Women, Motherhood, and Structural Transformation. Insights from Rural Latin America.*

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Preliminary version

Abstract

We study women's labor market outcomes in rural Latin America, documenting their evolution over the past two decades, examining the role of motherhood, and relating these patterns to broader changes in the region's economic structure. Using harmonized household surveys for 14 countries spanning the last two decades, we document trends in employment, hours, earnings, and the types of jobs women hold, and estimate motherhood effects through a pseudo-event study around the first childbirth, separately for rural and urban areas. We complement this analysis with Mexican time-use data to shed light on underlying mechanisms. We show that, despite substantial educational gains, rural women continue to lag behind both rural men and urban women across multiple labor market dimensions, reflecting a double disadvantage arising from the intersection of gender and spatial inequalities. While the region has experienced a decline in agricultural employment and an expansion of service-sector jobs—developments that have been accompanied by rising female employment in rural areas—rural women remain disproportionately concentrated in informal and unpaid forms of work. Motherhood reinforces these patterns: although rural mothers experience smaller short-term employment drops than urban mothers, they are more likely to transition into unpaid work and low-skilled self-employment. Cross-country evidence further suggests that motherhood penalties in rural areas tend to be larger in more developed settings, consistent with the idea that, as rural economies evolve and move away from agriculture, the types of jobs available to women may become less compatible with childcare responsibilities. Evidence from time-use data suggests that these outcomes are associated not only with childcare demands but also with heavier household responsibilities and limited access to labor-saving technologies.

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1 Introduction

Women's economic opportunities are shaped not only by gender inequality but also by where they live. This geographic dimension is particularly relevant in developing regions, where a substantial share of the population still resides in rural areas; in Latin America alone, around 110 million people—about one-fifth of the region's population—live in rural areas, including over 50 million women (World Bank, 2023).

Women in rural areas may face additional barriers beyond those affecting women more broadly. Rural regions tend to exhibit lower productivity, higher poverty rates, and more limited access to infrastructure, services, and formal employment opportunities (de la Mata and Odriozola, 2026; Food and Agriculture Organization of the United Nations, 2017; International Labour Organization, 2017), creating constraints that affect the population at large. However, these structural conditions may interact with existing gender inequalities in ways that disproportionately limit women's economic opportunities. In particular, women shoulder a disproportionate share of unpaid domestic and care work, which may be especially constraining in rural settings where access to childcare services, infrastructure, and labor-saving household technologies is often more limited and where social norms may reinforce traditional gender roles. Differences in economic structure may further shape women's opportunities: agricultural activities remain more prevalent in rural areas, while the expansion of service-sector employment—often associated with greater opportunities for women—tends to be more limited than in urban labor markets. Despite these considerations, systematic evidence on rural women's labor market outcomes remains scarce, particularly from a cross-country perspective in developing regions. In Latin America, this gap partly reflects the limited availability of indicators specifically designed to monitor rural labor markets, as most official statistics and policy discussions focus on national averages or urban settings.

This paper examines women's labor market outcomes in rural Latin America, documenting their evolution over time, analyzing the role of motherhood, and relating these patterns to broader changes in the region's economic structure. To do so, we assemble harmonized household survey data for 14 Latin American countries covering the last two decades. These data allow us to document gender and rural-urban disparities across a range of labor market outcomes. The evidence reveals substantial and persistent inequalities along both gender and spatial dimensions, and these patterns are remarkably consistent across countries. Rural women exhibit lower employment rates, work fewer hours, earn less, and are more likely to be concentrated in informal and unpaid forms of employment than both rural men and urban women. For example, despite notable educational progress, rural women's employment rate in 2023 was 56%—about eight percentage points lower than that of urban women and over 30 percentage points lower than that of rural men. These patterns point to a double disadvantage faced by rural women, arising from the intersection of gender inequality and spatial disparities in labor markets.

Beyond differences in employment rates and earnings, rural women's labor market

outcomes also differ markedly in terms of the types of jobs they hold. Rural women are substantially more likely to be employed in informal and non-salaried arrangements, including self-employment and unpaid family work in household enterprises. While participation in the service sector and in formal salaried jobs has increased across the region, informal employment continues to dominate women's employment in rural areas. In 2023, 68% of employed rural women were in informal jobs, and about 16% were unpaid family workers—a share that rises to around 30% within the primary sector.

After providing this broader picture, we zoom in on the experiences of mothers by estimating the effect of children—motherhood effects or child penalties—on rural and urban women in Latin America using a pseudo-event study approach around the birth of the first child (Kleven, 2022; Kleven et al., 2024; Marchionni and Pedrazzi, 2025). While a growing literature documents large child penalties in women's labor market outcomes, evidence comparing these effects across rural and urban labor markets remains scarce. We show that motherhood penalties are large and persistent across the region, in both urban and rural areas. Although the short-term decline in employment is smaller in absolute terms for rural mothers—an immediate drop of 18 percentage points compared to 22 percentage points for urban women—this represents a larger proportional reduction given their lower pre-birth employment levels. Despite rural women exhibit partial recovery in subsequent years, rural-urban disparities widen after motherhood. For instance, the rural-to-urban earnings ratio declines from 36% before childbirth to 27% afterward. Beyond employment levels, differences in the types of jobs women hold play a central role in explaining these rural-urban income gaps. In particular, motherhood in rural areas is associated with a shift toward more precarious forms of employment. For example, motherhood increases the likelihood of unpaid work in family farms or businesses among rural women by about 10 percentage points, compared to only about 2 percentage points among urban women.

We interpret these patterns in the context of broader changes in the region's economic structure over the past two decades. Our data show that over this period the share of employment in primary activities in Latin America declined steadily while employment in services expanded, with these shifts being particularly pronounced in rural areas. A growing literature links structural change to women's labor market opportunities. In particular, the expansion of service-sector employment and the marketization of activities traditionally performed within the household have been associated with increases in women's labor supply and changes in gender gaps in labor market outcomes (Goldin, 1995; Ngai and Petrongolo, 2017; Ngai et al., 2024). In our region, as we document in this paper, this period was indeed accompanied by an expansion in rural women's labor supply, a decline in their employment in agriculture, and a growing participation in services. Despite these changes, however, rural women remain disproportionately concentrated in informal jobs and unpaid family work.

In this context, we also document suggestive cross-country patterns linking motherhood penalties in rural areas to countries' levels of economic development. Countries with

higher GDP per capita or lower agricultural employment shares tend to exhibit larger employment penalties following motherhood among rural women, while no clear relationship emerges in urban areas. One possible interpretation is that, as rural economies move away from family-based agricultural production, rural mothers may lose access to forms of work that are relatively more compatible with childcare and other domestic responsibilities, without a parallel expansion of care services or labor-saving household technologies. In this sense, our findings suggest that structural transformation does not automatically translate into better labor market opportunities for rural women, particularly when the complementary conditions needed to ease the reconciliation of market and household work remain limited.

Finally, to shed light on the household mechanisms underlying rural women's labor market constraints, we complement our cross-country analysis with evidence from time-use data for Mexico. While childcare demands are substantial—mothers of children aged 0-5 devote around 46 hours per week to childcare—the rural-urban gap in this dimension is small. Instead, rural mothers spend significantly more time than their urban peers on household chores, home production for their own consumption, and tasks such as water collection. These heavier domestic responsibilities, coupled with lower access to labor-saving technologies and external services, limit the time rural mothers can allocate to market work. This evidence suggests that the persistence of rural-urban gaps in female employment reflect not only labor market conditions, but also unequal time burdens within the household. Moreover, unequal time burdens may themselves be shaped by broader social norms about gender roles. Consistent with this view, survey evidence from Latin America indicates that attitudes toward maternal employment and the division of domestic responsibilities remain more traditional in rural areas than in urban areas.

This paper makes three main contributions. First, it contributes to the characterization of gender inequalities in Latin American labor markets by documenting how gender gaps vary across geographic areas. While previous studies have thoroughly documented gender disparities in the region Chioda (2011); Marchionni et al. (2019); Berniell et al. (2025), our analysis provides a comprehensive rural-urban characterization of these gaps, allowing us to document both gender disparities within rural labor markets and the differences between rural and urban women across the region.

Second, the paper contributes to the growing literature on child penalties, which documents the persistent impact of motherhood on women's labor market trajectories in both developed and developing countries (Kleven et al., 2019b, 2024; Marchionni and Pedrazzi, 2025). While most studies estimate these penalties at the national level, much less is known about how they vary within countries. Using harmonized cross-country data and a pseudo-event study approach, we estimate motherhood effects separately for rural and urban women across Latin America. To the best of our knowledge, this paper provides the first systematic evidence on differences in motherhood penalties between rural and urban women in developing countries.

Third, beyond standard labor market outcomes such as employment, hours worked,

wages, and earnings, we provide a detailed characterization of women's labor market insertion. In particular, we examine how rural and urban women differ in terms of sectoral allocation—especially employment in primary activities and services—as well as employment arrangements, including informal employment, self-employment, and unpaid family work. Taken together, these patterns allow us to relate our findings to the literature on gender gaps and structural transformation, which highlights how sectoral shifts and the marketization of home production can reshape women's employment opportunities (Ngai and Petrongolo, 2017; Ngai et al., 2024). To the best of our knowledge, the only study that explores these links in a developing-region context is Dinkelman and Ngai (2022) for Africa.

The remainder of the paper is organized as follows. Section 2 describes the data sources and explains the construction of the main variables. Section 3 provides a descriptive overview of rural women's position in Latin American labor markets, documenting their double disadvantage relative to rural men and urban women. Section 4 estimates motherhood effects in rural and urban areas using a pseudo-event study approach around the birth of the first child. Section 5 relates these findings to broader changes in the region's economic structure, examining patterns of sectoral allocation and employment arrangements. Section 6 goes beyond labor market outcomes to examine time-use patterns, childcare access, and domestic responsibilities, using evidence from Mexico in order to shed light on the household mechanisms underlying rural women's disadvantage. Finally, Section 7 discusses the main findings and concludes.

2 Data

Data sources and sample

We rely primarily on the Socioeconomic Database for Latin America and the Caribbean (SEDLAC), a joint initiative of the Center for Distributive, Labor, and Social Studies at Universidad Nacional de La Plata and the World Bank (CEDLAS and The World Bank, 2023). SEDLAC is a harmonized database of socioeconomic indicators constructed from household survey microdata, applying consistent variable definitions across countries and years. It provides annual information disaggregated by urban and rural areas for 14 Latin American countries—Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Honduras, Mexico, Panama, Paraguay, Peru, and Uruguay. This disaggregation is key for our analysis, as it allows us to systematically compare labor market outcomes across rural and urban areas. The dataset spans the period 2003-2023 and offers yearly information on a broad set of socioeconomic, demographic, and labor market variables. For Chile and Mexico, we complement this information with data from the LABLAC database, which follows a protocol similar to that of SEDLAC but relies on labor force surveys rather than household surveys. Table A.1 in the Appendix summarizes the availability of these sources across countries in the region.

For both the descriptive analysis of labor market outcomes and the estimation of motherhood effects, we restrict the sample to individuals aged 20 to 54. To examine the evolution of rural and urban labor market conditions for women and men over the past two decades, we compute the relevant indicators for five reference years: 2003, 2008, 2013, 2018, and 2023.[1] Table A.2 in the Appendix reports descriptive statistics for the main variables in the most recent year (circa 2023). In that year, the sample includes 120,830 rural women and 115,614 rural men, as well as 440,976 urban women and 380,667 urban men. In addition to labor market outcomes, we also have information on fertility-related variables. Table A.2 shows the percentage of individuals who are mothers or fathers, the age at first birth, and the number of children they have, both in rural and urban areas.[2]

Finally, for the analysis in section 6, we use data from Mexico's National Time Use Survey (ENUT) for 2019, harmonized by the GenLAC project (CEDLAS, 2024), to analyze gender gaps in the time dedicated to unpaid activities, such as domestic chores and childcare, in rural and urban areas.

Pseudo-panels

In Sections 4 and 5 we estimate the causal effect of motherhood using a pseudo-event study approach (Kleven et al., 2024). While traditional event studies rely on panel data—which are scarce in the region—this approach leverages individual-level pseudo-panels constructed from cross-sectional data. Specifically, we generate these pseudo-panels based on the repeated cross-sectional surveys described in the previous subsection, closely following Marchionni and Pedrazzi (2025).[3]

To identify parents in our data, we focus on the heads of household and their spouses. For those already identified as parents, we estimate the calendar year of their first childbirth based on the age of their oldest child. While this method allows us to identify parents after the event, it is not possible to determine who will become a parent beforehand: cross-sectional data do not provide information about whether or when childless individuals will have children. To address this limitation, Kleven (2022) suggests pairing parents with non-parents who share similar observable characteristics.

For this matching process, we use variables such as age (in years), gender (male or female), education (categorized as incomplete primary, complete primary, incomplete secondary, complete secondary, incomplete tertiary, and complete tertiary), and geographic region (urban or rural).[4] In addition, following Marchionni and Pedrazzi (2025), we include the survey year as a matching criterion, which allows us to pair each individual with someone from the same birth-year cohort who also shares similar observable

[1] When a survey for a specific reference year was unavailable for a given country, we use the closest available year.

[2] These variables are defined for household head and spouse only.

[3] Unlike the descriptive analysis in Section 3, the analysis of motherhood effects in Section 4 excludes the Dominican Republic, as the event-study estimates are extremely noisy, possibly due to the small sample size.

[4] For the largest countries, such as Chile, Mexico, and Colombia, the matching combines regional and urban/rural indicators.

characteristics, including gender, age, education, and region. This feature improves the matching quality and is not feasible with census data, which are typically collected every ten years, as used in Kleven et al. (2024). Thus, household surveys provide an advantage over census data in this context.

These pseudo-panels include women and men whose age at the birth of the first child is between 20 and 45 years old. The resulting sample contains 1,096,871 mothers and 1,149,647 fathers, who had children at some point before the survey takes place. Among them, 10.9% of mothers and 7.7% of fathers live in rural areas, while the rest reside in urban areas. Table A.3 in the Appendix describes the sample for the pool of countries (pooled sample).

3 Female and rural: a double disadvantage in labor markets

Rural women in Latin America have made remarkable educational gains in recent decades. They have now surpassed rural men in years of schooling, a reversal that took place around 2013, following the urban trend with a five-year lag (see Figure A.1 in the Appendix). For instance, the share of rural women with some college education is about 5 percentage points higher than that of men, and the gap has been steadily widening over time. Despite this progress, rural women still face substantial labor market barriers.

This section aims to provide a comprehensive overview of rural women's position in the labor market in terms of labor supply and earnings, comparing them not only to rural men but also to their urban counterparts. We begin by analyzing the usual outcomes: employment, hours worked per week, hourly wages, and monthly earnings. The goal of these comparisons is to shed light on the extent to which the disadvantage faced by rural women in terms of labor supply and earnings stems from gender gaps, from rural-urban disparities, or from the intersection of both.

As shown in Figure A.2 in the Appendix, labor market trends over the past two decades exhibit striking regularities: rural and urban women have followed similar trajectories across all basic labor supply indicators, as have rural and urban men. This pattern implies that rural-urban gaps have remained relatively stable over time. Part of this rural-urban gap reflects differences in women's characteristics across areas: once we control for education and age, the employment gap decreases from 8 percentage points to just over 5. In contrast, gender gaps have narrowed substantially over time—particularly in employment, where women have seen important gains.

Despite this progress, rural women continue to exhibit the lowest labor supply at both the extensive and intensive margins, underscoring a persistent structural disadvantage, as shown in Figure 1. In 2023, the employment rate for rural women stood at 56%, about eight percentage points lower than that of their urban counterparts.[5] Moreover,

[5]We focus on employment because labor force participation yields similar conclusions, as shown in Figure A.2.

the gender gap remains notably wider in rural areas—over 30 percentage points even after controlling for education and age—than in urban areas—22 percentage points. Figure 1 also shows that rural women not only participate less but also work fewer hours per week: in 2023, they averaged 37 hours, four hours fewer than urban women and eight hours fewer than rural men. Once again, the gender gap in hours worked is more pronounced in rural areas—8 hours even after controlling for education and age—than in urban areas—6 hours.

These findings underscore that rural women face a double disadvantage in the labor market. On the one hand, they experience a persistent rurality gap characterized by lower employment rates and fewer hours worked compared to their urban peers. On the other hand, the gender gap is also wider in rural areas, at both the extensive and intensive margins. The intersection of these two dimensions—gender and rurality—thus results in a cumulative disadvantage for rural women.

While hourly wages have increased for all groups since 2003 (see Figure A.2 in the Appendix), rural women consistently earn less than rural men, who in turn earn less than both urban women and men, as shown in Figure 2. This wage gap, combined with a lower employment rate and fewer working hours, results in significantly lower total monthly earnings for rural women. In 2023, the cumulative effect of these disadvantages is evident: rural women earn 21% less than their male counterparts in rural areas and 27% less than urban women. To account for the fact that these gaps could reflect differences in age or education, we estimate conditional gender and rurality gaps. When we do so, the gender gap actually widens to 34%, suggesting a penalty for rural women relative to men beyond compositional differences, while the rurality gap among women narrows to 8%, indicating that part of their disadvantage relative to urban women is explained by observable characteristics.

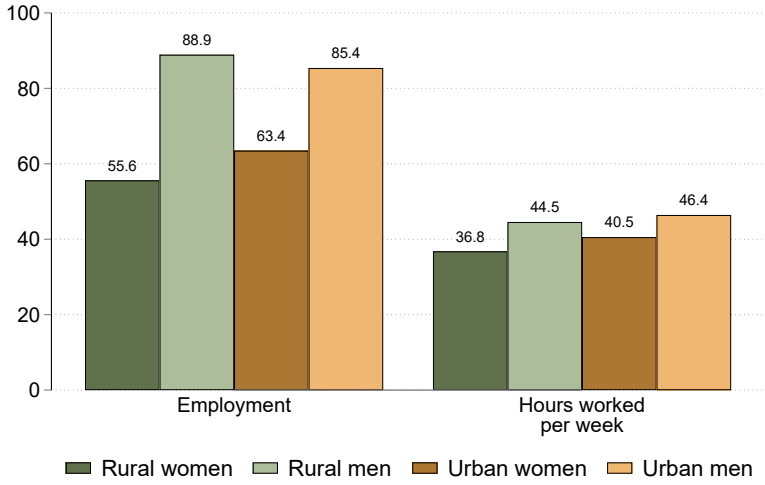
4 The motherhood effect in rural versus urban Latin America

While rural women already face a double disadvantage in labor markets—stemming from both their gender and their place of residence—motherhood adds yet another layer of vulnerability. This section explores the additional penalty associated with motherhood in rural settings, examining how it affects women's labor supply and earnings.

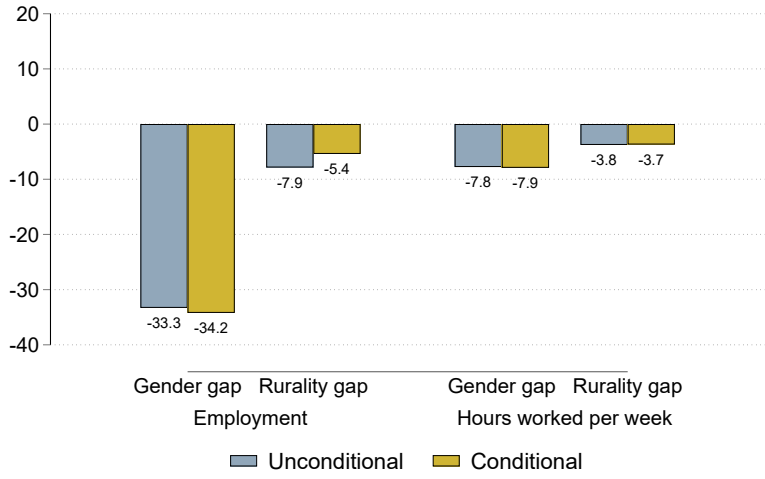
Figure 3 shows that mothers—especially those with young children—are significantly less engaged in the labor market than childless women. Although this child-related gap appears in both rural and urban areas, territorial disparities result in rural mothers exhibiting the lowest levels of employment and working hours.

Figure 1: Employment and weekly hours worked in Latin America, by gender and rural/urban area, circa 2023

(a) Levels



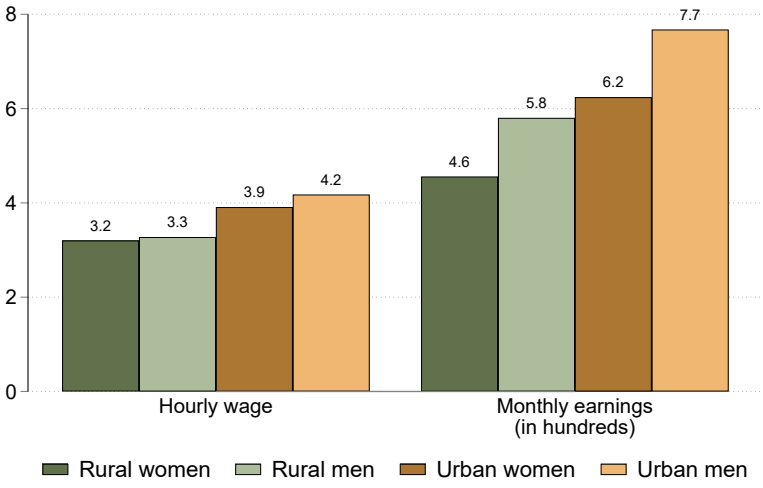
(b) Gender gaps and rurality gaps



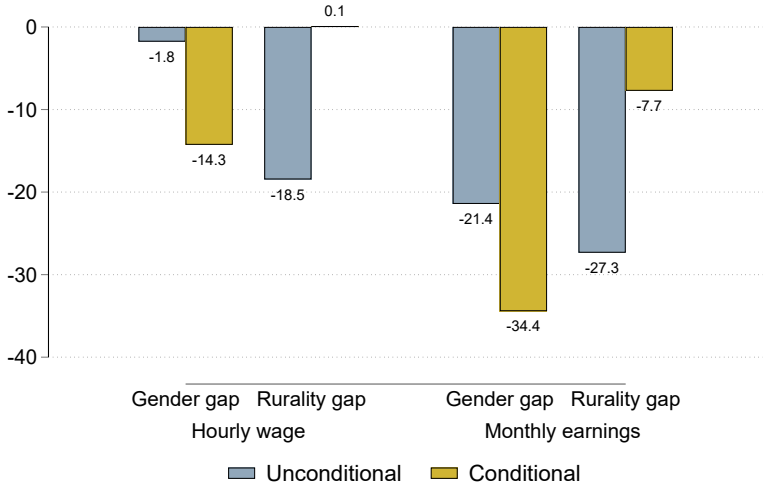
Note: Latin American average. The gender gaps in Panel (b) refer to rural women - rural men, while the rurality gaps refer to rural women - urban women. Employment gaps are measured in percentage points, whereas hours worked gaps are measured in weekly hours. Conditional gaps are obtained after controlling for education and age. The sample corresponds to individuals aged 20 to 54 years old. Source: authors' own calculations based on SEDLAC (CEDLAS and The World Bank, 2023) and GenLAC (CEDLAS, 2024) datasets.

Figure 2: Hourly wages and monthly earnings in Latin America, by gender and rural/urban area, circa 2023

(a) Levels

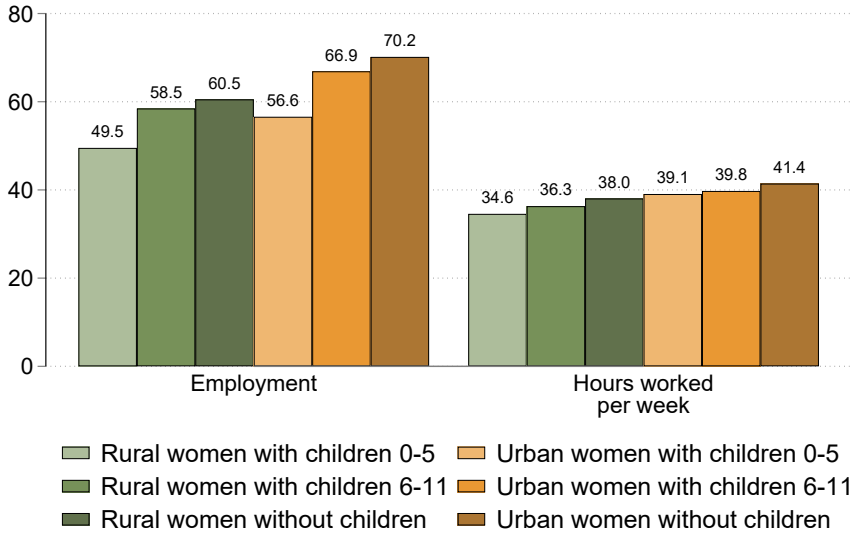


(b) Gender gaps and rurality gaps (in percentage)



Note: Latin American average. In Panel (a), wages are measured in constant 2005 USD and monthly earnings in hundreds of constant 2005 USD. The gender gaps in Panel (b) refer to rural women - rural men as a percentage of rural men's average outcomes, while the rurality gaps refer to rural women - urban women as a percentage of urban women's average outcomes. Conditional gaps are obtained after controlling for education and age. The sample corresponds to individuals aged 20 to 54 years old. Source: authors' own calculations based on SEDLAC (CEDLAS and The World Bank, 2023) and GenLAC (CEDLAS, 2024) datasets.

Figure 3: Employment and weekly hours worked for women in Latin America, by number and age of children and rural/urban area, circa 2023



Note: Latin American average. The sample corresponds to women aged 20 to 54 years old. Source: authors' own calculations based on SEDLAC (CEDLAS and The World Bank, 2023) and GenLAC (CEDLAS, 2024) datasets.

This raises a key question: how does motherhood affect rural women compared to their urban counterparts? The presence of children may influence labor market outcomes differently across settings due to factors such as access to childcare services, the availability of informal support networks, cultural norms regarding women's roles, and the sectoral composition of jobs. The relevance of this question is further amplified by the fact that rural women are more likely to be mothers, have more children on average, and start their families earlier. On average, 85% of women aged 20 to 54 in rural areas are mothers, compared to 82% in urban areas, rural mothers have 2.15 children on average, versus 1.92 among urban women, and begin their families approximately six months earlier.

To answer this question, in this section we assess the causal impact of children in rural and urban settings using a pseudo-event study approach around the birth of the first child (Kleven, 2022). This method allows us to isolate the effect of the first childbirth on the labor market trajectories of mothers and fathers in both rural and urban areas.

Pseudo-event study

The pseudo-event study methodology operates as an event study based on pseudo-panel data at the individual level, rather than relying on actual panel data, which are typically unavailable in most Latin American countries. Our approach closely follows Marchionni and Pedrazzi (2025), who adopt a pseudo-event study framework as in Kleven et al. (2019b) based on repeated cross-sectional data for Latin America.

In this context, the event is defined as the year of the first child's birth. Let τ

represent the number of years relative to the event, where $\tau = 0$ corresponds to the year when the first child is born.[6] The structure of this event-study around the first childbirth is captured in Equation 1:

$$y_{itc\tau} = \sum_{k \neq -1} \beta_k I(k = \tau_{itc}) + \sum_j \gamma_j I(j = age_{itc\tau}) + \sum_y \delta_y I(y = t) + \sum_s \lambda_s I(s = c) + \epsilon_{itc\tau}, \quad (1)$$

where $y_{itc\tau}$ denotes a labor market outcome for individual i observed in calendar year t, residing in country c, and at event time τ. The first term on the right-hand side includes event-time dummies, while the second and third terms capture a full set of age-in-years and calendar-year dummies, allowing for non-parametric control of life-cycle effects and time trends. When all countries are analyzed together, the model also incorporates country-fixed effects.

We estimate Equation 1 separately for mothers and fathers in rural and urban areas. The coefficients of interest, β_τ for $\tau \geq 0$, capture the impact of the first childbirth on labor market outcomes for women and men, relative to the year preceding the event ($\tau = -1$). As for an event-study based on actual panel data, the primary identification assumption is that, conditional on the controls included, the timing of the first childbirth is not correlated with the labor market outcomes of parents. Kleven et al. (2019b) shows that event studies reliably identify the effects of children on women's earnings and labor participation, while Kleven (2022) shows that pseudo-event study estimates closely replicate those obtained from actual panel data. Moreover, Marchionni and Pedrazzi (2025) argue that pseudo-event studies may perform even better with repeated cross-sections, as this allows incorporating birth cohort information into the matching procedure.

A concern for the identification of motherhood effects in our setting is the possibility of selective rural-to-urban migration around childbirth.[7] Since we cannot condition on women remaining in rural areas over time, such migration could generate systematic differences in unobservable characteristics between rural mothers and rural non-mothers. One specific form of selection would occur if rural women, anticipating motherhood, migrated to urban areas either shortly before or after childbirth, in which case compositional changes could be confounded with the causal impact of motherhood. If present, these anticipation effects should be partly visible in pre-trends. As we will show later, however, pre-event trajectories for men and women remain flat in both rural and urban areas, while

[6] The timing of the first birth is inferred from the age of the oldest coresiding child. A potential concern is that, for some mothers, the actual first child may have already left the household (e.g., an older sibling who moved out), in which case the measure would capture the birth of a subsequent child. This is unlikely to occur in our setting, as we restrict the sample to mothers whose oldest coresiding child is at most 10 years old. Misidentification would require the presence of an older sibling who has already left the household, in which case the event is effectively assigned to the second rather than the first birth. Since prior evidence (Kleven et al., 2019b) and our estimates indicate that effects are predominantly driven by the first birth, such misidentification would, if anything, bias the estimates downward, so that they should be interpreted as a lower bound.

[7] In Latin America, rural-to-urban migration was historically a key driver of urbanization but has declined substantially in recent decades, now remaining relatively low and largely composed of young migrants, with no significant gender differences (Busso et al., 2021).

sharp breaks in labor market outcomes appear only at childbirth. Moreover, given that women lack perfect control over conception timing and that a large share of pregnancies in Latin America are unplanned (Sedgh et al., 2014), the scope for coordinated anticipatory behavior is limited. Taken together, this evidence suggests that rural-to-urban migration is unlikely to generate anticipatory dynamics that undermine our estimates. While any residual selection from mobility could in principle bias the results upward or downward, depending on whether rural stayers are positively or negatively selected, the absence of systematic pre-trends and the limited scope for fertility timing provide reassurance that such biases are unlikely to drive our main findings.

The effects of children on labor supply and earnings

Figure 4 presents the results for the main labor market outcomes. Specifically, it plots the β_τ coefficients corresponding to the effects of children on employment, hours worked, hourly wages, and earnings.[8] Consistent with the child-penalty literature—e.g., Kleven et al. (2019a), Kleven et al. (2024), and Berniell et al., 2024 for developed countries; Berniell et al. (2021), Berniell et al. (2023), and Marchionni and Pedrazzi (2025) for developing countries; Kleven et al. (2024) for worldwide estimates—, we find that women experience significant negative impacts on labor market outcomes upon motherhood, which are persistent over time. In contrast, fatherhood is a non-event for men, as their labor market trajectories show no discontinuities upon the first childbirth.[9]

Beyond these overall patterns, Figure 4 reveals differences in the motherhood effects between urban and rural areas. Figure 4a shows that the short-term drop in employment is smaller in absolute terms for rural mothers—an immediate decline of 18 percentage points, compared to 22 percentage points for urban mothers—yet larger in proportional terms relative to re-birth employment levels is larger for rural women. In particular, the short-term decline represents a 42% drop for rural women, compared to 38% for urban women. There is also evidence of a gradual recovery in employment rates for rural mothers, particularly during the first 3 to 4 years after childbirth. On average, from $\tau = 0$ to $\tau = 10$, the motherhood effect on employment results in a 12 percentage point decline for rural women, compared to a 21 percentage point decline for urban women. These declines correspond to a 28% and 33% drop, respectively, relative to the employment rates observed prior to the birth of the first child.

This dynamic aligns with the possibility that rural mothers may face greater opportunities to re-enter the labor market, due to the prevalence of more flexible employment arrangements in rural settings. Indeed, the idea that the structure of local labor markets—particularly the degree of temporal flexibility and family friendliness of jobs—

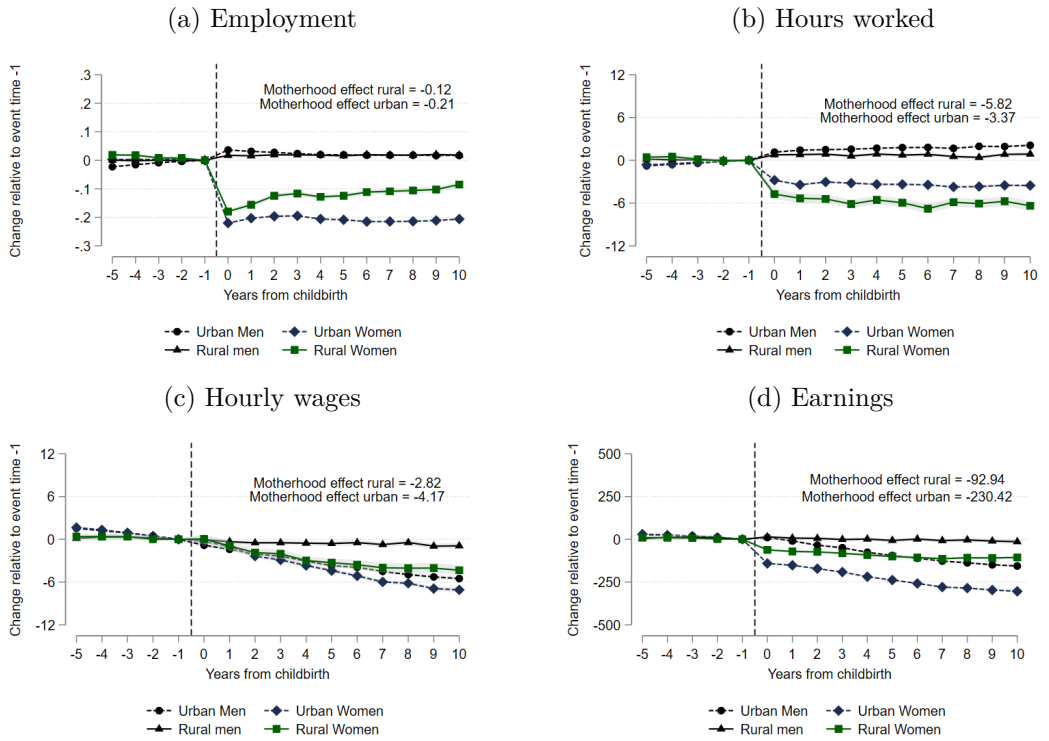
[8] Although it is common in the child penalties literature to express the event-time coefficients as percentage changes relative to a no-children counterfactual, we prefer to present the effects in levels. This choice is motivated by the substantial differences in baseline outcomes between rural and urban areas, as relative changes can be misleading in such cases.

[9] Notice that, although some of fathers' outcomes show a gradual downward trend, this simply reflects pre-existing patterns and does not constitute a discontinuity associated with childbirth.

plays a key role in shaping gender gaps is well established (Goldin, 2014; Goldin and Katz, 2016). In this regard, our findings echo those of Kleven (2022), who show that more urbanized states in the US tend to exhibit larger child penalties in employment. The higher flexibility and, in some cases, the greater compatibility with family responsibilities associated with certain rural jobs—particularly self-employment in agriculture, where work and home often overlap—, may facilitate the reintegration of rural mothers into the workforce after childbirth, whereas more rigid labor market structures in urban areas—often tied to formal, time-constrained sectors like banking—may amplify child penalties.

Consistent with the possibility that rural jobs may offer more flexibility, Figure 4b shows that, conditional on being employed, rural mothers in Latin America make more significant adjustments to their working hours after childbirth compared to urban mothers. On average, rural women reduce their working hours by nearly 6 hours per week, while urban women reduce theirs by just over 3 hours.

Figure 4: Effects of the first childbirth on labor supply and earnings. Rural vs. urban mothers.

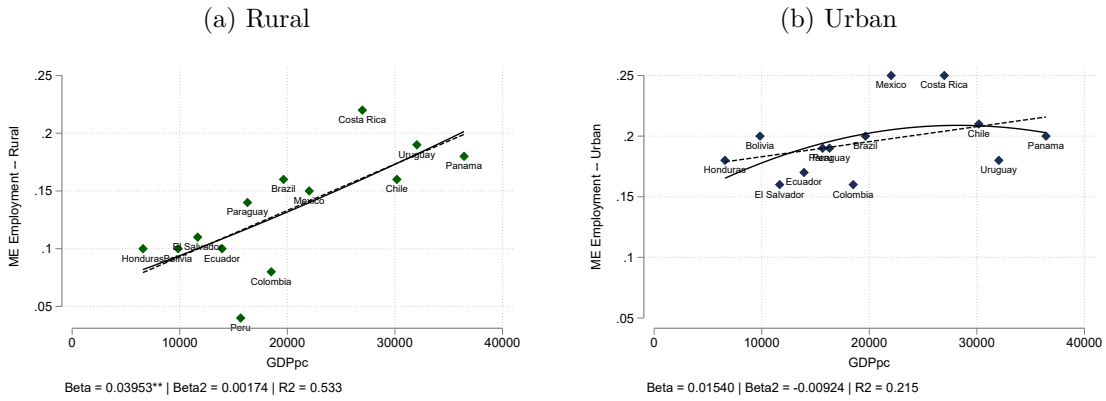


Note: These figures report the β_τs from Equation 1 for urban and rural mothers, separately. Since the omitted category is $\tau = -1$, the coefficients measure the impact of children relative to the year before the first childbirth. Controls include year, age-in-years, and country fixed effects. The effects on hours worked, informality and hourly wages are estimated conditional on being employed. The motherhood effect reported is the average motherhood effect from $\tau = 0$ through $\tau = 10$. Data cover the 14 Latin American countries from 2000-2021, except when estimating the effects on labor informality, where Panama is excluded from the sample. The sample is restricted to mothers and fathers whose age at first childbirth is between 20 and 45 years old.
Source: Own estimations based on SEDLAC (CEDLAS and The World Bank, 2023) and LABLAC (CEDLAS and The World Bank, 2021) datasets.

Motherhood also affects women's earnings, reinforcing the patterns described above. As shown in Figures 4c and 4d, both rural and urban women experience declines in hourly wages and monthly earnings after the first childbirth. Although the absolute drop is smaller for rural women, the relative decline is substantially larger given their lower pre-motherhood earnings—widening existing income disparities. For example, the rural-to-urban earnings ratio drops from 36% to 27% after childbirth, indicating that motherhood not only reduces female labor supply, but also amplifies the income gap between rural and urban women.

The patterns shown in Figure 4 hold across countries in the region (see Figures A.7 through A.9 in Appendix Section B I). This cross-country analysis also shows that, even within rural areas, the negative effect of children on mothers' employment increases with the level of economic development (see Figure 5a), a relationship that is much less evident in urban areas (see Figure 5b). These patterns suggest that, as rural economies develop—a process characterized by a declining share of employment in agriculture—motherhood penalties may become larger, possibly reflecting a shift toward forms of employment that are less compatible with childcare. We return to this discussion in the next section.

Figure 5: Effects of the first childbirth on employment and GDP per capita across countries



Note: Each marker corresponds to a country-level estimate of the average motherhood effect on employment from $\tau = 0$ through $\tau = 10$, obtained from Equation 1 estimated separately for rural and urban mothers. The solid and dashed lines correspond to linear and quadratic fits, respectively. Beta and Beta2 refer to the coefficients of the linear and quadratic terms. GDP per capita is measured in constant 2021 USD (World Bank).
Source: Own estimations based on SEDLAC (CEDLAS and The World Bank, 2023), LABLAC (CEDLAS and The World Bank, 2021) and WDI (World Bank, 2024) datasets.

5 Rural Women's Employment in a Changing Economic Structure

The gender gaps in labor market outcomes documented in Section 3—lower employment rates, fewer hours worked, and lower earnings among rural women—do not occur in isolation. Rather, they are observed alongside broader changes in the economic structure, which have reshaped the sectoral composition of employment, particularly in rural areas.

Over the development process, these changes are reflected in a gradual reallocation of labor away from primary activities toward industry and services (Gollin et al., 2002; Jonasson and Helfand, 2010; McMillan et al., 2014).

Figure 6a shows a steady decline in the share of employment in primary activities in rural areas between 2003 and 2023, from 37% to 31% for women and from 63% to 52% for men.[10] While rural women predominantly shift toward services, rural men experience a more pronounced transition toward industry and construction. In contrast, employment patterns in urban areas exhibit a far more stable sectoral composition over time, reflecting the fact that urban economies are already more diversified, with a greater presence of service-sector employment.

Hand in hand with the contraction of employment in the primary sector, labor organization undergoes a transformation from self-employment to salaried work (Jensen, 2022; Schoar, 2010; La Porta and Shleifer, 2008, 2014; Faggio and Silva, 2014). As shown in Figure 6b, the share of formal salaried workers has increased across the region over the past two decades. In urban areas, this rise was largely mirrored by a decline in unregistered salaried employment, suggesting a process of formalization within the wage sector. In rural areas, however, the rise in formal wage employment was mainly associated with a decline in unpaid work among women and a reduction in low-skilled self-employment among men. This pattern is broadly consistent with the transitions described in the structural transformation literature, whereby traditional, low-productivity forms of work tend to give way to more stable and better-remunerated employment arrangements.

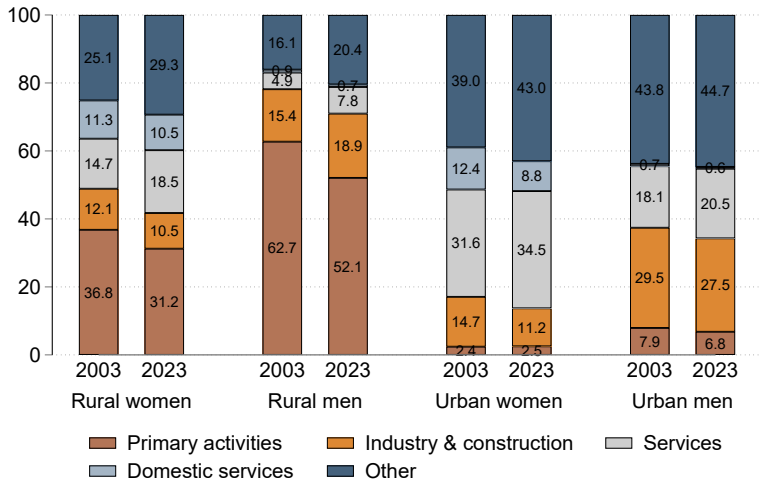
These compositional changes have contributed to the overall decline in labor informality documented in Figure 7. However, despite this broad reduction, informal labor arrangements—i.e., unpaid family work in household enterprises, low-skilled self-employment, and unregistered salaried work—remain extremely widespread in rural areas. In 2023, 68% of rural working women held some form of informal job, a share similar to that of rural men (66%) and 20 percentage points higher than that of urban women. These figures reveal a large and persistent rurality gap in informal employment, and suggest that rurality, rather than gender alone, plays a central role in shaping the quality of jobs available to rural women. The incidence of informal work is even higher within the primary sector—80% among rural women and 75% among rural men. This extremely high prevalence of informal arrangements in agriculture helps explain why the contraction of primary employment has contributed to the decline in rural labor informality.

Although rural women and men exhibit similar overall levels of informality, the nature of informal employment differs markedly by gender. About 16% of rural working women are unpaid workers, a share that rises to 30% within the rural primary sector. By contrast, only less than 5% of rural men fall into this category (7% in the primary sector). Conversely, unregistered wage employment and low-skilled self-employment are

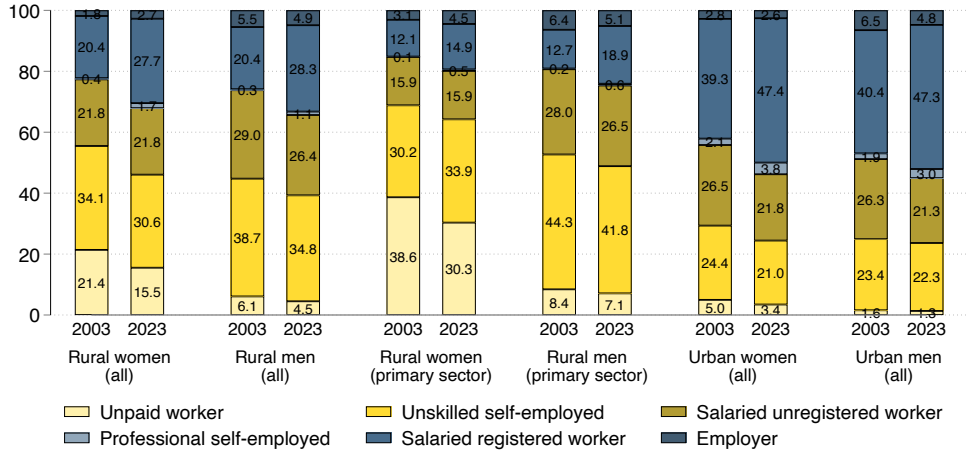
[10] Although the figure displays only the endpoint years 2003 and 2023, similar trends are observed in the intervening years, as the changes occur gradually over the period.

Figure 6: Employment structure in Latin America, evolution over time by gender and rural/urban area

(a) Sectoral employment



(b) Employment relationship

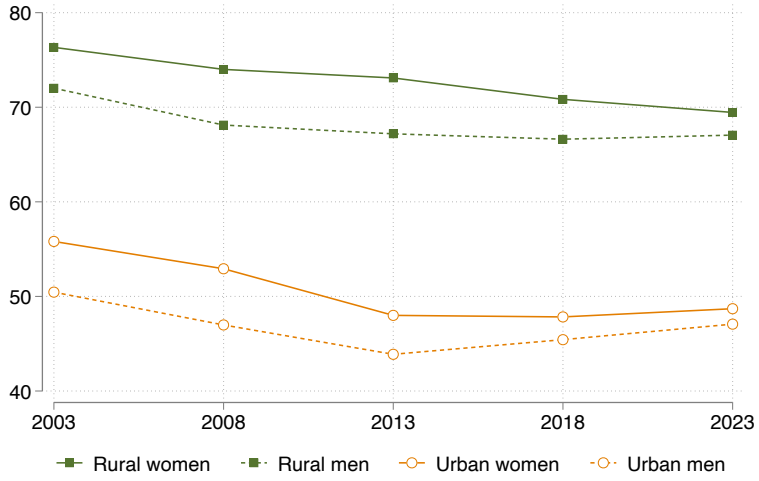


Note: Latin American average. Source: authors' own calculations based on SEDLAC (CEDLAS and The World Bank, 2023) and GenLAC (CEDLAS, 2024) datasets. The sample corresponds to employed individuals aged 20 to 54 years old.

more prevalent among rural men.[11]

Informal jobs have been linked in the literature to more flexible working arrangements that facilitate female labor force participation (Berniell et al., 2021, 2023). In this regard, rural labor markets appear to offer greater flexibility to reconcile market work with domestic responsibilities. Unpaid work and low-skilled self-employment, in particular, often involve flexible schedules and are carried out within or near the household, features that make them more compatible with care responsibilities in contexts where formal childcare services are scarce. Yet, this flexibility comes at a cost: such jobs tend to be less productive, poorly remunerated, and lacking in access to social protection and employment stability. Therefore, while informality may facilitate rural women's participation in the labor market, it does so under precarious conditions that ultimately reinforce their structural disadvantage. Moreover, this greater flexibility is not sufficient to close the participation gap documented in Section 3: despite the widespread prevalence of informal work, rural women continue to engage in the labor market at significantly lower rates than their urban counterparts.

Figure 7: Labor informality in LAC, evolution over time by gender and rural/urban area



Note: Latin American average. Source: authors' own calculations based on SEDLAC (CEDLAS and The World Bank, 2023) and GenLAC (CEDLAS, 2024) datasets. The sample corresponds to individuals aged 20 to 54 years old.

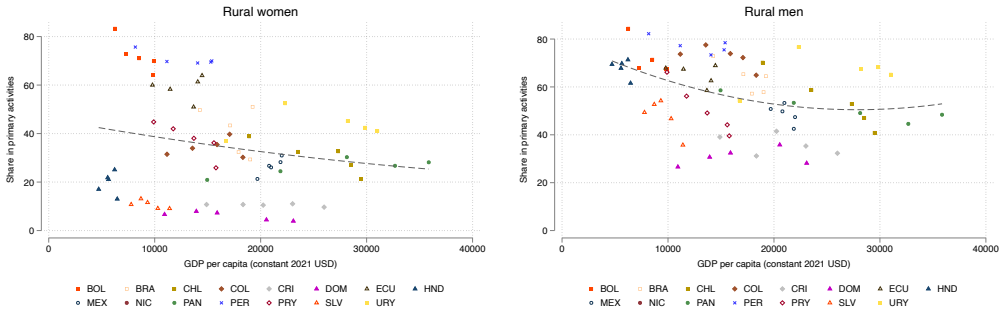
These patterns are also evident when comparing economic development across countries, as illustrated in Figure 8. Panel 8a shows that the share of the primary sector

[11] These differences between rural men and women may partly reflect gendered patterns in labor force reporting rather than substantive differences in economic activity. Agricultural self-employment and unpaid work could, in many cases, correspond to the same underlying activity—household members working the family's own land, whether for market sale or subsistence. Survey responses suggest that men may be more likely to identify themselves as self-employed, while women may more often report being unpaid contributors to family production. Such patterns could arise not only from gender norms and perceptions of labor roles, but also from possible differences in control over income within the household. In some rural settings, women engaged in family agriculture might not directly manage or receive the earnings from their work, which may encourage their identification as unpaid workers.

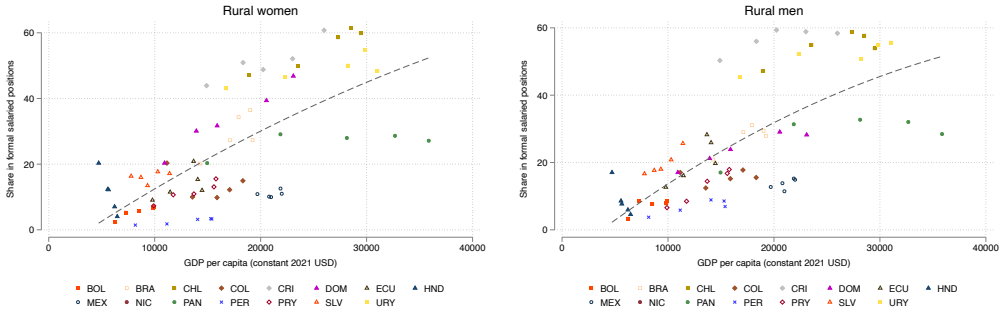
in rural employment tends to decline as GDP per capita rises, although there is substantial cross-country heterogeneity, reflecting the influence of country-specific factors. Panels 8b to 8d further illustrate how labor organization evolves throughout the development process. As GDP per capita increases, the share of formal salaried employment rises among both rural women and men. At the same time, agricultural self-employment declines—particularly among men—while unpaid family work decreases more markedly among women. These contrasting gradients reflect the fact that, at low levels of development, agricultural self-employment is more common among men, whereas unpaid work is more prevalent among women.

Figure 8: Rural labor organization and economic development, for rural women (left) and rural men (right)

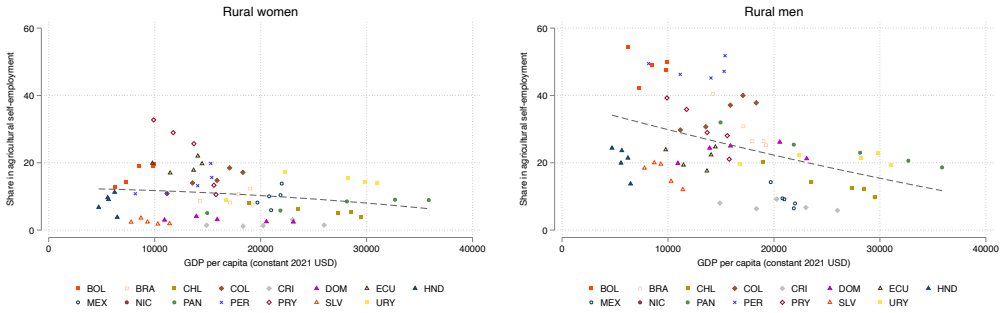
(a) Share in primary sector



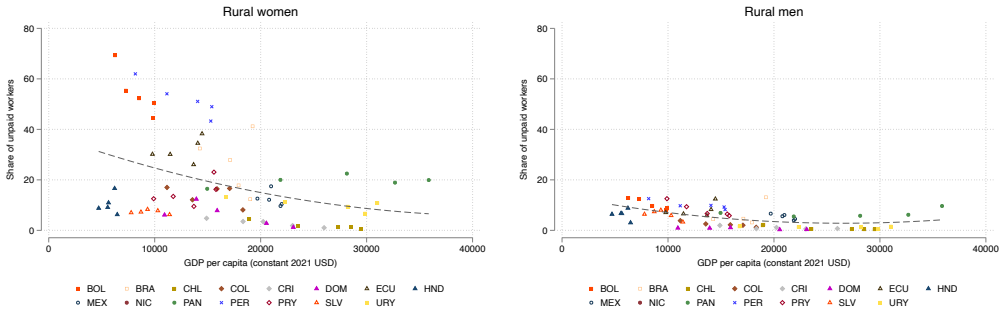
(b) Share in formal salaried positions



(c) Share in agricultural self-employment



(d) Share of unpaid workers



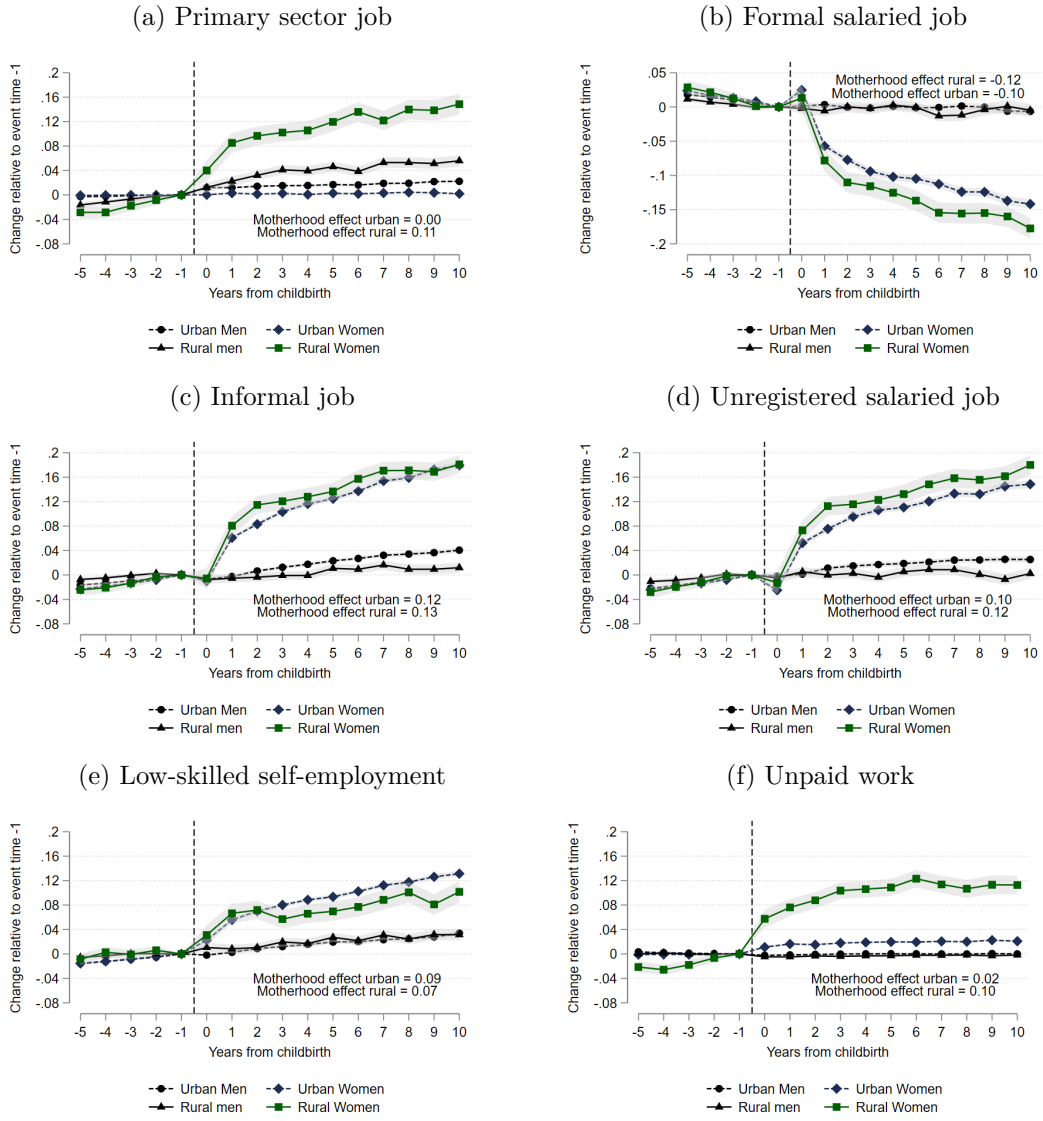
Note: Latin American average. Source: authors' own calculations based on SEDLAC (CEDLAS and The World Bank, 2023) and GenLAC (CEDLAS, 2024) datasets. The sample corresponds to individuals aged 20 to 54 years old. The dashed gray line corresponds to a quadratic regression line.

Motherhood and the Persistence of Disadvantaged Employment among Rural Women

The sectoral shifts toward services and the expansion of formal salaried employment documented so far may generate opportunities that are more compatible with reconciling paid work and childcare responsibilities. Yet the evidence indicates that such sectoral and occupational shifts have not eliminated the disadvantages faced by mothers—particularly in rural areas. Motherhood in these contexts still entails relatively larger penalties, not only restricting labor supply as shown in Section 4, but also reinforcing traditional employment patterns. Figure 9 illustrates this persistence: after their first child, rural women who remain in the labor market after their first childbirth are more likely to move into the primary sector, away from formal salaried jobs, and into informal job arrangements—patterns that could reflect either sectoral mobility or a selection effect whereby women exiting the labor market are disproportionately drawn from more formal, non-primary sectors of employment. Quantitatively, having a first child increases the likelihood of working in the primary sector by 11 percentage points (a 31% rise relative to pre-motherhood levels), reduces the probability of holding a formal salaried job by 12 percentage points (a 44% drop), and raises the incidence of informal jobs by 13 percentage points (a 19% increase). These shifts are generally more pronounced—both in absolute and relative terms—among rural mothers than among their urban counterparts.

The pattern described in Figure 9c for overall labor informality holds consistently across the different types of work arrangements included in our broad definition of informal employment—namely, unregistered employees, low-skilled self-employed, and unpaid workers. Despite the decline in informal employment, motherhood continues to pull women back into these less protected and more precarious forms of work. In particular, Figure 9f shows a large increase in unpaid work because of motherhood in rural areas only. Among rural women, unpaid work increases by approximately 10 percentage points in the medium to long term after childbirth, whereas in urban areas, the increase is limited to around 2 percentage points and remains stable thereafter. This pattern suggests that the motherhood effect adds to an already substantial share of unpaid work among rural women (before childbirth, 23% of working women in rural areas have unpaid jobs compared to only 3% in urban areas), further exacerbating pre-existing inequalities. Regarding self-employment, Figure 9e reveals an initial increase in the years following childbirth among rural women, followed by a temporary dip around three years post-birth, before the upward trend resumes. This temporary decline may reflect the failure of small-scale self-employment initiatives, possibly pointing to a misallocation of talent into self-employment upon motherhood—a mechanism documented in the European context by Berniell et al. (2024).

Figure 9: Effects of the first childbirth on the type of job in rural vs. urban Latin America.



Note: These figures report the β_τs from Equation 1 for urban and rural mothers, separately. Since the omitted category is $\tau = -1$, the coefficients measure the impact of children relative to the year before the first childbirth. Controls include year, age-in-years, and country fixed effects. The effects on every outcome are estimated conditional on being employed. The motherhood effect reported is the average motherhood effect from $\tau = 0$ through $\tau = 10$. Data cover the 14 Latin American countries from 2000-2021, except when estimating the effects on labor informality, where Panama is excluded from the sample. The sample is restricted to mothers and fathers whose age at first childbirth is between 20 and 45 years old.
Source: Own estimations based on SEDLAC (CEDLAS and The World Bank, 2023) and LABLAC (CEDLAS and The World Bank, 2021) datasets.

Taken together, these findings underscore that, despite improvements in female employment rates and declines in informality alongside the contraction of agricultural employment, rural mothers in Latin America continue to face significant barriers to accessing stable and formal jobs. These patterns are consistent with the idea that structural change alone does not automatically translate into more inclusive labor market opportunities for women with family responsibilities.

6 Beyond the labor market: childcare, household chores, and gender roles

In the previous sections, we documented the changes in the composition of employment, from agricultural self-employment and unpaid family work toward salaried work. However, we also showed that this transition has not been uniform: gender gaps persist, and rural mothers are less likely to access these new opportunities. One potential explanation is that these salaried jobs, while more stable, are often less flexible and harder to reconcile with domestic and care responsibilities. For mothers to transition into these roles, they require the possibility of outsourcing domestic services, having access to childcare services that can substitute or complement their own time, as well as a higher involvement of fathers in domestic and caregiving tasks, which would reduce the disproportionate burden on mothers.

To better understand how childcare or domestic services needs compete for time with market work in rural and urban areas, we turn to a different source of data. Unlike the previous sections, which relied on harmonized household surveys with broad regional coverage, the analysis here is based on national time use surveys (TUS), which have richer information about time spent on different activities, but are more limited in availability and comparability (only a subset of countries in the region have ever conducted TUS, and even fewer have conducted more than one). For the purpose of our analysis, we selected countries whose surveys (i) distinguish between urban and rural areas, (ii) allow household-level reconstruction, (iii) report time use information on all adult members, and (iv) have information on daycare or preschool attendance for young children. Since only Mexico fulfills these criteria, the analysis of this section will be restricted to this country, ensuring consistency and analytic depth at the expense of regional coverage.

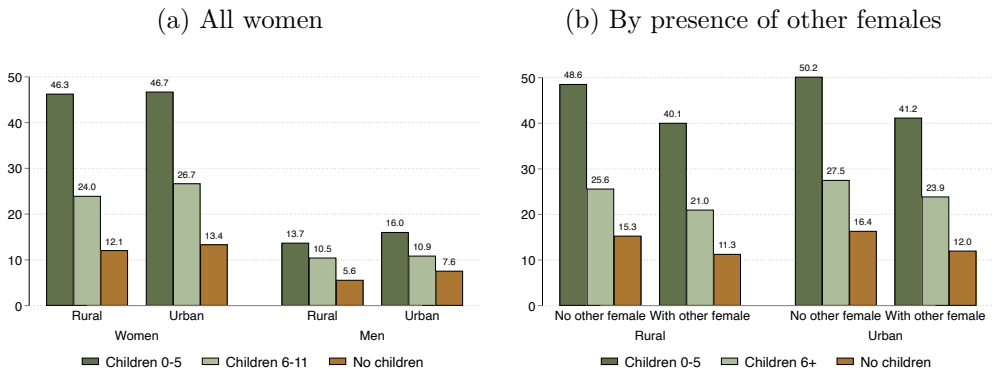
In key labor market indicators, Mexico is close to the average for Latin America, both for rural and urban women. For example, according to the SEDLAC dataset, in 2023 the employment rate of rural women in Mexico was 57%, compared to 64% for urban women, while these figures were 56% and 63% for the Latin American average. In terms of hours worked, women in rural areas worked 37 hours per week on average in both Mexico and Latin America, while their urban counterparts worked 42 and 41 hours, respectively, in urban areas. Informality rates are also similar: 74% of rural women in Mexico were employed in informal jobs, compared to 70% on average in Latin America, while 57% for urban women in Mexico held informal jobs compared to 49% in the region. These parallels make Mexico a useful benchmark for understanding rural women's labor market constraints in the region, while its detailed time use data allow us to explore how different activities compete for women's time.

We start by exploring a first hypothesis of why rural women—especially mothers—are at a disadvantage in the labor market, which is that they spend more time on childcare activities. Panel (a) of Figure 10 shows hours per week spent on childcare,[12] separately

[12]Table A.4 in the Appendix details the activities considered as childcare.

for rural and urban women and men, and by the presence and age of children in the household: mothers of children aged 0-5, mothers of children aged 6-11, and women with no children aged 0-11 in the household. The figure shows that mothers spent much more time on childcare activities, and this is particularly so when children are young: rural mothers of children aged 0-5 devote 46 hours per week to childcare activities, which is almost twice the number of hours for mothers of children aged 6-11, and about 4 times the number of hours for women without children.[13] For men, the number of hours devoted to childcare is very low across all groups. Surprisingly, we do not observe that this pattern differs between rural and urban mothers, which implies that, while childcare responsibilities appear to be an important driver of the gaps in employment and hours worked between mothers and women without children, in the case of Mexico they do not seem to account for rural-urban differences among mothers.

Figure 10: Weekly hours spent on childcare, by gender and children, in rural and urban areas. Mexico, 2019



Source: Own estimations based on Mexico's National Time Use Survey for 2019. The sample corresponds to individuals aged 20 to 54 years old who are either the household head or their spouse. Table A.4 lists the activities included as household chores and home production.

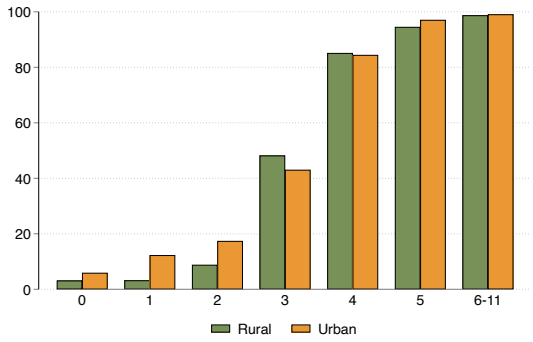
To shed light on why childcare demands generate large gaps between mothers and non-mothers but do not translate into an additional disadvantage for rural women relative to their urban counterparts, we examine differences in access to childcare services. Figure 11 presents the percentage of children attending any type of educational institution by age. Attendance rates decrease substantially for younger children, particularly for those aged three and less, in both urban and rural areas, compared to the high enrollment rates for older children.[14] Yet, unlike some other countries in the region, the rural-urban

[13] Women without children are defined as those who do not live with any child aged 0-11. Since the survey asks about care activities of all children aged 0-14, we cannot fully exclude older children from this measure. This is why we observe a non-zero amount of childcare hours for this group of women.

[14] For children aged 0-4, parents are asked about the reasons for non-attendance. The most commonly reported reason (about 90% of cases in both rural and urban areas) is that the child is cared for by a parent or another family member, and there is no perceived need for external childcare. This rationale may mask the fact that it is typically the mother who takes the burden of caregiving, and what is perceived as "no need" often means that mothers stay home to care for the child, at the expense of their own opportunities. In addition, about 4% and 2% of rural and urban children face barriers related to the lack of adequate facilities or the long distance to the nearest center.

gap in Mexico is minimal, which suggests that there are factors beyond formal service availability that shape the rural-urban gap in caregiving responsibilities.[15]

Figure 11: Percentage of children aged 0-11 attending educational institutions. Mexico 2019



Source: Own estimations based on Mexico's National Time Use Survey for 2019. For children aged 0-4 years old, the survey asks about attendance at daycare, nursery school, preschool, or kindergarten. For children aged 5 and older, the survey asks about school attendance. The sample corresponds to children aged 0 to 11 years old.

Given the low access to childcare for young children, there is a potential role for other female household members in providing support with childcare. This extended support network may include older women, such as grandmothers or other adult female relatives, as well as adolescent girls, such as older sisters or nieces.[16] [17] Consistent with this, Panel (b) of Figure 10 shows that when other women are present in the household, mothers devote fewer hours to childcare.[18] For instance, in rural areas, women with children aged 0-5 spend about 49 hours per week on childcare activities when there is no other adult female in the household, while they spend 40 hours when another female is present, and the figures are similar in urban areas.[19] These results highlight the disadvantage faced by mothers relative to non-mothers, but they do not necessarily account for the additional disadvantage faced by rural women.

Another potential reason for rural mothers lagging behind in their labor market indicators is related with the time spend on other activities (other than childcare) necessary to run the household, which might potentially be more time-consuming in rural than

[15] It is worth noting, however, that even when enrollment rates are similar, differences may remain in the number of hours children actually spend in childcare centers. Unfortunately, the survey does not collect information on daily attendance hours, which limits the analysis of such differences.

[16] In rural areas, 15% of women aged 25-54 live with an older woman (aged 55-85), while this is 17% in urban areas. The numbers are very similar regardless of the presence of children.

[17] Figures A.4 and A.5 in the Appendix plot the number of hours devoted to child care by senior members aged 55-85 (broadly referred to as grandmothers) and by adolescents aged 12-18 (broadly referred to as sisters), for three groups: (i) those who live with at least one child aged 0-5 who is not their son or daughter; (ii) those who live with at least one child aged 6-11 (and no younger children) under the same condition; and (iii) those who do not live with any child aged 0-11. The figures show clearly that both grandmothers and sisters contribute significantly to the care of young children.

[18] We focus on other female household members since males, such as grandfathers or older brothers, contribute little time to childcare, as shown in Figures A.4 and A.5.

[19] This pattern aligns with Figures A.13 and A.14, which indicate that motherhood effects on labor market outcomes are generally smaller in extended families.

urban settings. Panels (a), (c), and (d) of Figure 12 show hours per week spent on household chores, home production, and water collection.[20] In line with other evidence for Mexico that highlights how unpaid work increases disproportionately for mothers (Aguilar-Gomez et al., 2026), the figure reveals a clear rurality gap in terms of time devoted to household chores (such as cooking, cleaning, and household management): rural mothers spend 6 more hours per week than their urban counterparts (44 versus 38). Notably, this gap exists even among women without children, suggesting that it is not only the presence of children that competes for rural women's time but possibly other constraints as well. When we analyze home production (such as raising animals, growing food, or other forms of home production for own consumption), rural mothers devote almost 4 hours per week on average, compared to less than one hour among urban mothers (Panel c). This type of work is often overlooked but represents a critical component of rural livelihoods, especially in lower-income households.

Taken together, these findings suggest that while childcare demands explain much of the difference between mothers and women without children, they do not seem to account for the lower participation of rural women relative to their urban counterparts (at least in the case of Mexico). Instead, it is the heavier burden of household chores and home production in rural areas that appears to be a more important factor limiting rural women's engagement in the labor market. Since care and household activities can often be performed simultaneously, it is difficult to assess how much time they actually absorb in total. One way to capture this is by looking at leisure time, which can be interpreted as the residual once all other activities are accounted for. Figure A.6 in the Appendix illustrates this, showing that rural women end up with substantially less leisure time than urban women.

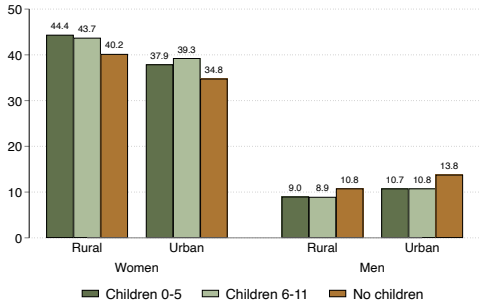
Other pieces of evidence are suggestive of this. First, according to the Mexican labor force survey ENOE (*Encuesta Nacional de Ocupación y Empleo*), while about 6% of urban households reported employing domestic workers in 2024, this figure is only 1.5% for rural households. Second, the observed differences could be the result of gaps in the (lack of) access to appliances and other home-production technologies. Indeed, the evidence has shown that the diffusion of labor-saving household technologies (such as washing machines, refrigerators, or vacuum cleaners) has been a key factor behind the increase in female labor force participation in the 20th century.[21] Access to these technologies differs between rural and urban settings: for instance, while 77% of urban households reported owning a washing machine in 2022, this falls to 58% for rural

[20] See Table A.4 in the Appendix for a detailed classification of activities into household chores and home production. Note that the survey does not ask whether these activities are carried out simultaneously. As a result, reported hours may in some cases add up to more than 24 hours per day when individuals perform multiple tasks at the same time. Further, the hours devoted to home production reported in the time use surveys are not necessarily exclusive of the hours spent on market unpaid work reported in household surveys, as the latter do not always allow these activities to be separately identified. Therefore, we cannot rule out some overlap between measures.

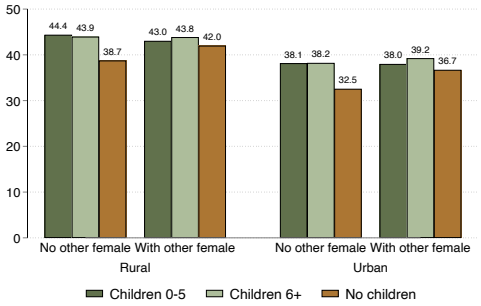
[21] See, for instance, Bose et al. (2022), and de V. Cavalcanti and Tavares (2008). A recent pilot program in Colombia also suggests that access to washing machines in low-income settings can increase female employment (García-Jimeno and Peña, 2016).

Figure 12: Weekly hours spent on different activities, by gender and children, in rural and urban areas. Mexico, 2019

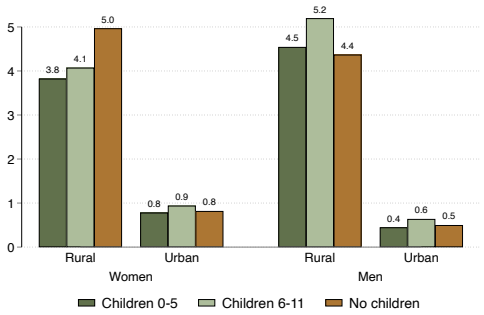
(a) Household chores



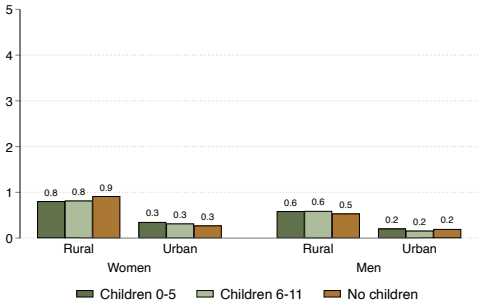
(b) Hhold. chores (by presence of females)



(c) Home production



(d) Water collection



Source: Own estimations based on Mexico's National Time Use Survey for 2019. The sample corresponds to individuals aged 20 to 54 years old who are either the household head or their spouse. Table A.4 lists the activities included as household chores and home production.

households; or 92% of urban households have a refrigerator compared to 80% in rural areas. In addition, there are other tasks specific to rural areas, such as water collection. Although it requires less total time than other domestic chores, it is mostly performed by women (see Panel d of Figure 12), further adding to the already high burden of unpaid household work. Therefore, the limited availability of both external domestic services and household technologies that facilitate domestic work reinforces the inequality in available time between rural and urban women, and may explain the disadvantage of rural women –especially mothers– in the labor market.

Beyond these time constraints, it is important to consider the role of social norms. Rural areas tend to be more conservative about gender roles, which may further reinforce the unequal division of household and care responsibilities. For instance, evidence from the 2018 World Values Survey for Mexico, shows that rural respondents are more likely than urban ones to agree with statements like *"Being a housewife is just as fulfilling as working for pay"* (61% versus 53%, respectively), or *"When a mother works for pay, the children suffer"* (54% versus 49%, respectively). These attitudes, together with the heavier unpaid work burden in rural areas, suggest that structural transformation will not be enough on its own to improve labor market opportunities for rural women.

7 Conclusions

This paper has examined women's labor market outcomes in rural Latin America, documented their evolution over time, analyzed the role of motherhood, and related these patterns to broader changes in the region's economic structure. By documenting trends over two decades in 14 countries, we showed that rural women face a persistent double disadvantage: they participate less, work fewer hours, and earn less than both rural men and urban women. Structural transformation has expanded service employment and increased the share of formal salaried jobs, but these shifts have not sufficed to close the gaps. Informality remains widespread in rural areas, and for women it often takes the form of unpaid family work. Around 16% of employed rural women are in unpaid jobs—well above the incidence among rural men or urban women—, highlighting the enduring relevance of family-based unpaid arrangements in shaping rural women's labor opportunities.

Consistent with previous studies, we also show the pervasiveness of large child penalties across the region, and add to this evidence by documenting their marked heterogeneity between urban and rural areas. Rural mothers experience smaller short-run employment drops than their urban peers and show partial recovery, suggesting that more flexible rural jobs allow easier re-entry. Yet this flexibility is achieved largely through precarious employment: motherhood pushes rural women into unpaid work and low-skilled self-employment, widening long-term income gaps with urban women. Moreover, evidence from a cross-country analysis suggests that motherhood penalties in rural areas increase with the level of development, pointing to the possibility that, as rural economies become less reliant on agriculture and more oriented toward non-agricultural activities, the types of jobs available to women may become less compatible with childcare responsibilities. Complementary evidence from time-use data in Mexico shows that rural mothers' disadvantage is not primarily explained by childcare responsibilities—similar in intensity to those of urban mothers—but by heavier demands of household chores, home production for own consumption, and limited access to labor-saving technologies.

Taken together, these results underscore that structural transformation, while reducing agricultural dependence and expanding services, does not automatically translate into more inclusive labor market opportunities for rural women with family responsibilities. Instead, unpaid work within the household continues to constrain their capacity to benefit from new economic opportunities.

From a policy perspective, our findings suggest that fostering gender equity in rural labor markets requires going beyond the promotion of structural change per se. Expanding access to affordable childcare and early childhood education remains crucial, but equally important are interventions that reduce the domestic workload borne disproportionately by rural women. Policies to improve access to labor-saving household technologies, invest in rural infrastructure (such as water supply and energy), and expand the availability of paid domestic and care services could help release women's time for market activities.

Besides freeing women's time, such policies may also gradually influence gender norms by reshaping expectations about work and care. Strengthening rural social protection systems and promoting the formalization of employment are also essential to ensure that the jobs women access are not only more numerous but also of better quality.

Ultimately, structural transformation holds the potential to narrow gender gaps, but this potential will remain unrealized unless complemented with policies that address the unequal distribution of unpaid work. Only by combining labor market policies with broader social and infrastructure investments can rural mothers fully share in the benefits of economic development.

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Appendix

A Tables and figures

Table A.1: Data Sources

Country	Household Surveys (SEDLAC & LABLAC)	Time-Use Surveys (GenLAC)
Latin America		
Bolivia	X	
Brazil	X	
Chile	X	
Colombia	X	
Costa Rica	X	
Ecuador	X	
El Salvador	X	
Guatemala	X	
Honduras	X	
Mexico	X	X
Nicaragua	X	
Panama	X	
Paraguay	X	
Peru	X	
Dominican Republic	X	
Uruguay	X	

Table A.2: Summary statistics for women and men in rural and urban areas, circa 2023

			Rural		Urban	
	Women	Men	Women	Men	Women	Men
Number of individuals	561,806	496,281	120,830	115,614	440,976	380,667
Employed	0.62	0.86	0.56	0.89	0.63	0.85
Hours worked	39.73	45.79	36.78	44.54	40.55	46.41
Informal worker	0.53	0.52	0.69	0.67	0.49	0.47
Hourly wage	3.80	3.98	3.20	3.27	3.91	4.18
Monthly earnings	595.03	724.24	455.89	580.30	624.16	767.64
Salaried worker	0.65	0.66	0.49	0.55	0.69	0.69
Self-employed	0.26	0.28	0.32	0.36	0.25	0.25
Unpaid worker	0.06	0.02	0.16	0.04	0.03	0.01
Has children	0.83	0.73	0.85	0.76	0.82	0.71
Age at first birth	24.11	26.69	23.62	26.61	24.26	26.72
Number of children	1.98	1.97	2.15	2.14	1.92	1.90

The table presents the Latin American average, computed as the simple average of country-level values for the year 2023. The data covers 14 Latin American countries, and the sample is restricted to individuals aged 20 to 54. Hours worked, informality, wages, earnings, and type of employment relationship are conditional on being employed. Children-related variables (has children, age at first birth and number of children) are defined for household head and spouse only.
Source: Own estimations based on SEDLAC (CEDLAS and The World Bank, 2023) and GenLAC (CEDLAS, 2024).

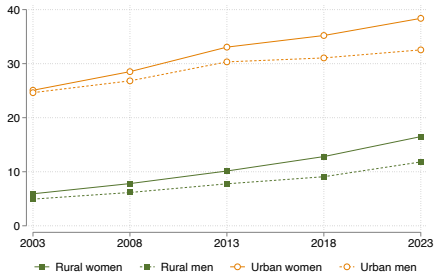
Table A.3: Summary statistics at $\tau = -1$, pooled sample.

	Total		Urban		Rural	
	Mothers	Fathers	Mothers	Fathers	Mothers	Fathers
Complete sample						
Year of first child's birth	2010	2010	2010	2010	2010	2009
	(4.49)	(4.50)	(4.44)	(4.45)	(4.66)	(4.63)
Age at first child	26.62	28.58	26.67	28.65	25.30	27.64
	(5.37)	(5.89)	(5.34)	(5.88)	(5.52)	(6.02)
With some college education	0.41	0.30	0.43	0.33	0.07	0.04
	(0.49)	(0.46)	(0.49)	(0.47)	(0.26)	(0.18)
Maximum one child	0.63	0.59	0.64	0.60	0.60	0.56
	(0.48)	(0.49)	(0.48)	(0.49)	(0.49)	(0.50)
Maximum two children	0.94	0.92	0.95	0.93	0.91	0.89
	(0.23)	(0.26)	(0.23)	(0.25)	(0.29)	(0.32)
Monthly labor earnings (PPP 2005)	343.10	581.76	357.59	604.36	128.04	373.10
	(420.92)	(750.00)	(410.56)	(569.07)	(427.58)	(1449.97)
Employed	0.63	0.90	0.64	0.90	0.43	0.93
	(0.35)	(0.21)	(0.33)	(0.20)	(0.43)	(0.19)
No. of individuals	1,096,871	1,149,647	937,809	945,904	100,170	148,375
Sample of workers						
Hours worked	42.17	48.33	43.01	48.96	38.06	46.38
	(11.63)	(11.56)	(10.79)	(11.15)	(16.53)	(11.79)
No. of individuals	412,515	760,060	357,218	599,290	23,167	110,772
Hourly wages	15.08	14.93	15.06	15.62	8.30	9.11
	(15.30)	(20.62)	(14.91)	(18.08)	(19.88)	(31.34)
No. of individuals	395,829	736,703	342,342	580,359	22,063	106,922
Share in primary sector activities	0.03	0.11	0.01	0.04	0.35	0.58
	(0.14)	(0.27)	(0.08)	(0.14)	(0.45)	(0.41)
No. of individuals	426,154	862,088	404,696	746,842	21,458	115,246
Share in non-agricultural self-employment	0.22	0.24	0.22	0.26	0.17	0.10
	(0.30)	(0.31)	(0.30)	(0.31)	(0.34)	(0.25)
No. of individuals	292,423	551,677	273,407	460,382	19,016	91,295
Share in formal salaried position	0.55	0.47	0.57	0.51	0.27	0.25
	(0.37)	(0.36)	(0.36)	(0.35)	(0.42)	(0.36)
No. of individuals	313,225	578,423	293,087	484,191	20,138	94,232
Non-Registered job	0.38	0.45	0.37	0.42	0.70	0.74
	(0.39)	(0.39)	(0.38)	(0.38)	(0.43)	(0.37)
No. of individuals	433,506	842,025	382,941	697,529	20,205	99,720
Self employment	0.10	0.17	0.10	0.15	0.21	0.29
	(0.23)	(0.27)	(0.22)	(0.25)	(0.38)	(0.37)
No. of individuals	491,242	961,904	436,188	791,535	22,889	120,251
Unpaid work	0.04	0.01	0.03	0.01	0.23	0.02
	(0.15)	(0.07)	(0.13)	(0.06)	(0.40)	(0.11)
No. of individuals	491,242	961,969	436,188	791,600	22,889	120,251
Labor Informality	0.34	0.39	0.32	0.34	0.68	0.67
	(0.37)	(0.37)	(0.35)	(0.34)	(0.44)	(0.40)
No. of individuals	491,242	961,969	436,188	791,600	22,889	120,251

Notes: The table shows the mean and the standard deviation (in parentheses) of sociodemographic and labor market variables for both mothers and fathers one year before the first childbirth. Monthly labor earnings take the value 0 when the individual is not working in a given month. Hours worked and informality are conditional on being employed. Data cover the 14 Latin American countries from 2000-2021, except for labor informality, where Panama is excluded from the sample. The sample is restricted to mothers and fathers whose age at first childbirth is between 20 and 45 years old.
Source: Own estimations based on SEDLAC (CEDLAS and The World Bank, 2023) and LABLAC (CEDLAS and The World Bank, 2021).

Figure A.1: Educational outcomes in LAC, evolution over time by gender and rural/urban area

(a) Share with some college education



(b) Years of schooling

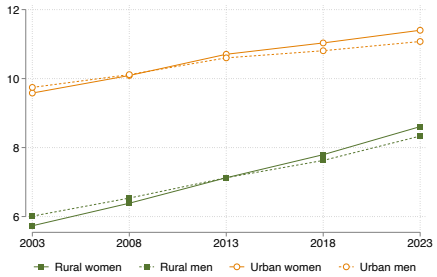
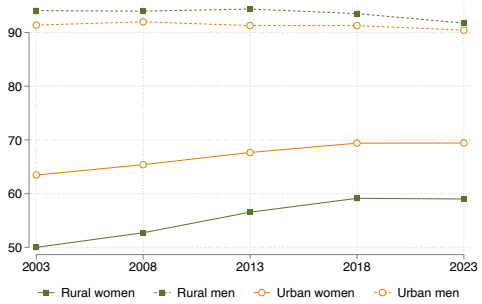
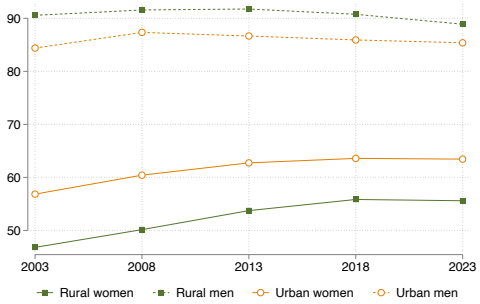


Figure A.2: Main labor outcomes in LAC, evolution over time by gender and rural/urban area

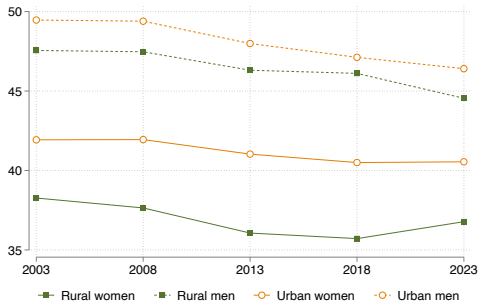
(a) Labor force participation



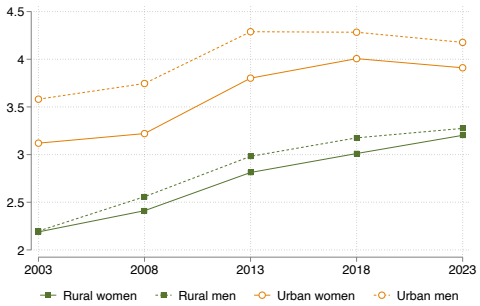
(b) Employment



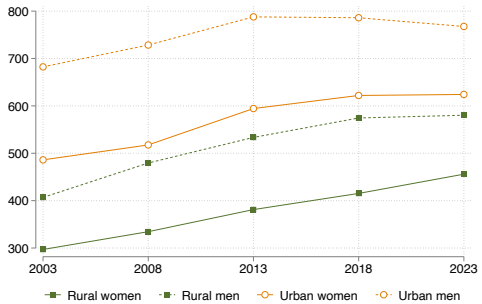
(c) Hours worked per week



(d) Hourly wages

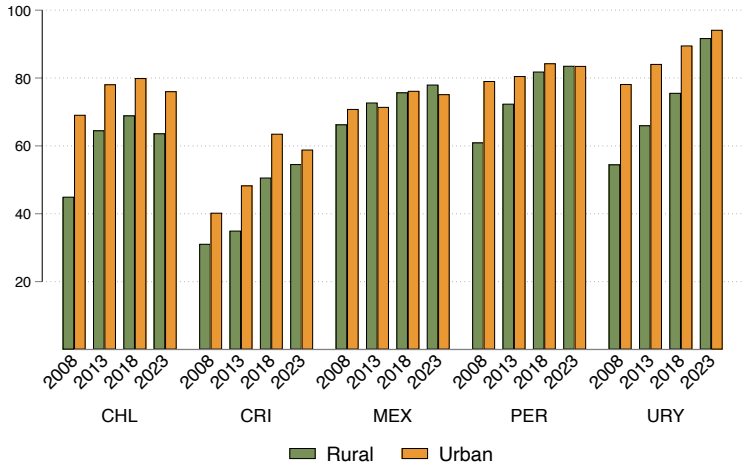


(e) Monthly earnings



Note: Latin American average. Source: authors' own calculations based on SEDLAC (CEDLAS and The World Bank, 2023) and GenLAC (CEDLAS, 2024) datasets. The sample corresponds to individuals aged 20 to 54 years old.

Figure A.3: Percentage of children aged 3-5 attending an educational institution

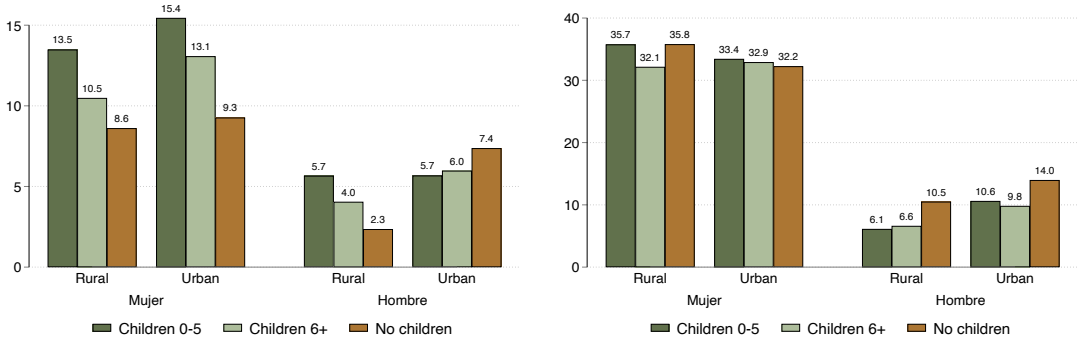


Source: authors' own calculations based on SEDLAC (CEDLAS and The World Bank, 2023) and GenLAC (CEDLAS, 2024) datasets. The sample corresponds to children aged 3 to 5 years old.

Figure A.4: Weekly hours spent on different activities for women aged 55-85, by presence of children in rural and urban areas. Mexico 2019

(a) Child care

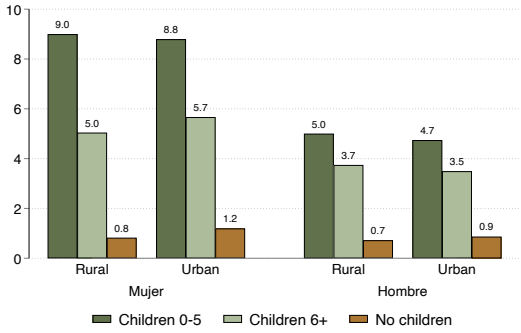
(b) Household chores



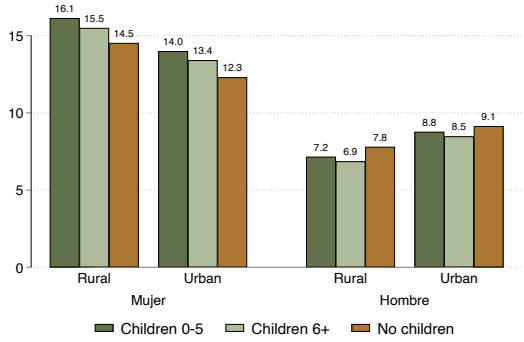
Note: The sample includes individuals aged 55 to 85 in three groups: (i) those who live with children aged 0-5 who are not their sons or daughters; (ii) those who live with children aged 6-11 who are not their sons or daughters; and (iii) those who do not live with any young children.
Source: Own estimations based on Mexico's 2019 National Time Use Survey (ENUT).

Figure A.5: Weekly hours spent on different activities for girls aged 12-18, by presence of children in rural and urban areas. Mexico 2019

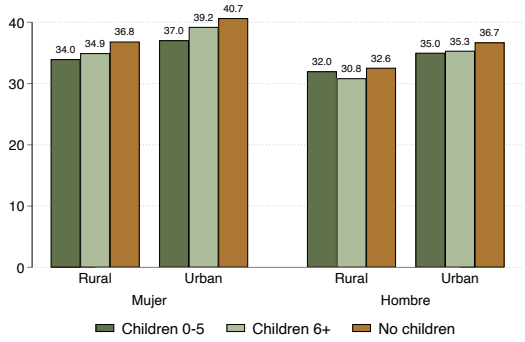
(a) Child care



(b) Household chores

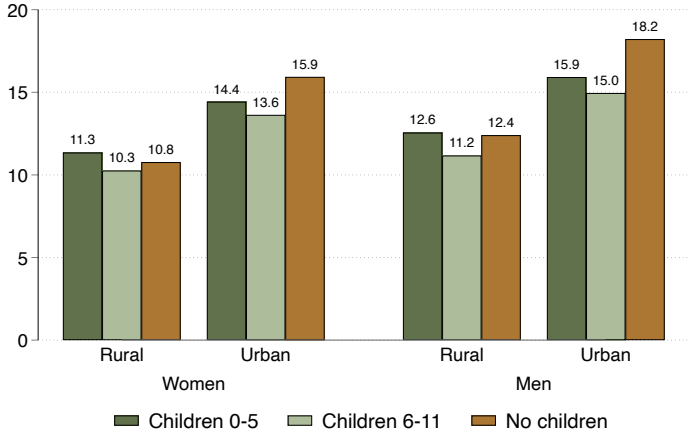


(c) Study



Note: The sample includes individuals aged 12 to 18 in three groups: (i) those who live with children aged 0-5 who are not their sons or daughters; (ii) those who live with children aged 6-11 who are not their sons or daughters; and (iii) those who do not live with any young children.
Source: Own estimations based on Mexico's 2019 National Time Use Survey (ENUT).

Figure A.6: Weekly hours spent on leisure activities, by gender and children, in rural and urban areas. Mexico, 2019



Source: Own estimations based on Mexico's National Time Use Survey for 2019. The sample corresponds to individuals aged 20 to 54 years old who are either the household head or their spouse.

Table A.4: Classification of activities into household chores and home production

Category	**Activities**
Childcare	Feeding or breastfeeding children aged 0-5; bathing, dressing, or grooming them; carrying or putting them to bed. Taking children aged 0-14 to or picking them up from daycare, school, or relatives' houses; helping them with schoolwork; providing therapy or physical exercises; taking them to health appointments; attending school meetings or events; supervising or looking after them while doing another activity.
Household chores	Preparing food (including cooking, making tortillas, lighting the stove, serving meals, washing dishes); cleaning the house and outdoor spaces; doing laundry, ironing, mending, or caring for clothes and shoes; shopping for food, cleaning products, or household goods; caring for pets or plants; household maintenance and minor repairs; vehicle cleaning and maintenance; managing household accounts or payments; supervising services or repairs; ensuring household safety (locking doors, waiting for utilities); dealing with household's paperwork or social programs.
Home production	Collecting firewood; caring for or raising small livestock (e.g., milking, collecting eggs); gathering plants, mushrooms, wild fruits, fishing or hunting; planting or maintaining a home garden; producing household goods (furniture, kitchen utensils, adobe, blocks); weaving or sewing textiles.

Source: Mexico's 2019 National Time Use Survey (ENUT).

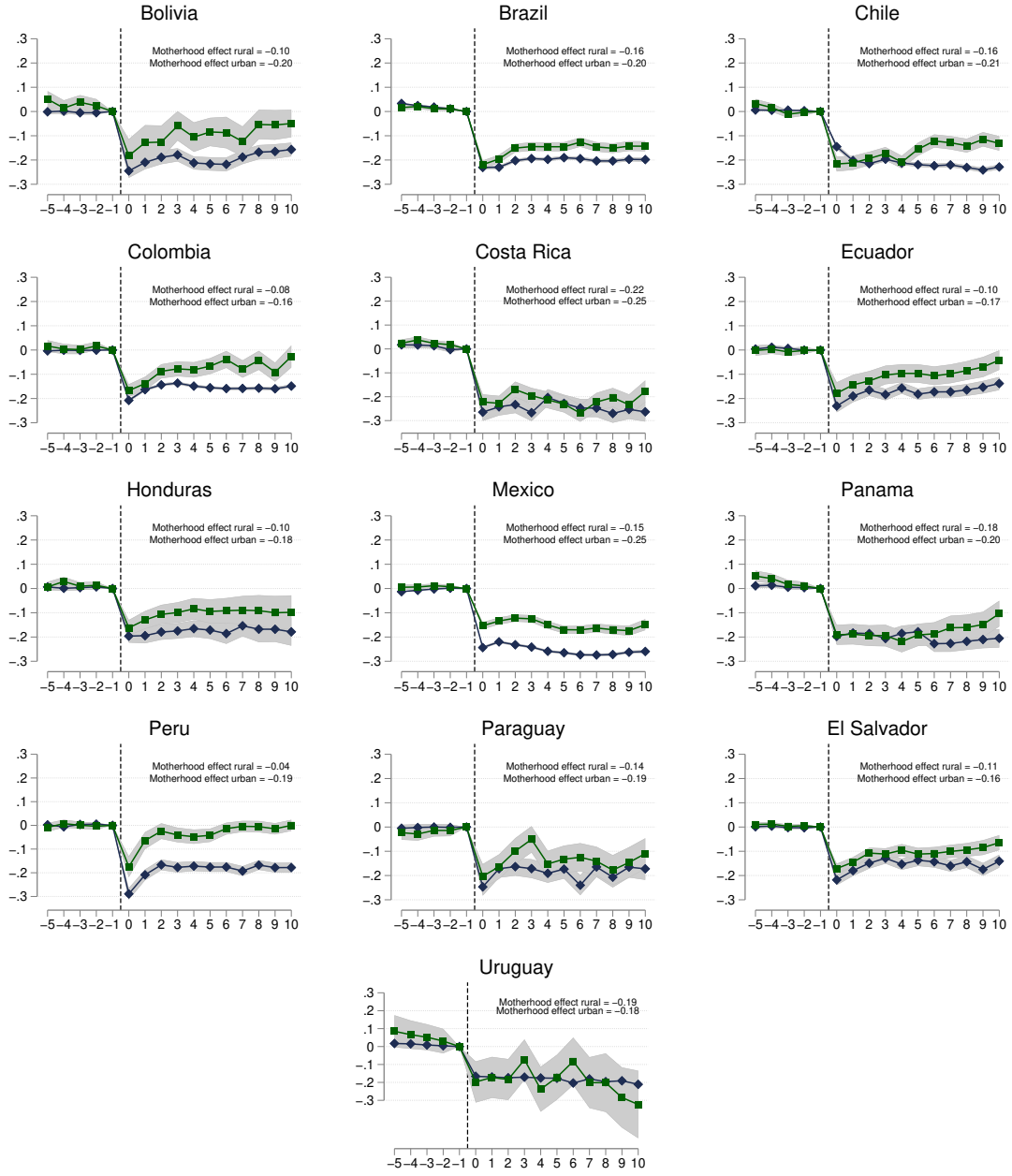
B Heterogeneity analysis

In this section, we explore potential heterogeneities in the motherhood effects across different groups of women, both in rural and urban areas. Specifically, we examine these

effects based on women's educational attainment, number of children, and by grouping countries according to their income levels (low, medium, and upper). By investigating these heterogeneous effects, we aim to provide a more comprehensive understanding of how structural change interacts with gender dynamics in the labor market. This disaggregation will help identify areas where policies can be tailored to address the unique challenges faced by different groups of women, ultimately offering guidance for more targeted and effective gender equality interventions.

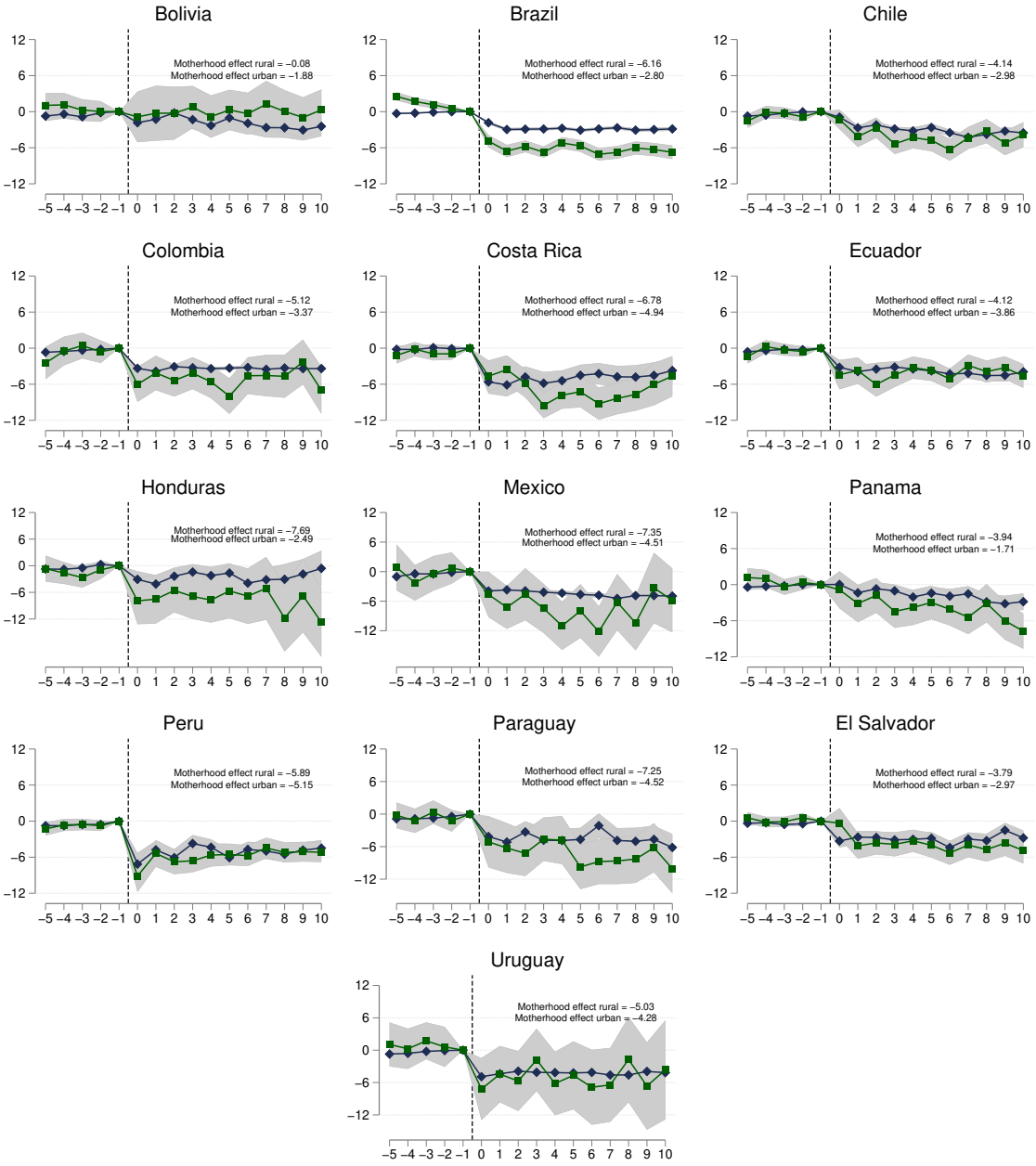
B I By country

Figure A.7: Effects of the first childbirth on employment by country and region



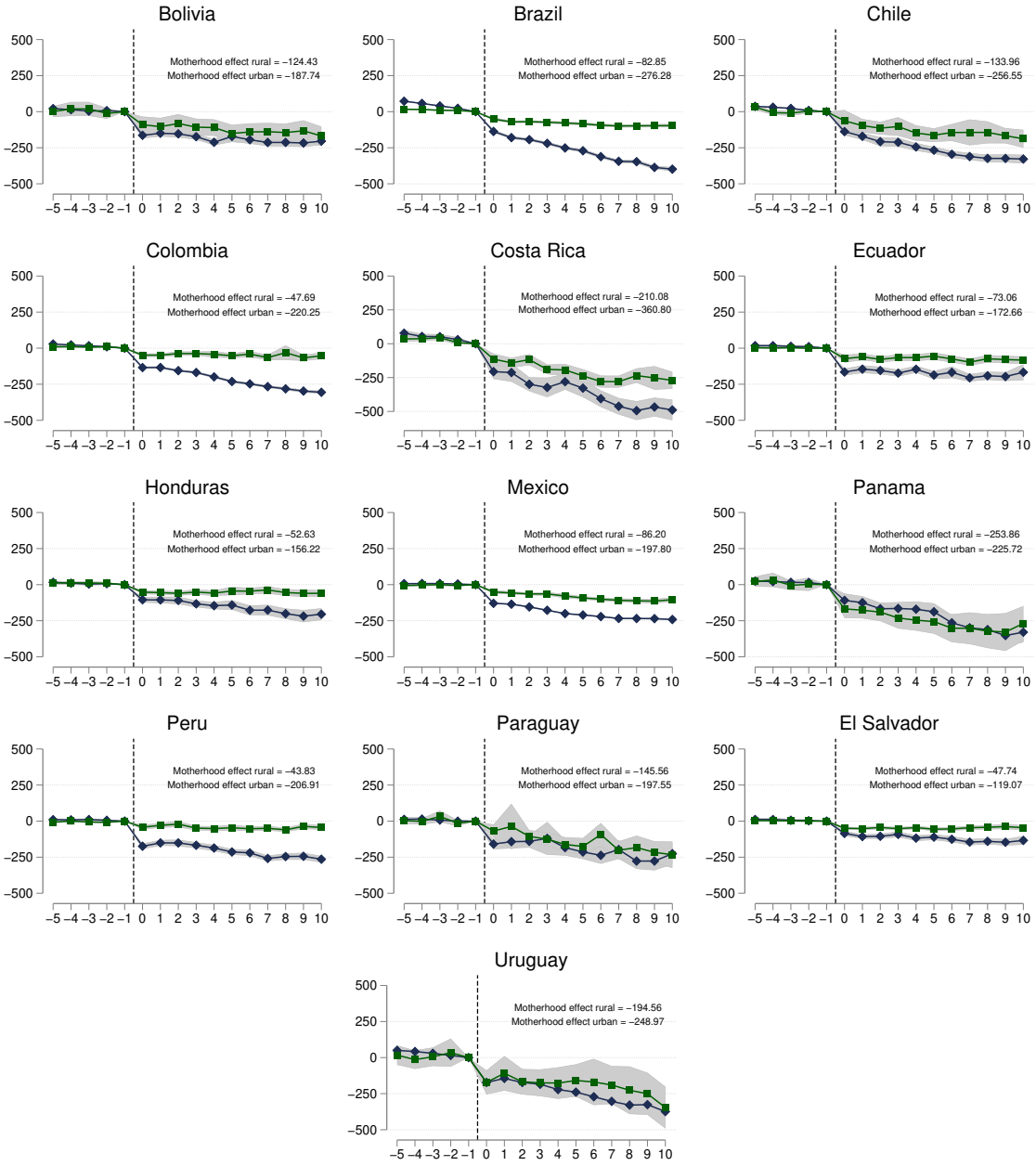
Note: These figures report the β_τs from Equation 1 for urban and rural mothers, separately. Since the omitted category is $\tau = -1$, the coefficients measure the impact of children relative to the year before the first childbirth. Controls include year and age-in-years. The effects on hours worked and informality are estimated conditional on being employed. The motherhood effect reported is the average motherhood effect from $\tau = 0$ through $\tau = 10$. Data cover the 14 Latin American countries from 2000-2021, except when estimating the effects on labor informality, where Panama is excluded from the sample. The sample is restricted to mothers and fathers whose age at first childbirth is between 20 and 45 years old.
Source: Own estimations based on SEDLAC (CEDLAS and The World Bank, 2023) and LABLAC (CEDLAS and The World Bank, 2021) datasets.

Figure A.8: Effects of the first childbirth on hours worked by country and region



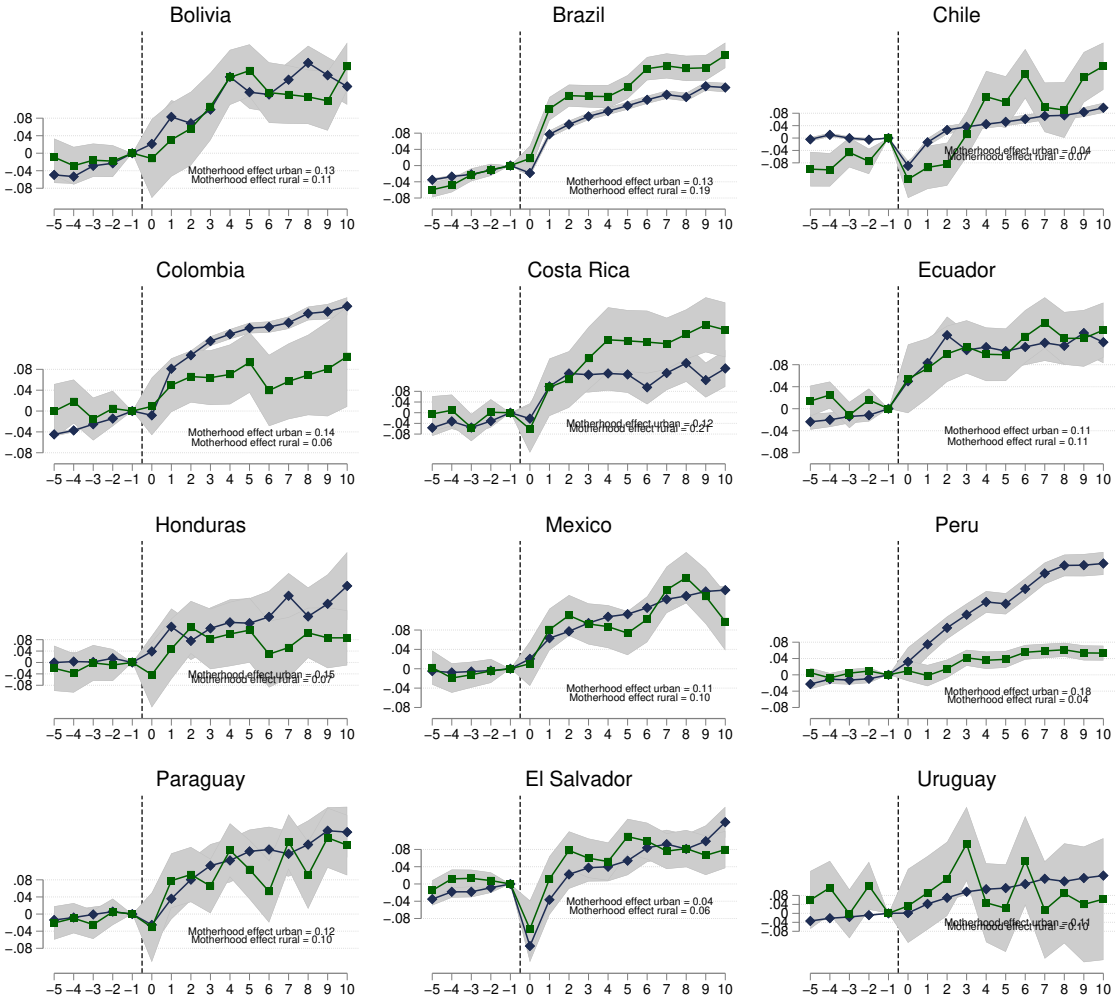
Note: These figures report the β_τs from Equation 1 for urban and rural mothers, separately. Since the omitted category is $\tau = -1$, the coefficients measure the impact of children relative to the year before the first childbirth. Controls include year and age-in-years. The effects on hours worked and informality are estimated conditional on being employed. The motherhood effect reported is the average motherhood effect from $\tau = 0$ through $\tau = 10$. Data cover the 14 Latin American countries from 2000-2021, except when estimating the effects on labor informality, where Panama is excluded from the sample. The sample is restricted to mothers and fathers whose age at first childbirth is between 20 and 45 years old.
Source: Own estimations based on SEDLAC (CEDLAS and The World Bank, 2023) and LABLAC (CEDLAS and The World Bank, 2021) datasets.

Figure A.9: Effects of the first childbirth on earnings by country and region



Note: These figures report the β_τs from Equation 1 for urban and rural mothers, separately. Since the omitted category is $\tau = -1$, the coefficients measure the impact of children relative to the year before the first childbirth. Controls include year and age-in-years. The effects on hours worked and informality are estimated conditional on being employed. The motherhood effect reported is the average motherhood effect from $\tau = 0$ through $\tau = 10$. Data cover the 14 Latin American countries from 2000-2021, except when estimating the effects on labor informality, where Panama is excluded from the sample. The sample is restricted to mothers and fathers whose age at first childbirth is between 20 and 45 years old.
Source: Own estimations based on SEDLAC (CEDLAS and The World Bank, 2023) and LABLAC (CEDLAS and The World Bank, 2021) datasets.

Figure A.10: Effects of the first childbirth on informality by country and region



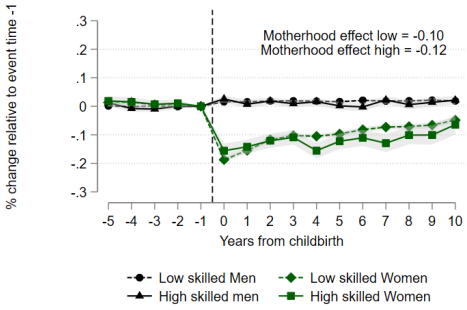
Note: These figures report the β_τs from Equation 1 for urban and rural mothers, separately. Since the omitted category is $\tau = -1$, the coefficients measure the impact of children relative to the year before the first childbirth. Controls include year and age-in-years. The effects on hours worked and informality are estimated conditional on being employed. The motherhood effect reported is the average motherhood effect from $\tau = 0$ through $\tau = 10$. Data cover the 14 Latin American countries from 2000-2021, except when estimating the effects on labor informality, where Panama is excluded from the sample. The sample is restricted to mothers and fathers whose age at first childbirth is between 20 and 45 years old.
Source: Own estimations based on SEDLAC (CEDLAS and The World Bank, 2023) and LABLAC (CEDLAS and The World Bank, 2021) datasets.

B II By skill level

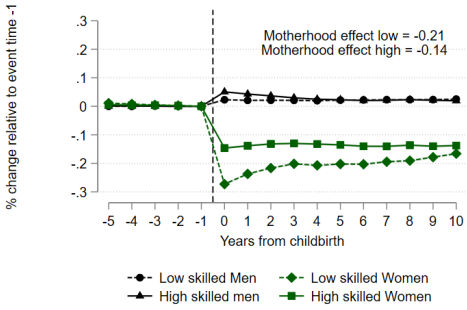
We analyze the heterogeneous impacts of motherhood by educational level. It is expected that women with higher education in urban areas experience fewer negative consequences on labor outcomes due to greater access to formal and higher-paying jobs. In contrast, women with lower education, especially in rural areas, are likely to face more significant challenges in accessing formal employment and are more likely to remain in informal labor markets even after childbirth. This distinction allows us to evaluate how educational policies can help mitigate or exacerbate gender inequalities in labor market outcomes, particularly within the context of ongoing structural change.

Figure A.11: Effects of the first childbirth on earnings and employment, by skill level

(a) Employment: rural



(b) Employment: urban



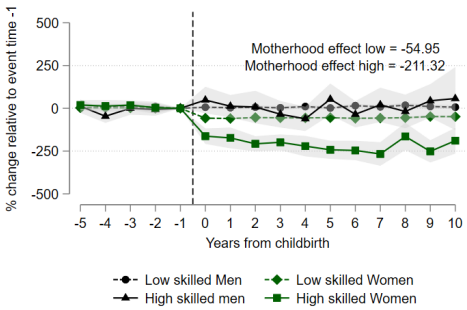
(c) Hours worked: rural



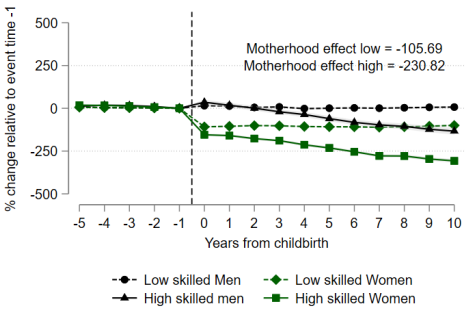
(d) Hours worked: urban



(e) Earnings: rural



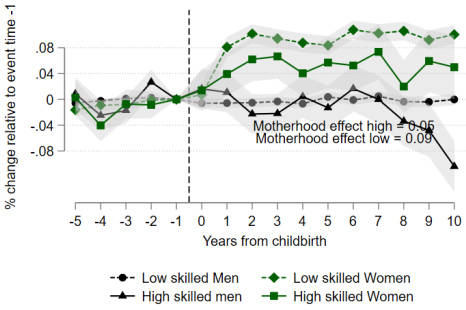
(f) Earnings: urban



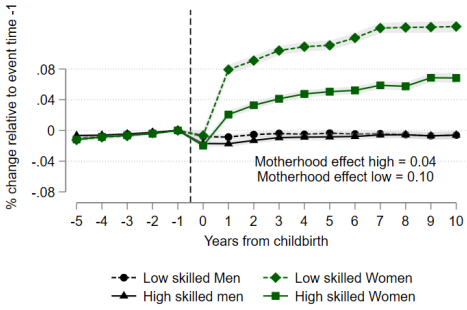
Note: These figures report the β_τs from Equation 1 for low-skilled (LS) and high-skilled (HS) mothers and fathers in urban and rural regions, separately. We define low-skilled individuals if they have completed secondary education or less, and high-skilled individuals if they have completed some tertiary education or more. Since the omitted category is $\tau = -1$, the coefficients measure the impact of children relative to the year before the first childbirth. Controls include year, age-in-years, and country fixed effects. The effects on hours worked and informality are estimated conditional on being employed. The motherhood effect reported is the average motherhood effect from $\tau = 0$ through $\tau = 10$. Data cover the 14 Latin American countries from 2000-2021, except when estimating the effects on labor informality, where Panama is excluded from the sample. The sample is restricted to mothers and fathers whose age at first childbirth is between 20 and 45 years old.
Source: Own estimations based on SEDLAC (CEDLAS and The World Bank, 2023) and LABLAC (CEDLAS and The World Bank, 2021) datasets.

Figure A.12: Effects of the first childbirth on informality, by skill level

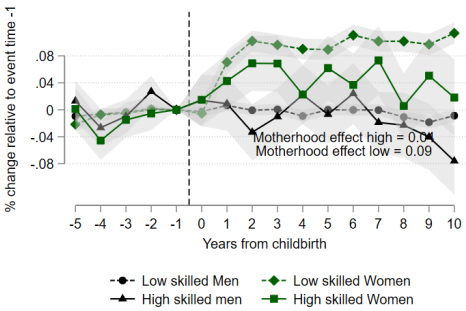
(a) Informality: rural



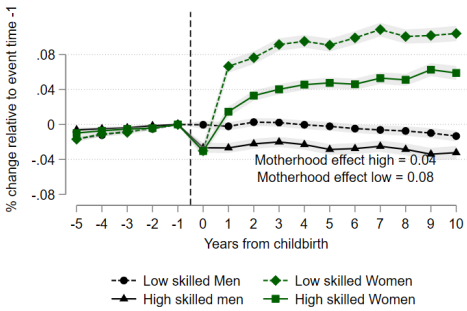
(b) Informality: urbano



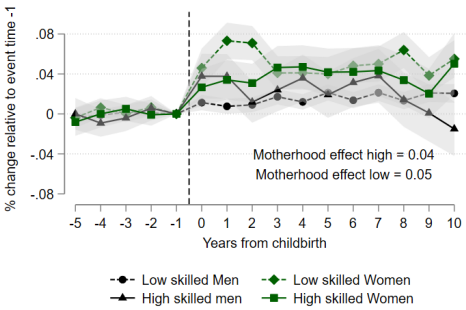
(c) Informality: Non-Registered job: rural



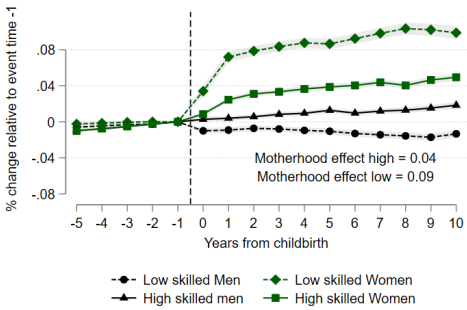
(d) Informality: Non-Registered job: urbano



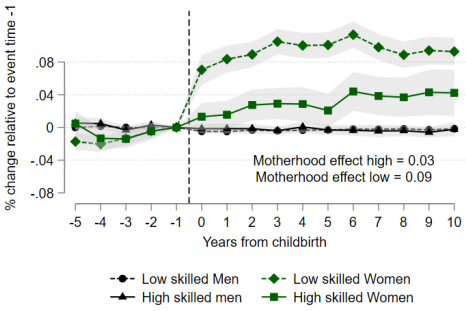
(e) Informality: Self employment: rural



(f) Informality: Self employment: urbano



(g) Informality: Unpaid work: rural



(h) Informality: Unpaid work: urbano

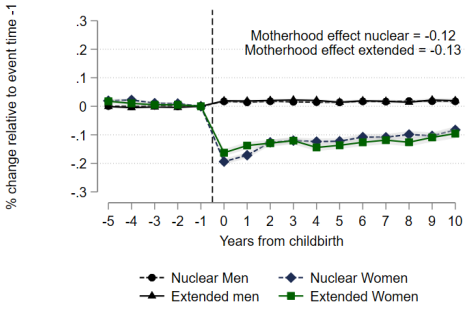


Note: These figures report the β_τs from Equation 1 for low-skilled (LS) and high-skilled (HS) mothers and fathers in urban and rural regions, separately. We define low-skilled individuals if they have completed secondary education or less, and high-skilled individuals if they have completed some tertiary education or more. Since the omitted category is $\tau = -1$, the coefficients measure the impact of children relative to the year before the first childbirth. Controls include year, age-in-years, and country fixed effects. The effects on informality are estimated conditional on being employed. The motherhood effect reported is the average motherhood effect from $\tau = 0$ through $\tau = 10$. Data cover the 14 Latin American countries from 2000-2021, except Panama. The sample is restricted to mothers and fathers whose age at first childbirth is between 20 and 45 years old.
Source: Own estimations based on SEDLAC (CEDLAS and The World Bank, 2023) and LABLAC (CEDLAS and The World Bank, 2021) datasets.

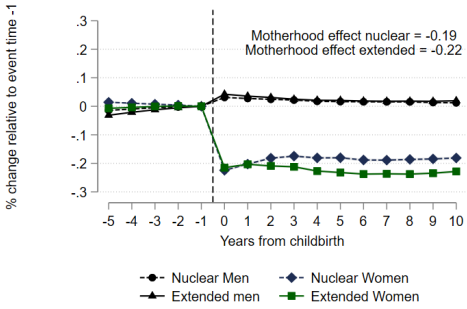
B III By household structure

Figure A.13: Effects of the first childbirth on earnings and employment, by household structure

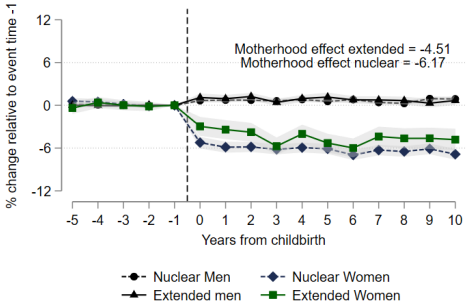
(a) Employment: rural



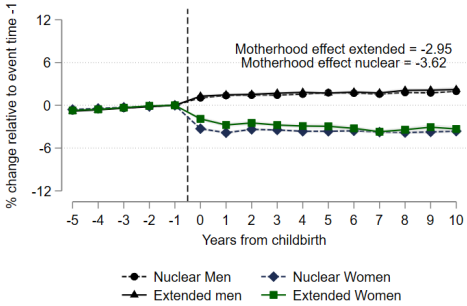
(b) Employment: urban



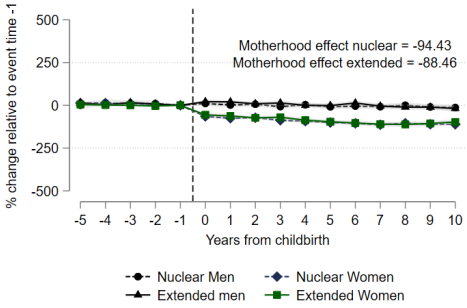
(c) Hours worked: rural



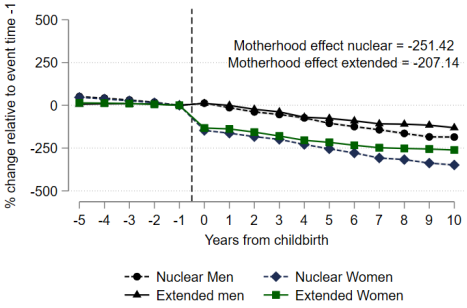
(d) Hours worked: urban



(e) Earnings: rural



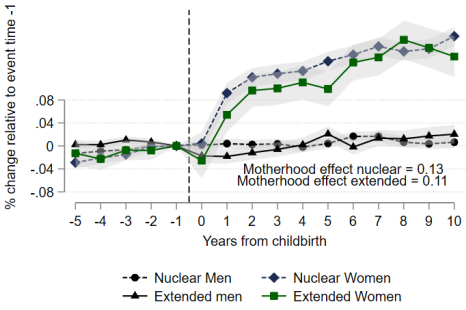
(f) Earnings: urban



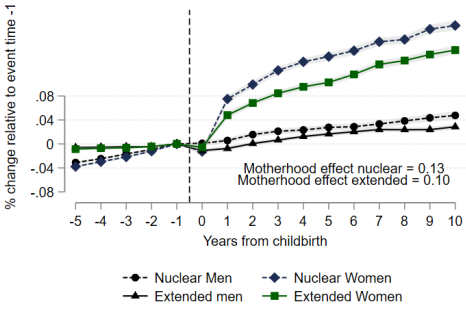
Note: These figures report the β_τs from Equation 1 for mothers and fathers in extended and nuclear families in urban and rural regions, separately. We define an extended family as one in which there is another woman in the household besides the mother and a potential daughter, and a nuclear family as one in which there is no other woman in the household. Since the omitted category is $\tau = -1$, the coefficients measure the impact of children relative to the year before the first childbirth. Controls include year, age-in-years, and country fixed effects. The effects on hours worked and informality are estimated conditional on being employed. The motherhood effect reported is the average motherhood effect from $\tau = 0$ through $\tau = 10$. Data cover the 14 Latin American countries from 2000-2021, except when estimating the effects on labor informality, where Panama is excluded from the sample. The sample is restricted to mothers and fathers whose age at first childbirth is between 20 and 45 years old.
Source: Own estimations based on SEDLAC (CEDLAS and The World Bank, 2023) and LABLAC (CEDLAS and The World Bank, 2021) datasets.

Figure A.14: Effects of the first childbirth on informality, by household structure

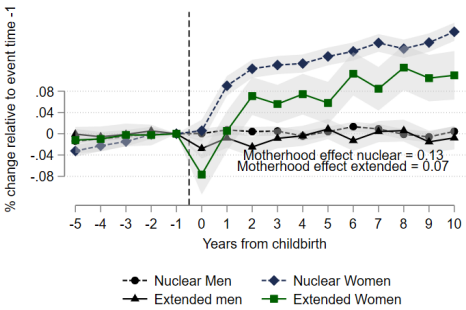
(a) Informality: rural



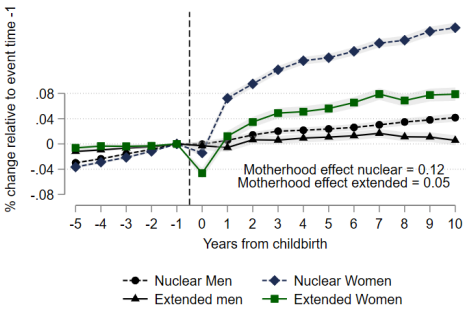
(b) Informality: urbano



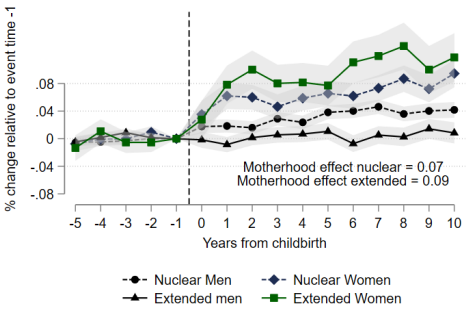
(c) Informality: Non-Registered job: rural



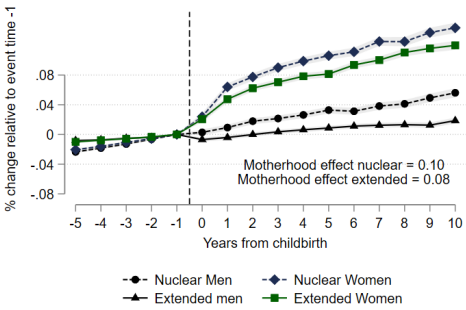
(d) Informality: Non-Registered job: urbano



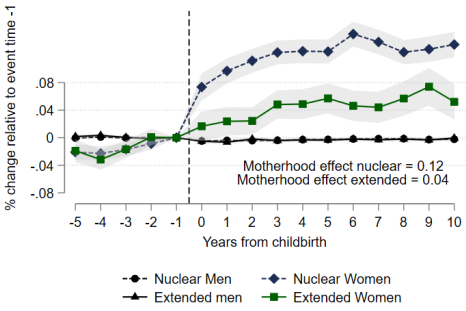
(e) Informality: Self employment: rural



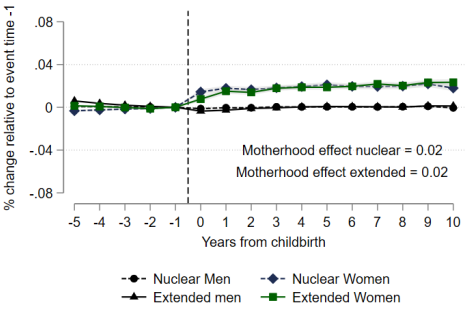
(f) Informality: Self employment: urbano



(g) Informality: Unpaid work: rural



(h) Informality: Unpaid work: urbano



Note: These figures report the β_τs from Equation 1 for mothers and fathers in extended and nuclear families in urban and rural regions, separately. We define an extended family as one in which there is another woman in the household besides the mother and a potential daughter, and a nuclear family as one in which there is no other woman in the household. Since the omitted category is $\tau = -1$, the coefficients measure the impact of children relative to the year before the first childbirth. Controls include year, age-in-years, and country fixed effects. The effects on informality are estimated conditional on being employed. The motherhood effect reported is the average motherhood effect from $\tau = 0$ through $\tau = 10$. Data cover the 14 Latin American countries from 2000-2021, except Panama. The sample is restricted to mothers and fathers whose age at first childbirth is between 20 and 45 years old.

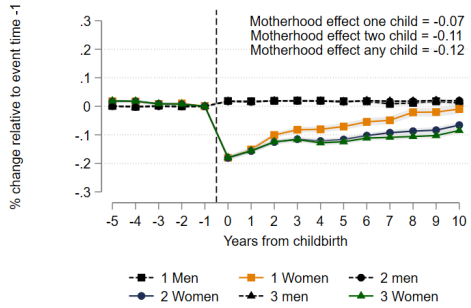
Source: Own estimations based on SEDLAC (CEDLAS and The World Bank, 2023) and LABLAC (CEDLAS and The World Bank, 2021) datasets.

B IV By number of children

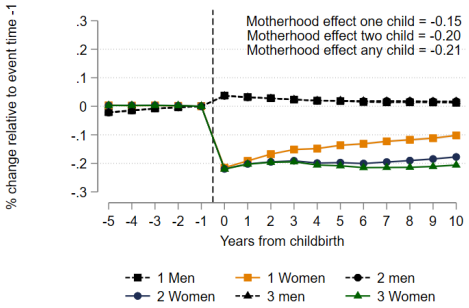
Next, we examine the effects of motherhood by the number of children. As caregiving responsibilities increase with the number of children, the negative impacts on labor force participation are expected to be more pronounced, especially for rural women. This analysis allows us to assess whether women with more children experience more severe penalties in terms of hours worked, wages, and earnings, and whether these penalties are further exacerbated by the lack of supportive policies such as childcare or parental leave.

Figure A.15: Effects of the first childbirth on earnings and employment, by number of children

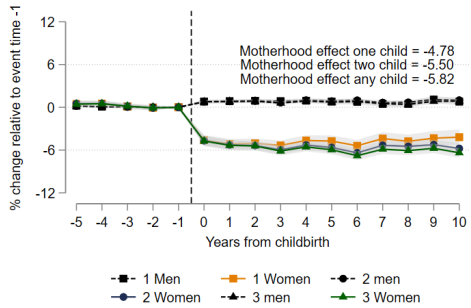
(a) Employment: rural



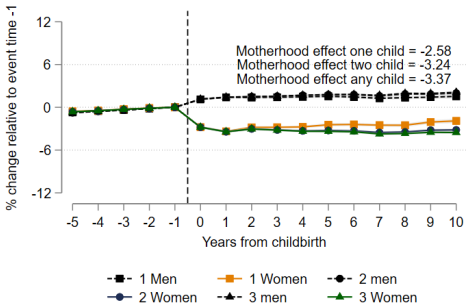
(b) Employment: urban



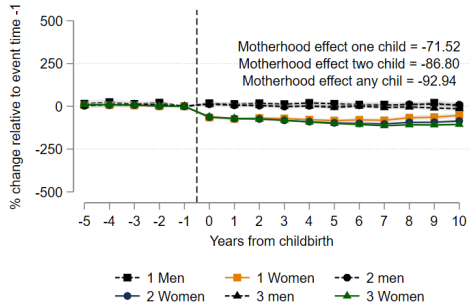
(c) Hours worked: rural



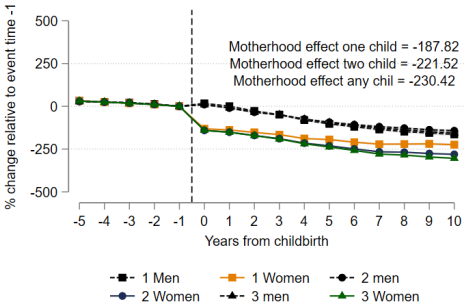
(d) Hours worked: urban



(e) Earnings: rural



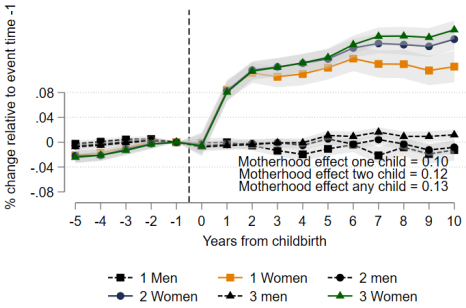
(f) Earnings: urban



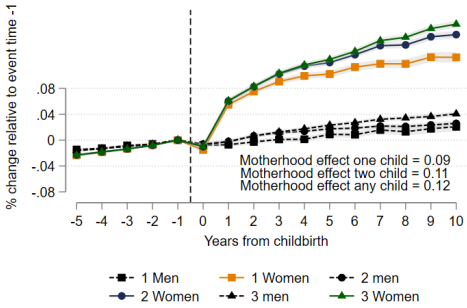
Note: These figures report the β_τs from Equation 1 for mothers and fathers with at most one child, at most two children, or any number of children, separately for urban and rural regions. Since the omitted category is $\tau = -1$, the coefficients measure the impact of children relative to the year before the first childbirth. Controls include year, age-in-years, and country fixed effects. The effects on hours worked and informality are estimated conditional on being employed. The motherhood effect reported is the average motherhood effect from $\tau = 0$ through $\tau = 10$. Data cover the 14 Latin American countries from 2000-2021, except when estimating the effects on labor informality, where Panama is excluded from the sample. The sample is restricted to mothers and fathers whose age at first childbirth is between 20 and 45 years old.
Source: Own estimations based on SEDLAC (CEDLAS and The World Bank, 2023) and LABLAC (CEDLAS and The World Bank, 2021) datasets.

Figure A.16: Effects of the first childbirth on informality, by number of children

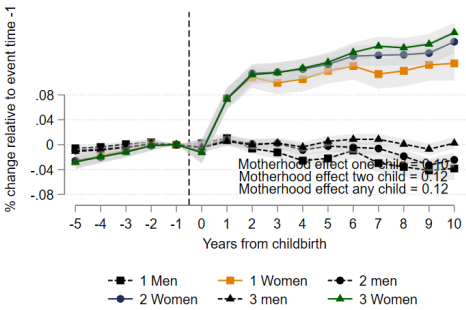
(a) Informality: rural



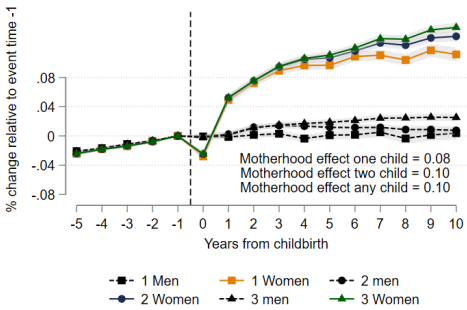
(b) Informality: urbano



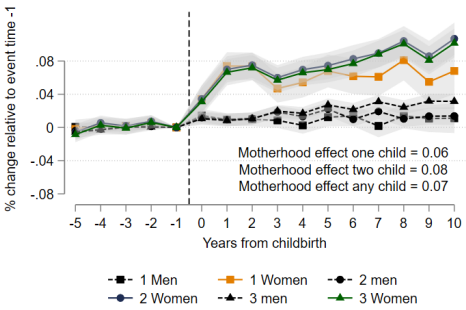
(c) Informality: Non-Registered job: rural



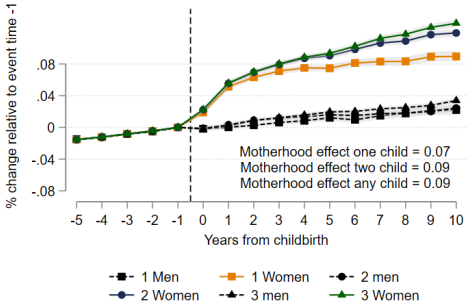
(d) Informality: Non-Registered job: urbano



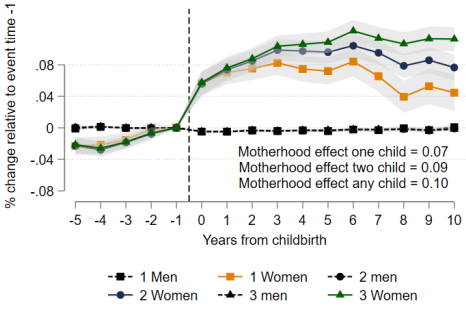
(e) Informality: Self employment: rural



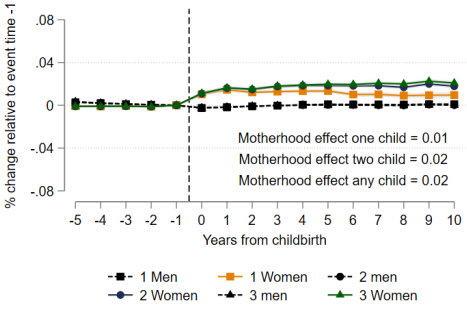
(f) Informality: Self employment: urbano



(g) Informality: Unpaid work: rural



(h) Informality: Unpaid work: urbano



Note: These figures report the β_τs from Equation 1 for mothers and fathers with at most one child, at most two children, or any number of children, separately for urban and rural regions. Since the omitted category is $\tau = -1$, the coefficients measure the impact of children relative to the year before the first childbirth. Controls include year, age-in-years, and country fixed effects. The effects on informality are estimated conditional on being employed. The motherhood effect reported is the average motherhood effect from $\tau = 0$ through $\tau = 10$. Data cover the 14 Latin American countries from 2000-2021, except Panama. The sample is restricted to mothers and fathers whose age at first childbirth is between 20 and 45 years old.
Source: Own estimations based on SEDLAC (CEDLAS and The World Bank, 2023) and LABLAC (CEDLAS and The World Bank, 2021) datasets.