The School Break Effect: Temporary Caregiving Constraints and Female Employment *

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August, 2025

Abstract

This paper studies how temporary spikes in caregiving demands affect women's labor market outcomes in developing countries. We focus on the school break period in Colombia, which intensifies unpaid care responsibilities that fall disproportionately on women. Using high-frequency household survey data from 2008 to 2019, we show that women's labor force participation drops by 2 percentage points during school breaks, a decline equivalent to one-third of the drop observed during the COVID-19 crisis. This effect is entirely concentrated among informal workers and is especially pronounced for mothers of young children and married women. These findings underscore how even short-term caregiving shocks can significantly disrupt women's attachment to the labor market in settings where flexibility is prevalent but closely tied to job precarity.

JEL Classification: J13; J16; J22; J46.
Keywords: School breaks; Caregiving responsibilities; Female labor force participation; Informal employment; Gender inequality; Developing countries; Colombia.

*We are very grateful to Lucía Ramirez-Leira and Leonardo Peñaloza-Pacheco for their valuable insights. The usual disclaimer applies.

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1 Introduction

Each year in Colombia millions of children take a break from school during the summer. While this break brings a pause to academic routines, it simultaneously creates a surge in unpaid caregiving demands—demands that disproportionately fall on women (Cowan et al., 2024). In developing countries, where social infrastructure and formal childcare systems are limited, such seasonal shifts can have profound implications for female labor market outcomes.

Although the literature has thoroughly examined long-term structural barriers to women's employment (Marchionni et al., 2019; Marchionni and Pedrazzi, 2023), less is known about how women adjust to short-term shocks in caregiving responsibilities. These temporary constraints may not lead to permanent labor force withdrawal, but they may induce cyclical exits or reductions in labor supply that, over time, compound gender disparities in employment. Understanding the impact of these recurrent constraints is crucial to explaining persistent breaks in women's labor market trajectories.

This paper explores whether temporary increases in caregiving needs—specifically those tied to school break—lead to measurable declines in women's labor supply in Colombia. We focus on December and January, when most schools across the country are closed; these months offer a natural setting to investigate how institutional childcare schedules intersect with labor force participation patterns. Our analysis draws on monthly microdata from the Colombian household survey (2008–2019), allowing us to capture both seasonal trends and gendered labor dynamics.

Our results reveal a sharp and consistent drop of two percentage points in women's labor force participation during school break months. This effect is sizeable: it represents a 2.8% reduction relative to November and accounts for nearly a third of the decline observed during the COVID-19 pandemic, highlighting the impact of a seemingly routine and predictable annual event. On the contrary, male labor market outcomes remain stable over the same period, reinforcing the interpretation that caregiving shocks—rather than aggregate labor demand—drive these dynamics.

The observed drop in women's labor force participation during school break is explained by a surge in caregiving responsibilities: women are significantly more likely to report household chores as their main activity in these months. This adjustment occurs among informal workers, while formal employment remains unaffected, suggesting that informality—often associated with greater flexibility—is what facilitates women to temporary exit the labor market. However, this flexibility comes at a cost: weaker social protection, lower wages, and worse prospects for career mobility (Berniell et al., 2021). Although the education sector accounts for part of the decline, roughly half of the drop in employment occurs in other sectors, suggesting that the mechanism extends well beyond school-related jobs.

These effects are particularly pronounced for mothers of young children and for married women, groups more likely to shoulder increased caregiving responsibilities during school closures. Among women with children aged 0 to 12, labor force participation declines by 2.2 percentage points, compared to a 0.9 percentage point drop among women without children. In relative terms, this gap is even starker: given a baseline participation rate of 69% among mothers, the effect represents a 3.2% decline, whereas the 0.9 percentage point drop among non-mothers—whose participation rate is 76%—implies a smaller relative reduction of 1.2%. These patterns are consistent with the persistence of traditional gender roles and underscore how, in contexts where job flexibility is largely tied to informality, the trade-off between paid work and caregiving becomes especially salient during periods of institutional childcare suspension.

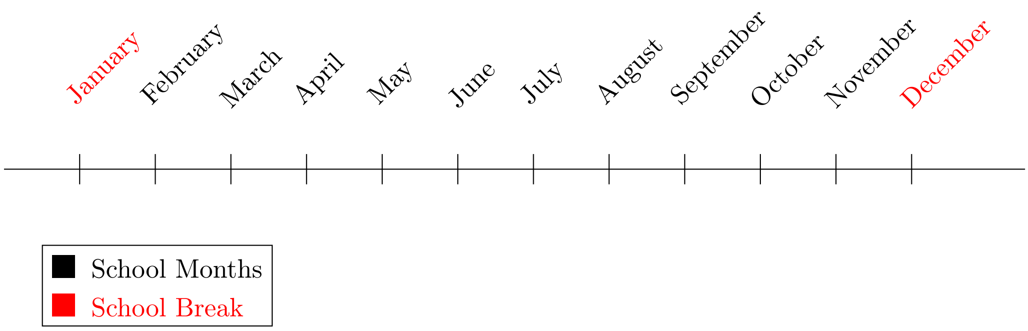
By focusing on a routine, predictable institutional feature—the school calendar—we provide novel evidence on how time-bound caregiving pressures can drive temporary but meaningful disruptions in women's economic activity. Our findings contribute to several strands of literature. First, we add to research on maternal labor supply and school schedules (Graves, 2013; Duchini and Van Effenterre, 2024), showing that even regular break periods can reduce employment among women in informal jobs. Second, we build on paper that highlights the role of childcare in shaping women's labor force participation (Kleven et al., 2024; Brewer et al., 2022; Garcia et al., 2023), emphasizing not just the presence but the timing of services as critical. Third, we contribute to debates on job flexibility and gender inequality (Goldin, 2014; Goldin and Katz, 2016; Kleven et al., 2019), revealing that temporal rigidity—at the scale of months, not just hours or days—matters profoundly in informal labor markets. The most closely related paper is Price and Wasserman (2024), who document a summer drop in female employment in the United States; we extend their findings to a developing country context, where flexible arrangements often come with a cost: informal jobs.

The remainder of the paper is organized as follows. Section 2 outlines the institutional context, focusing on the structure of the Colombian school calendar. Section 3 describes the data and provides descriptive statistics. Section 4 presents our empirical strategy. Section 5 discusses the main results and explores heterogeneity across job types and household characteristics. Finally, Section 7 concludes.

2 Institutional context

In Colombia, the academic year is structured around two official school calendars: Calendar A and Calendar B. Calendar A is the dominant schedule, adopted by nearly all public schools and the majority of private institutions. Under this system, the school year runs from late January or early February until late November or early December, and is divided into two semesters. December and January constitute the official school break. Calendar B, by contrast, is followed by a minority of private schools—primarily in Bogotá and among institutions offering bilingual or international programs. This calendar aligns more closely with that of the Northern Hemisphere, beginning in August or September and ending in June or July of the following year.

Figure 1: Colombian school calendar.



Regional deviations from the standard academic calendar are minimal. For example, some coastal departments (e.g., Atlántico, Bolívar, and Magdalena) start the school year slightly earlier to accommodate local festivities and weather patterns. Additionally, the departments of Valle del Cauca and Nariño historically followed a September–June calendar; however, between 2008 and 2011, public schools in these regions transitioned to Calendar A. Some private schools retained the old schedule, but these exceptions represent a small share of total enrollment.[1]

Given that Calendar A predominates nationwide, we focus our analysis on its break period—December and January—when school closures are most widespread. This timing is critical to our identification strategy: it allows us to exploit a predictable, institutionalized break in formal childcare provision, one that potentially shifts unpaid care work back into households and disrupts women's labor market engagement.

3 Data and Descriptive statistics

We use data from the Gran Encuesta Integrada de Hogares (GEIH), a nationally representative monthly household survey conducted by Colombia's National Statistical Department (DANE). The GEIH collects detailed information on a wide range of socioeconomic, demographic, and labor market variables.[2] We focus on the period 2008–2019,[3] restricting the sample to individuals aged 25 to 65.[4]

Our main labor market outcomes are: (i) *Employment* (equal to 1 if the individual was employed in the reference week), (ii) *Labor force participation* (equal to 1 if employed or actively seeking work), (iii) *Unemployment* (equal to 1 if seeking work but not employed), (iv) *Earnings* (monthly income from all jobs), and (v) *Informality* (equal to 1

[1]Even though our sample starts in 2008, if we exclude Valle del Cauca and Nariño from the analysis, the results remain almost unchanged.

[2]See the Appendix for a detailed description of variable construction.

[3]We begin in 2008, when the GEIH survey was first launched and provided information that allows us to identify the interview month, and end in 2019 to avoid confounding effects from the COVID-19 pandemic.

[4]We restrict the sample to individuals in the prime-age group, between 25 and 65 years old. Those younger than 25 are often still in education, while those older than 65 are typically in the age range of retirement transitions. This restriction also allows us to focus on parents with school-age children, who are the group most directly affected by school calendars.

if the individual is classified as informally employed under an extended definition, and 0 otherwise). This extended definition considers an individual informal if they lack social security coverage or a signed employment contract, are in temporary or low-skilled self-employment, or work without pay. While we first analyze this broad measure of informality as a whole, we later explore each of its components separately to identify which specific dimensions drive the observed effects. A key feature of the GEIH is that it records self-reported reasons for not working. Individuals outside the labor force are categorized as (i) Job seekers, (ii) Students, (iii) Caregivers (i.e., household chores), or (iv) Other reasons. This information allows us to trace changes in labor force participation and identify caregiving-related exits from the labor market during school break periods.

The final sample includes 2,504,567 women and 2,073,937 men. Table 1 summarises the main characteristics. On average, women are slightly older and more educated than men (8.89 vs. 8.57 years of schooling), but are substantially less likely to participate in the labor force (67% vs. 94%) or to be employed (61% vs. 89%). Men are also more likely to be married: 68% report being in a formal or consensual union, compared to 63% of women. Regarding informality, unconditional rates appear markedly different across genders. However, when conditioning on being employed, the gap almost disappears: 78.3% of employed women are in informal jobs, compared to 76% of employed men. The only major gender divergence within informal employment lies in the prevalence of unpaid work, which is more common among women. These disparities translate into a large gender wage gap—on average, men earn approximately 88% more than women.[5] Table A.1 shows the reasons for not working. Among non-working individuals, the vast majority of women—nearly 85%—report household chores as their main activity, making it by far the most common reason for not participating in the labor force. In contrast, this is not the case for men: only 16% of non-working men report household responsibilities as their primary activity.

[5] Authors' calculations using GEIH data.

Table 1: Descriptive statistics.

	Women	Men
Complete sample		
Age	41.93	41.64
	(11.05)	(11.02)
Married	0.63	0.68
	(0.48)	(0.47)
Low skilled	0.50	0.52
	(0.50)	(0.50)
Medium skilled	0.36	0.35
	(0.48)	(0.48)
High skilled	0.14	0.13
	(0.35)	(0.34)
Years of education	8.89	8.57
	(4.77)	(4.81)
In the labor force	0.67	0.94
	(0.47)	(0.24)
Employed	0.61	0.89
	(0.49)	(0.32)
Unemployed	0.07	0.06
	(0.25)	(0.23)
Hours worked	25.48	45.94
	(25.07)	(22.19)
Informality	0.47	0.68
	(0.50)	(0.46)
Informality: No entitlement to a pension in the current job	0.37	0.53
	(0.48)	(0.50)
Informality: Self-employed without professional qualifications	0.23	0.36
	(0.42)	(0.48)
Informality: No signed employment contract	0.39	0.59
	(0.49)	(0.49)
Informality: Temporary employment	0.46	0.67
	(0.50)	(0.47)
Informality: Working without pay	0.03	0.01
	(0.18)	(0.09)
Formality	0.13	0.20
	(0.34)	(0.40)
Monthly labor earnings (PPP 2005)	303.18	571.42
	(621.66)	(911.49)
No. of individuals	2,504,567	2,073,937

Notes: This table reports the mean and standard deviation (in parentheses) of sociodemographic and labor market variables for women and men in Colombia, over the period 2008–2019. Hours worked, informality, formality, and monthly labor earnings are coded as zero for individuals not working. The sample is restricted to individuals aged 25–64.
Source: Own calculations based on GEIH-DANE data.

Table A.2 displays employment distribution by sector. Women are mostly concentrated in commerce; manufacturing; hotels and restaurants; education; healthcare; and domestic service. Men, in contrast, are primarily employed in agriculture, commerce, manufacturing, and construction.

Finally, the large sample size and monthly frequency of the GEIH make it particularly well-suited for our empirical strategy. These features allow us to track seasonal patterns in labor market outcomes and to disaggregate effects by gender, job type, and household characteristics—key for isolating changes driven by the school break in December and January.

4 Empirical strategy

Our empirical strategy leverages the recurring nature of the school break in Colombia—specifically the December and January break—to estimate its impact on women's and men's labor market outcomes. The key idea is to compare labor market outcomes during the year, particularly during the school break. We estimate the following event-study separately for each gender:

$$Y_{it} = \sum_{m \neq \text{Nov}} \beta_m \cdot \mathbb{1}[\text{Month}_t = m] + \gamma_r + \delta_y + \theta_a + \varepsilon_{it}, \quad (1)$$

where Y_{it} is the labor market outcome of interest for individual i in month t—including labor force participation, employment status, among others. The coefficients β_m capture the difference in outcomes for each month m relative to November, the month immediately preceding the school break. We include region fixed effects (γ_r) to control for time-invariant regional heterogeneity, year fixed effects (δ_y) to absorb macroeconomic shocks and national trends, and age-group fixed effects (θ_a) to account for differences in labor outcomes across age profiles. Standard errors are clustered at the department level. We also estimate models separately by parental and marital status to assess heterogeneity in the response to school break.

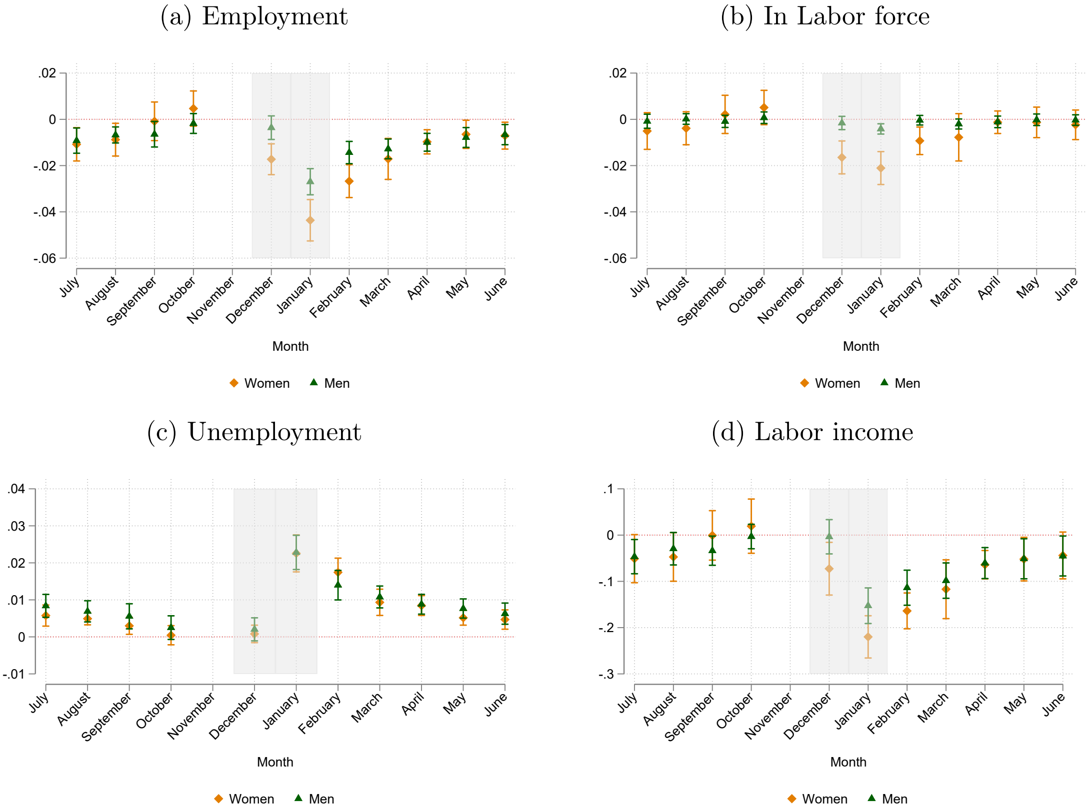
This approach allows us to trace month-to-month fluctuations in labor outcomes while holding constant broader trends and individual composition. November serves as a credible benchmark, as it is the last month before the school break and does not coincide with other major national holidays or labor market shocks. Our identification relies on the assumption that, conditional on fixed effects and controls, there are no other systematic monthly factors that differentially affect women's labor supply. This assumption is supported by two pieces of evidence. First, male labor force participation remains virtually unchanged across these months, suggesting that the observed drop among women is not driven by seasonality in labor demand. Second, we document a sharp rise in the share of women reporting "household chores" as their main activity during school break, consistent with an increase in caregiving responsibilities.

5 The school break effect

We examine how labor market outcomes for women and men evolve throughout the calendar year, focusing on the school break in December and January. Figure 2 displays the estimated β_t coefficients from Equation 1 using our full sample. As shown in Figure 2a, employment probabilities for men and women are similar across most months but diverge noticeably during the school break. Figures 2b and 2c decompose this pattern. The drop in employment is driven by a decline in women's labor force participation, while unemployment trends remain stable across genders. Although labor income also declines for women relative to men during the break, the difference is not statistically significant. The 2 percentage point drop in female labor force participation amounts to a 2.8% decline relative to November—equivalent to roughly one-third of the gendered participation shock observed during the COVID-19 crisis.[6]

[6] Our estimations based on GENLAC-CEDLAS (2024).

Figure 2: Effect of school break on employment and earnings



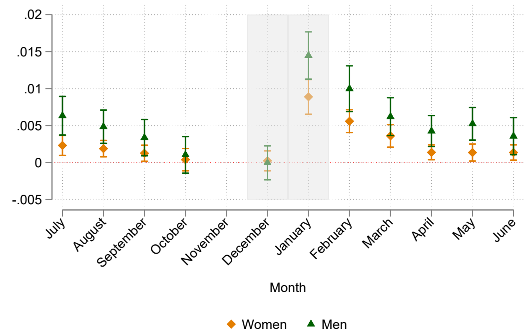
Note: The figures report the estimated β_t coefficients from Equation 1. All specifications include controls for age, year, and region fixed effects. Estimates are calculated using the full sample and are not conditional on being employed. The data cover the period 2008–2019 and include men and women aged 25 to 64.
Source: Own calculations based on GEIH-DANE data.

To understand why women are more likely to exit the labor market during the school break, we use detailed information on reported reasons for non-employment. We classify these into four categories: Looking for a job, Studying, Household chores, and Other reasons. Figure 3 shows the estimated β coefficients for each reason. We find no gender difference in Looking for a job, Studying, or Other reasons throughout the year. The only notable divergence appears in Household chores, which increases for women during December and January.[7] These findings suggest that women leave the labor force during the school break primarily to meet increased caregiving demands

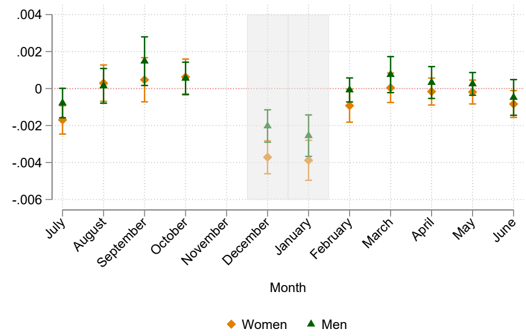
[7]We may still observe an effect in February, as some individuals may take longer to return to employment after the school break.

Figure 3: Effect of school break on reasons of not working

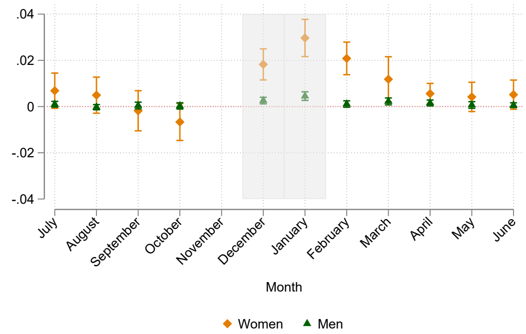
(a) Looking for a job



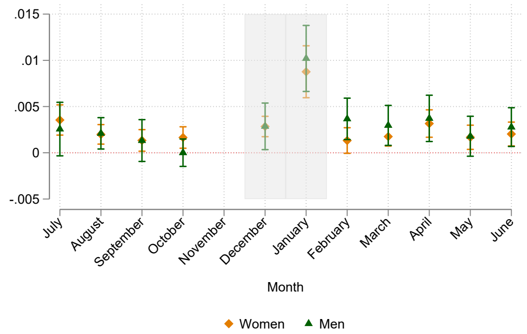
(b) Studying



(c) Household chores



(d) Others



Note: The figures repot the estimated β_t coefficients from Equation 1. All specifications include controls for age, year, and region fixed effects. Estimates are computed using the full sample and are not conditional on being employed. The data cover the period 2008–2019 and include men and women aged 25 to 64.
Source: Own calculations based on GEIH-DANE data.

Taken together, these results suggest that women are more likely to be out of the labor force, primarily because they are more likely to be engaged in household chores during the school break. Based on this finding, the next section explores which groups of women are exiting the labor market during the school break, with particular attention to their sector of employment—formal, informal, educational, and other sectors.

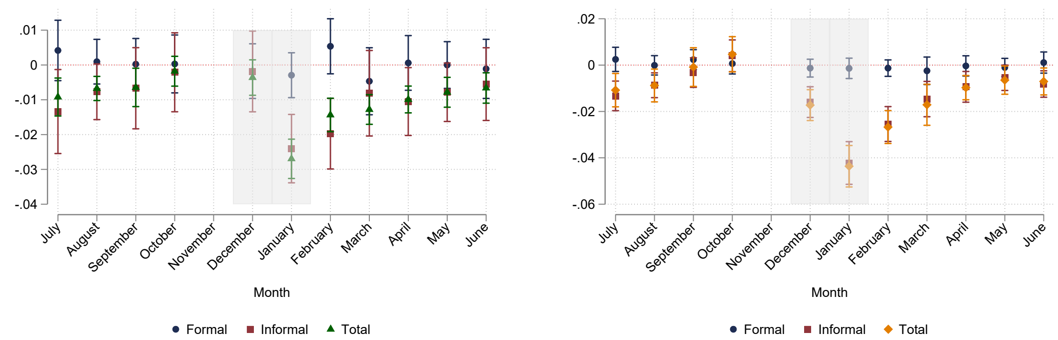
5.1 Women Leaving the Labor Market: (In)Formality and Sector Patterns

In this section, we decompose total employment into two categories: formal and informal employment. This distinction allows us to identify which sector is driving the adjustment during the school break.

Figure 4 shows the estimated β coefficients from Equation 1 for total, formal, and informal employment, disaggregated by gender. For men (Figure 4a), employment remains stable across all job types. A slight decline appears in informal jobs in January, but the timing and magnitude suggest this is unrelated to the school calendar. For women (Figure 4b), however, the drop in employment is evident in December and January and is entirely concentrated among informal jobs. Formal employment for women remains virtually unchanged throughout the year. These results suggest that informal jobs are more vulnerable to short-term caregiving disruptions.

Figure 4: Effect of school break on formal and informal employment by gender

(a) Men (b) Women



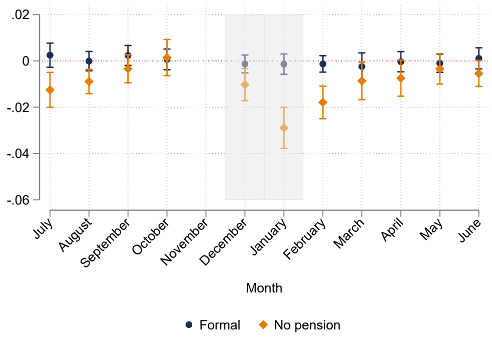
Note: The figures report the estimated β_t coefficients from Equation 1. All specifications include controls for age, year, and region fixed effects. Estimates are computed using the full sample and are not conditional on being employed. Informal workers are defined as those who lack access to social security benefits, do not have a signed employment contract, work in temporary jobs, are low-skilled self-employed, or are unpaid workers with zero earnings. The remaining individuals are classified as formal workers. The data cover the period 2008–2019 and include men and women aged 25 to 64.
Source: Own calculations based on GEIH-DANE data.

To identify which types of informal jobs are most affected, we further disaggregate informal employment into subcategories. Our extended definition of informality includes individuals who (i) lack access to social security benefits, (ii) have no signed employment contract, (iii) are temporary workers, (iv) are low-skilled self-employed workers, or (v) are unpaid workers with zero earnings. These categories are not mutually exclusive—individuals may belong to more than one group at the same time.

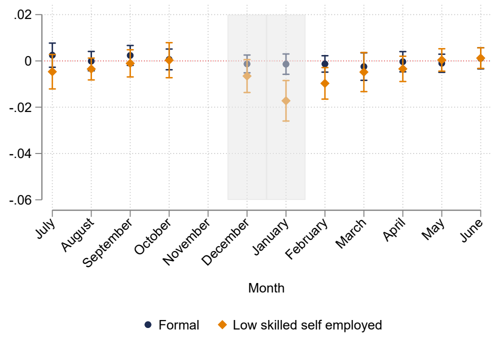
Figure 6 shows the estimated β coefficients for each subgroup. We find that informal employment declines significantly across all categories except for unpaid workers. This suggests that the reduction in women's employment during the school break is mainly concentrated among informal workers with some form of labor market attachment—either through paid work without benefits, temporary contracts, or low-skilled self-employment—rather than among unpaid workers, whose participation appears less sensitive to the school calendar.

Figure 5: Effect of school break on informal employment by types of informality

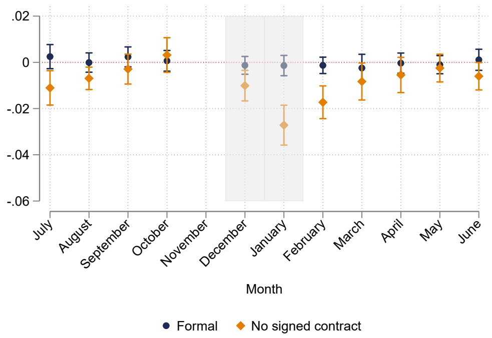
(a) No pension



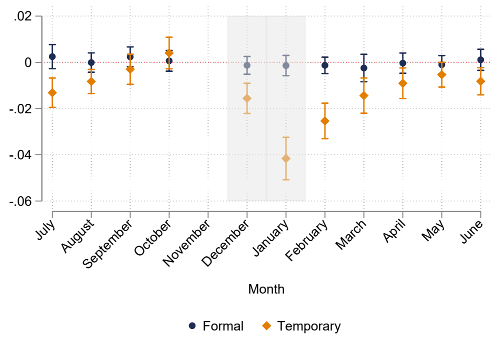
(b) Low Skilled Self employed



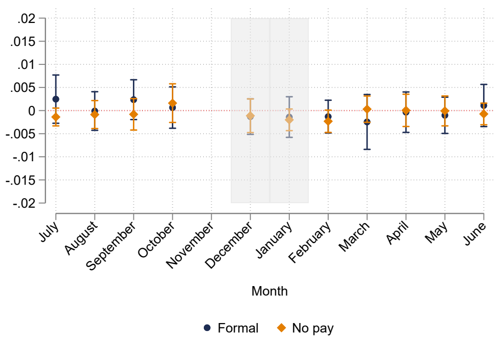
(c) No signed contract



(d) Temporary



(e) No pay



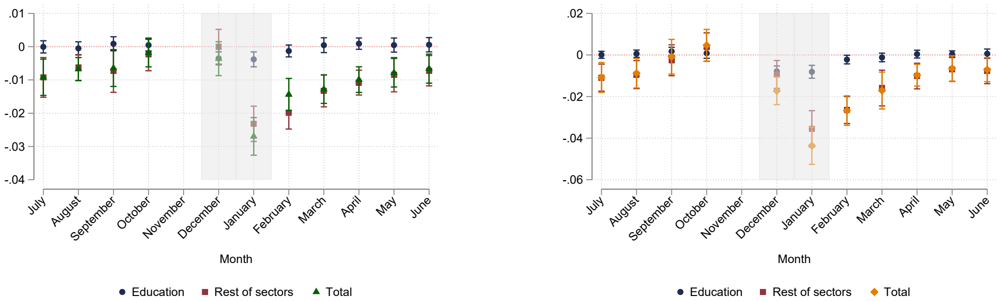
Note: The figures report the estimated β_t coefficients from Equation 1. All specifications include controls for age, year, and region fixed effects. Estimates are computed using the full sample and are not conditional on being employed. The data cover the period 2008–2019 and include men and women aged 25 to 64.
Source: Own calculations based on GEIH-DANE data.

We can also evaluate which sector is adjusting during the school break. To do so, we disaggregate total employment into two outcomes: (i) an indicator equal to one if the individual works in the education sector, and zero otherwise; and (ii) an indicator equal to one if the individual works in any other sector, and zero otherwise. Figure 6 presents the estimated β coefficients for both outcomes by gender. The results show that the reduction in employment among women is not solely driven by the education sector. While employment in education decreases during both December and January, we also observe a significant decline in other sectors. In fact, roughly half of the total drop in women's employment in January is explained by the education sector, with the remaining half accounted for by other sectors. Among men, we also find a decline in employment within the education sector during both months of the school break. However, there is no decline in non-education sectors in January. A small drop appears only in February, likely reflecting other seasonal dynamics in male employment unrelated to the school calendar.

Figure 6: Effect of school break on education and non-education employment by gender

(a) Men

(b) Women



Note: The figures display the estimated β_t coefficients from Equation 1. All specifications include controls for age, year, and region fixed effects. Estimates are computed using the full sample and are not conditional on being employed. The data cover the period 2008–2019 and include men and women aged 25 to 64.
Source: Own calculations based on GEIH-DANE data.

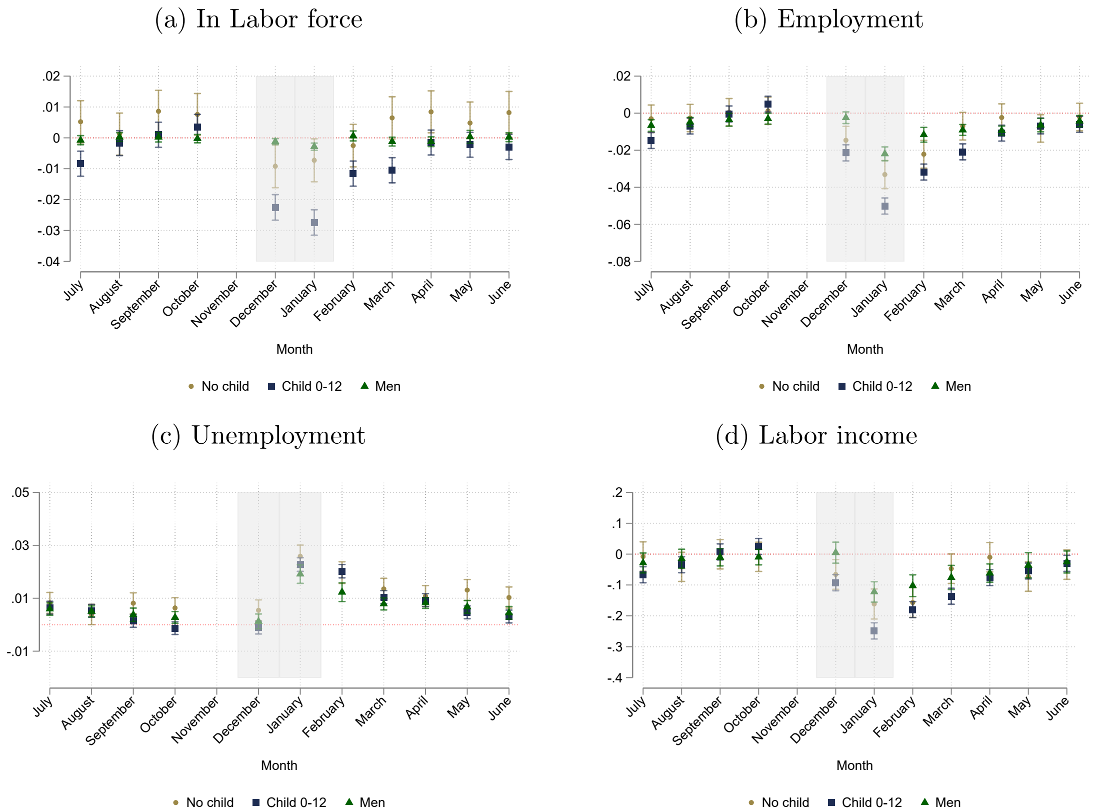
Taken together, the results in this section show that the decline in women's employment during the school break is driven primarily by informal jobs. The adjustment is concentrated among workers without access to social security, without a signed contract, in temporary positions, or in low-skilled self-employment. Unpaid workers, in contrast, do not show any significant change. Additionally, while the education sector explains part of the decline, it does not account for it entirely. Employment among women falls both in the education sector and in other sectors, with each contributing roughly half of the total drop. Among men, the pattern is different: the decline is limited to the education sector and appears only in February for other sectors, likely reflecting broader seasonal dynamics. These patterns support the interpretation that caregiving pressures—rather than sectoral shifts—are behind the observed adjustment.

In the next section, we explore one potential explanation for this findings. We examine whether women's temporary exit from the labor market during the school break is a response to greater household responsibilities.

6 The Role of Family Responsibilities in Women's Labor Market Exit

We next explore whether women's labor market response to the school break varies by household composition, focusing on the presence of children and marital status. Figure 7 presents estimates disaggregated by parenthood. Among women with children aged 0 to 12, labor force participation declines by 2.2 percentage points, compared to a 0.9 percentage point drop among women without children. In relative terms, this gap is even starker: given a baseline participation rate of 69% among mothers, the effect represents a 3.2% decline, whereas the 0.9 percentage point drop among non-mothers—whose participation rate is 76%—implies a smaller relative reduction of 1.2%. This pattern is suggestive of a caregiving channel: women with young children may face greater constraints during the school break, limiting their ability to remain in the labor force.

Figure 7: Effect of school break on employment and income by gender and parenthood status

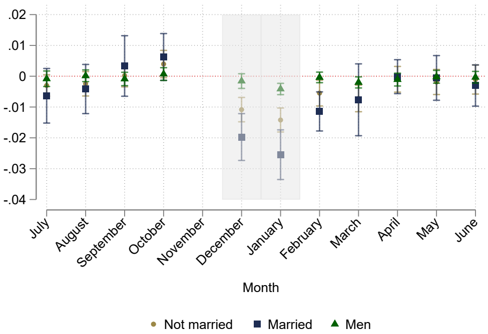


Note: The figures display estimates of the β_t coefficients from Equation 1. All specifications include controls for age, year, and region fixed effects. The sample includes household heads and their spouses. *No child* refers to women with no children in the household; *Child 0–12* refers to women with at least one child aged 0 to 12. Each outcome is measured over the full sample and is not conditional on being employed. The data cover the period 2008–2019 and include men and women aged 25 to 64.
Source: Own calculations based on GEIH-DANE data.

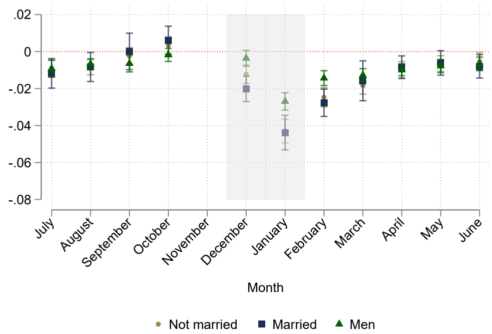
We also examine heterogeneity by marital status. Figure 8 shows that the school break effect is more pronounced among married women. This pattern may reflect persistent gender norms, where women in couples are more likely to assume caregiving duties during school closures. In addition, married women may face fewer financial constraints than single women, making it more feasible for them to temporarily withdraw from paid work.

Figure 8: Effect of summer break in Colombia: by marital status

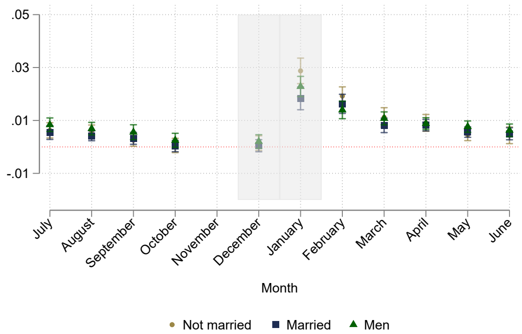
(a) In Labor force



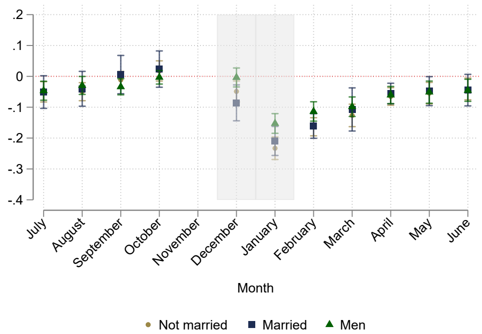
(b) Employment



(c) Unemployment



(d) Labor income



Note: The figures display estimates of the β_t coefficients from Equation 1. All specifications include controls for age, year, and region fixed effects. *Married* and *Not married* refer to women who report being (or not being) in formal or consensual unions at the time of the survey. *Men* includes all male respondents in the sample. Each outcome is measured over the full sample and is unconditional on employment status. The data cover the period 2008–2019 and include men and women aged 25 to 64.
Source: Own calculations based on GEIH-DANE data.

7 Conclusions

This paper provides new evidence on how temporary caregiving constraints shape women's labor market outcomes in developing countries. Exploiting the predictable timing of school closures in Colombia, we show that women's labor force participation falls sharply during December and January. These effects are entirely concentrated in informal employment and are most pronounced among mothers of young children and married women, highlighting the central role of household responsibilities in explaining short-term female labor market exits.

Our findings reveal that the flexibility commonly associated with informal jobs enables women to adjust to seasonal caregiving demands, but this adjustment comes at the cost of job precarity, weaker social protection, and lower earnings. While the education sector partly explains the decline, nearly half of the adjustment occurs in other sectors, underscoring that school closures affect women's employment more broadly.

These results have two key implications. First, they suggest that even routine and predictable shocks—such as school breaks—can meaningfully disrupt women's attachment to the labor market. Second, they highlight the need for policies that support families during periods of increased caregiving demand. Expanding access to affordable childcare, offering short-term leave arrangements, or introducing more formal flexibility options could help reduce women's reliance on informal work as a coping strategy.

By documenting how time-bound caregiving shocks translate into gendered labor market disruptions, this study contributes to broader debates on the persistence of gender gaps in employment and the trade-off between flexibility and security in labor markets of developing countries.

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Appendix

A Tables and figures

Table A.1: Descriptive statistics: reason of not working

	Women	Men
Not working: looking for a job	0.02	0.04
	(0.12)	(0.19)
Not working: studying	0.01	0.01
	(0.09)	(0.08)
Not working: household chores	0.34	0.02
	(0.47)	(0.14)
Not working: others	0.03	0.05
	(0.17)	(0.21)
No. of individuals	2,504,567	2,073,937

Notes: The table reports the mean and standard deviation (in parentheses) of the main reported reasons for not participating in the labor market, for both women and men in Colombia over the period 2008–2019. The sample is restricted to individuals aged 25 to 64.
Source: Own calculations based on GEIH-DANE data.

Table A.2: Descriptive statistics: sectoral composition

	Women	Men
Agriculture, Livestock, Hunting and Forestry	0.04	0.19
	(0.19)	(0.39)
Fishing	0.00	0.01
	(0.03)	(0.09)
Mining and Quarrying	0.00	0.01
	(0.05)	(0.11)
Manufacturing	0.08	0.10
	(0.27)	(0.31)
Electricity, Gas and Water Supply	0.00	0.01
	(0.04)	(0.08)
Construction	0.00	0.09
	(0.06)	(0.29)
Commerce	0.13	0.16
	(0.34)	(0.37)
Hotels and Restaurants	0.06	0.03
	(0.24)	(0.16)
Transport, Storage and Communications	0.02	0.11
	(0.14)	(0.31)
Financial Intermediation	0.01	0.01
	(0.10)	(0.10)
Real Estate, Business and Rental Activities	0.05	0.06
	(0.22)	(0.24)
Public Administration and Defense	0.02	0.03
	(0.14)	(0.17)
Education	0.04	0.03
	(0.20)	(0.16)
Health and Social Services	0.05	0.02
	(0.22)	(0.12)
Other Community, Social and Personal Services	0.04	0.03
	(0.20)	(0.17)
Private Households with Domestic Services	0.05	0.00
	(0.21)	(0.05)
Extraterritorial Organizations and Bodies	0.00	0.00
	(0.01)	(0.01)
No. of individuals	2,504,567	2,073,937

Notes: The table reports the mean and standard deviation (in parentheses) of the sectoral composition of employment for women and men in Colombia over the period 2008–2019. The sample is restricted to individuals aged 25 to 64.
Source: Own calculations based on GEIH-DANE data.

Table A.3: Descriptive statistics: Education sector workers

	Women	Men
Employed sample: teachers		
Age	41.83	42.64
	(10.14)	(10.59)
Married	0.58	0.66
	(0.49)	(0.47)
Incomplete primary	0.02	0.01
	(0.14)	(0.10)
Complete primary	0.03	0.02
	(0.16)	(0.14)
Incomplete secondary	0.03	0.03
	(0.18)	(0.17)
Complete secondary	0.12	0.13
	(0.32)	(0.34)
Incomplete tertiary	0.12	0.09
	(0.33)	(0.29)
Complete tertiary	0.68	0.71
	(0.47)	(0.45)
Years of education	14.54	14.83
	(3.34)	(3.05)
Hours worked in all jobs	38.59	41.74
	(11.22)	(13.95)
Informality	0.46	0.42
	(0.50)	(0.49)
Informality: No entitlement to a pension in the current job	0.17	0.10
	(0.37)	(0.30)
Informality: Self-employed without professional qualifications	0.05	0.05
	(0.23)	(0.22)
Informality: No signed employment contract	0.13	0.09
	(0.34)	(0.29)
Informality: Temporary employment	0.45	0.41
	(0.50)	(0.49)
Informality: Working without pay	0.00	0.00
	(0.04)	(0.03)
Formality	0.54	0.58
	(0.50)	(0.49)
Monthly labor earnings (PPP 2005)	1005.48	1264.54
	(828.04)	(1205.26)
No. of individuals	123,985	71,166

Notes: The table reports the mean and standard deviation (in parentheses) of sociodemographic and labor market variables for women and men employed in the education sector in Colombia over the period 2008–2019. Outcome variables take the value zero for individuals who are unemployed or out of the labor force. The sample is restricted to individuals aged 25 to 64.
Source: Own calculations based on GEIH-DANE data.

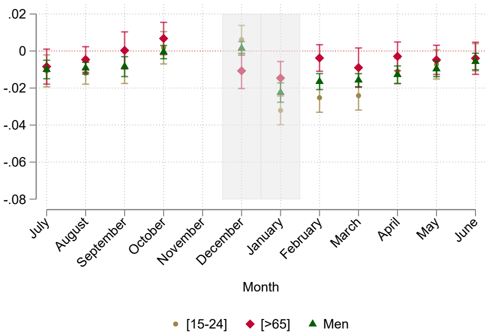
Table A.4: Descriptive statistics: sectoral composition conditional on working

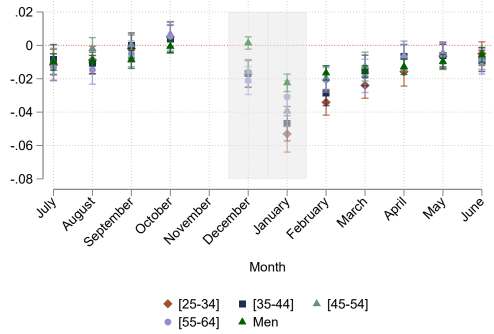
	Women	Men
Agriculture, Livestock, Hunting and Forestry	0.06	0.21
	(0.24)	(0.41)
Fishing	0.00	0.01
	(0.04)	(0.09)
Mining and Quarrying	0.00	0.01
	(0.06)	(0.12)
Manufacturing	0.13	0.12
	(0.34)	(0.32)
Electricity, Gas and Water Supply	0.00	0.01
	(0.05)	(0.09)
Construction	0.01	0.10
	(0.08)	(0.30)
Commerce	0.22	0.18
	(0.41)	(0.39)
Hotels and Restaurants	0.10	0.03
	(0.30)	(0.17)
Transport, Storage and Communications	0.03	0.12
	(0.17)	(0.33)
Financial Intermediation	0.02	0.01
	(0.13)	(0.10)
Real Estate, Business and Rental Activities	0.09	0.07
	(0.28)	(0.25)
Public Administration and Defense	0.03	0.03
	(0.18)	(0.18)
Education	0.07	0.03
	(0.26)	(0.17)
Health and Social Services	0.08	0.02
	(0.28)	(0.13)
Other Community, Social and Personal Services	0.07	0.03
	(0.26)	(0.18)
Private Households with Domestic Services	0.08	0.00
	(0.27)	(0.05)
Extraterritorial Organizations and Bodies	0.00	0.00
	(0.01)	(0.01)
No. of individuals	1,522,156	1,789,309

Notes: The table reports the mean and standard deviation (in parentheses) of sociodemographic and labor market variables for women and men in Colombia over the period 2008–2019. The sample is restricted to employed individuals aged 25 to 64.
Source: Own calculations based on GEIH-DANE data.

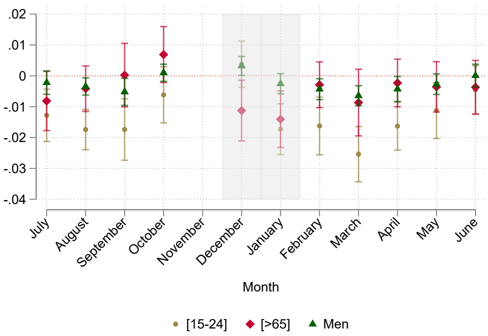
Figure A.1: Effect of school break on employment and income by age

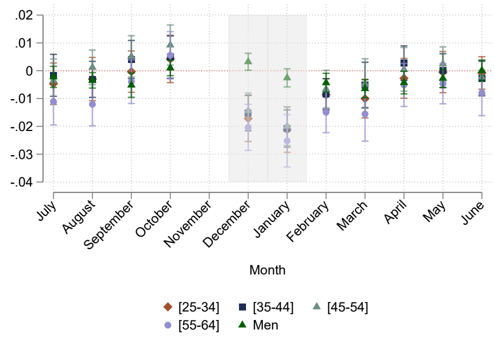
Employment





In Labor force

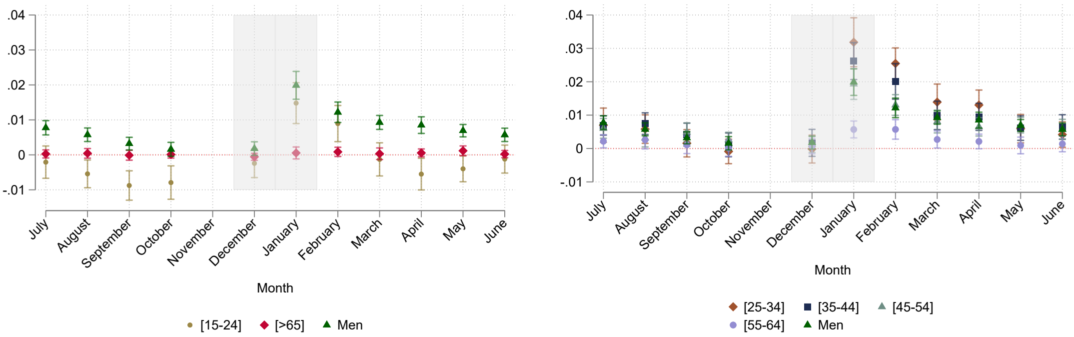




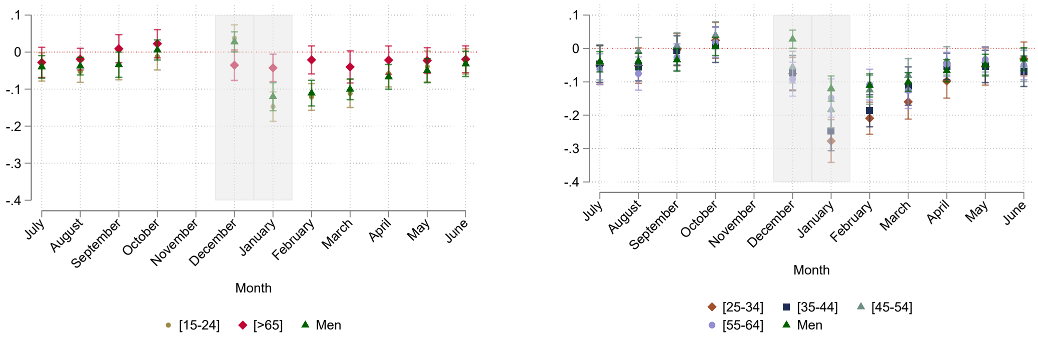
Note: The figures report the estimated β_t coefficients from Equation 1. All specifications include controls for age, year, and region fixed effects. Women are divided into the following age groups: [15–24], [25–34], [35–44], [45–54], [55–64], and 65 and over. Each outcome is measured over the full sample and is not conditional on being employed. The data cover the period 2008–2019 and include men and women aged 25 to 64.
Source: Own calculations based on GEIH-DANE data.

Figure A.2: Effect of school break on employment and income by age

Unemployment



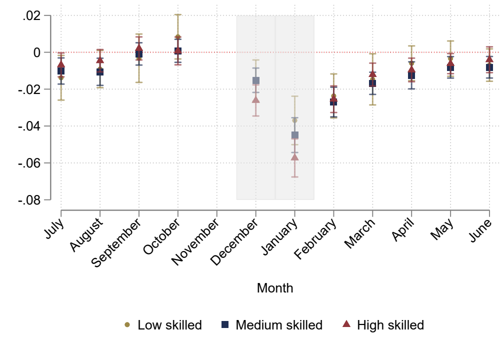
Labor income



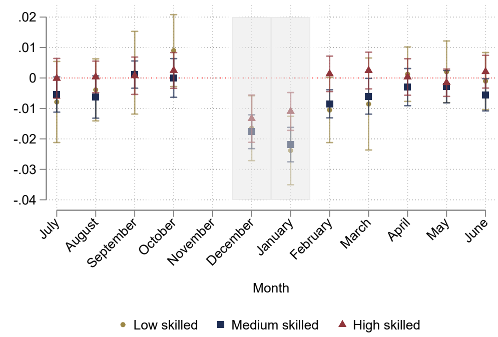
Note: The figures report the estimated β_t coefficients from Equation 1. All specifications include controls for age, year, and region fixed effects. Women are grouped into the following age ranges: [15–24], [25–34], [35–44], [45–54], [55–64], and 65 and over. Each outcome is measured over the full sample and is not conditional on being employed. The data cover the period 2008–2019 and include men and women aged 25 to 64.
Source: Own calculations based on GEIH-DANE data.

Figure A.3: Effect of school break on employment and income by education

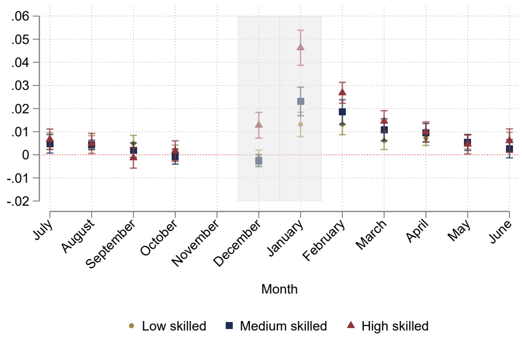
(a) Employment



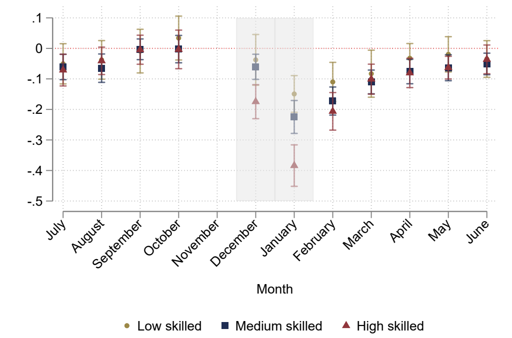
(b) In Labor force



(c) Unemployment



(d) Labor income



Note: The figures display the estimated β_t coefficients from Equation 1. All specifications include year and region fixed effects. *Low-skilled* women are defined as high school dropouts; *medium-skilled*, as high school graduates or those with some college education; and *high-skilled*, as those who completed higher education. Each outcome is measured over the full sample and is not conditional on being employed. The data cover the period 2008–2019 and include men and women aged 25 to 64.
Source: Own calculations based on GEIH-DANE data.