law mandate equal remuneration for work of equal value?	-0.002	0.011	0.864	0.604	0.518	-0.001	5,512
Can a woman work at night in the same way as a man?	0.016	0.012	0.173	0.606	0.420	0.007	5,512
Can a woman work in a job deemed dangerous in the same way as a man?	-0.009	0.017	0.595	0.605	0.236	-0.002	5,512
Can a woman work in an industrial job in the same way as a man?	-0.036	0.011	0.002	0.613	0.399	-0.014	5,512
Is there no legal provision that requires a married woman to obey her husband?	-0.017	0.016	0.301	0.605	0.120	-0.002	5,512
Can a woman be head of household in the same way as a man?	-0.024	0.014	0.094	0.606	0.202	-0.005	5,512
Is there legislation specifically addressing domestic violence?	-0.011	0.006	0.074	0.606	0.753	-0.009	5,512
Can a woman obtain a judgment of divorce in the same way as a man?	-0.058	0.026	0.026	0.613	0.140	-0.008	5,512
Does a woman have the same rights to remarry as a man?	-0.056	0.021	0.008	0.615	0.187	-0.010	5,512
Is paid leave of at least 14 weeks available to mothers?	-0.023	0.012	0.048	0.608	0.357	-0.008	5,512

Does the government administer 100% of maternity leave benefits?	0.008	0.018	0.647	0.604	0.175	0.001	5,512
Is there paid leave available to fathers?	-0.009	0.009	0.349	0.605	0.530	- 0.005	5,512
Is there paid parental leave?	0.000	0.013	0.997	0.604	0.305	0.000	5,512
Is dismissal of pregnant workers prohibited?	0.010	0.010	0.309	0.605	0.573	0.006	5,512
Can a woman sign a contract in the same way as a man?	-0.003	0.022	0.885	0.604	0.119	0.000	5,512
Can a woman register a business in the same way as a man?	-0.019	0.018	0.288	0.605	0.169	- 0.003	5,512
Can a woman open a bank account in the same way as a man?	0.005	0.021	0.804	0.604	0.153	0.001	5,512
Does the law prohibit discrimination in access to credit based on gender?	-0.023	0.010	0.019	0.610	0.540	- 0.013	5,512
Do men and women have equal ownership rights to immovable property?	-0.011	0.012	0.362	0.605	0.257	- 0.003	5,512
Do sons and daughters have equal rights to inherit assets from their parents?	0.028	0.018	0.124	0.606	0.104	0.003	5,512
Do male and female surviving spouses have equal rights to inherit assets?	0.033	0.018	0.065	0.607	0.118	0.004	5,512
Does the law grant spouses equal administrative authority over assets during marriage?	-0.016	0.013	0.237	0.605	0.235	- 0.004	5,512
Does the law provide for the valuation of nonmonetary contributions?	-0.029	0.015	0.051	0.608	0.235	- 0.007	5,512
Is the age at which men and women can retire with full pension benefits the same?	0.000	0.012	0.984	0.604	0.290	0.000	5,512
Is the age at which men and women can retire with partial pension benefits the same?	0.014	0.010	0.151	0.606	0.375	0.005	5,512
Is the mandatory retirement ages for men and women the same?	0.023	0.012	0.065	0.606	0.224	0.005	5,512
Are periods of absence due to childcare accounted for in pension benefits?	-0.007	0.011	0.528	0.605	0.531	- 0.004	5,512

# Annex III. Robustness Results



**Figure 8. Legal Betas, Male LFP Rate, with Additional Controls**



**Figure 9. Legal Betas, Gender Gap in LFP Rate, with Additional Controls**



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