CESifo WORKING PAPERS

10736
2023

October 2023

Firm and Worker Responses to Extensions in Paid Maternity Leave

Cecilia Machado, Valdemar Neto, Christiane Szerman

CESifo

Impressum:

CESifo Working Papers
ISSN 2364-1428 (electronic version)
Publisher and distributor: Munich Society for the Promotion of Economic Research - CESifo GmbH
The international platform of Ludwigs-Maximilians University's Center for Economic Studies and the ifo Institute
Poschingerstr. 5, 81679 Munich, Germany
Telephone +49 (0)89 2180-2740, Telefax +49 (0)89 2180-17845, email office@cesifo.de
Editor: Clemens Fuest
https://www.cesifo.org/en/wp
An electronic version of the paper may be downloaded
· from the SSRN website: www.SSRN.com
· from the RePEc website: www.RePEc.org
· from the CESifo website: https://www.cesifo.org/en/wp

CESifo *Working Paper No. 10736*

Firm and Worker Responses to Extensions in Paid Maternity Leave

Abstract

This paper investigates how firms and workers respond to a voluntary government-funded program increasing the duration of paid maternity leave from four to six months in Brazil. We show that larger, higher-paying, and more productive firms are more likely to provide extended leaves to workers. Exploiting the gradual implementation of extended leave across firms and the exact time of leave-taking, we present four key findings. First, we find an incomplete take-up of 35 percent among eligible workers, largely driven by those with high socioeconomic status. Second, firms and workers strategically defer job separations to extract rents from the government. Third, extended leave has no long-term impact on maternal labor market outcomes. Fourth, job security and information transmission about leave extensions boost take-up and reduce deferred job separations. The results illustrate that distributional concerns can justify the mandated provision of extensions in paid maternity leave.

Keywords: maternity leave, labor market, social insurance.

Cecilia Machado
Getulio Vargas Foundation (EPGE FGV)
Rio de Janeiro / Brazil
machadoc@gmail.com

Valdemar Neto
Getulio Vargas Foundation (EPGE FGV)
Rio de Janeiro / Brazil
valdemar.pinho@fgv.br

Christiane Szerman
Stone Center and Economics Department
University College London / United Kingdom
c.szerman@ucl.ac.uk

October 24, 2023
This study was financed by the Coordenação de Aperfeiçoamento de Pessoal de Nível Superior – Brasil (CAPES) - Finance Code 001. Machado and Neto also gratefully acknowledge the financial support from the Applied Research Fund (FPA FGV).

1 Introduction

Despite the rise in female labor force participation over the last decades, family-friendly policies in the workplace remain sparse in the developing world (Heath and Jayachandran, 2018). As of 2022, about 44 percent of low- and middle-income countries offer no or fewer than 14 weeks of paid maternity leave. This figure is less than 25 percent for high-income countries (WORLD Policy Analysis Center, 2023).[1] Given the substantial evidence that child penalties largely account for gender inequality in labor market outcomes (Kleven et al., 2019), many countries have recently introduced policy reforms to expand the duration of paid maternity leave, and more countries will likely take similar steps in the next years.[2]

An important goal of extensions in paid maternity leave is to insure women against income loss due to absence from work and to support labor hoarding after childbirth. Much of the evidence on their effectiveness is drawn from high-income countries. It is well established that, when extensions in maternity leave provide full wage replacement, the take-up rates are almost universal and the long-term impact on parental labor market outcomes is minimal (Schönberg and Ludsteck, 2014; Carneiro et al., 2015; Dahl et al., 2016; Olivetti and Petrongolo, 2017). Less developed countries, however, are often characterized by the prevalence of gender norms, weak female labor force attachment, specific labor market frictions, and limited childcare support, and these features can influence both the take-up and subsequent impacts of paid leave extensions. Despite growing calls for maternity leave extensions in low- and medium-income countries, including China, India, Pakistan, and South Africa, there is remarkably little research on their effectiveness in these countries (Banerjee et al., 2023), and how the effects differ from high-income countries (Fallon et al., 2017; Uribe et al., 2019).

The objective of this paper is to provide new evidence on the labor market consequences of paid maternity leave extensions on firms and workers in the context of a large middle-income country. We do this by exploiting the introduction of an ambitious government-funded program in Brazil. Women with formal employment at the time of pregnancy are entitled to a mandatory paid maternity leave of 120 days, a period during which they receive full

[1] Similarly, nearly 28 percent of high-income countries provide maternity leave of at least 26 weeks, while less than 10 percent of low- and middle-income countries do so (WORLD Policy Analysis Center, 2023).

[2] Many countries have recently enacted regulations to increase the duration of maternity leave. In 2017, an amendment to the Maternity Benefit Act in India raised the duration of paid maternity leave from 12 to 26 weeks. The Labor Laws Amendment Act of 2018 expanded maternity leave from four months to 26 weeks. In 2023, Pakistan enacted a new law that extended maternity leave from 12 weeks to 180 days. Recent examples of high-income countries with similar policies include France and South Korea.

wages and have job protection up to five months after childbirth. In 2010, aiming to reduce gender inequality and promote job retention and breastfeeding after childbirth, the federal government created the *Empresa Cidadã* (henceforth EC) program and granted firms and workers discretion over whether to participate in the EC program (henceforth EC adoption). Participant firms must offer extended maternity leave of 60 days after the mandatory leave period to their workers. During the voluntary extended leave period, participant firms must pay full wages, which can be deducted from income taxes, and bear the costs of fringe benefits. Workers, in turn, can choose whether they wish to extend their leave period.

The first result pinpoints which firms are more likely to voluntarily provide extended maternity leave by adopting the EC program. Leveraging rich firm- and worker-level records from the matched employer-employee data combined with the universe of participant firms, we document substantial disparities in participation in the EC program across firms. Relative to non-participant counterparts, participant firms are larger, higher-paying, more productive, and more likely to be located in the most developed regions. They also have more male and high-skilled workers. Complementary evidence from a qualitative survey reveals that participant firms are publicly more committed to gender equality and to providing family-friendly amenities in the workplace, such as flexible work after childbirth, lactation rooms, and childcare support (Family Talks and 4Daddy, 2022). This result adds to the scant understanding of the types of firms that provide family-friendly policies in the workplace.

A unique feature of our data is that it contains the universe of formal workers who take maternity leave. To quantify the impact of paid maternity leave extensions on workers, our research design compares labor market trajectories of women who have given birth between 360 and 180 days before their employers have adopted the EC program and are ineligible to extend their paid leave period to those who have given birth up to 180 days after their employers have adopted the EC program and are eligible for an extension. Our estimation sample contains the universe of all firms that have adopted the EC program, mitigating concerns related to selection into the program. The key variation is that only women who have given birth after their employers have entered into EC the program are eligible for a paid leave extension. We show that eligible and ineligible women are similar in observable characteristics and exhibit similar levels and trends in various outcomes before EC adoption, supporting the causal interpretation of our estimates.

We find that, among women who are eligible for paid leave extension, only 35.7 percent of them ultimately take it up. The low leave-taking contrasts with the nearly universal take-up rates from high-income countries that provide full or high wage replacement, such as Germany and Norway (Kluve and Tamm, 2013; Carneiro et al., 2015; Dahl et al., 2016). Instead, our findings are comparable to countries that offer low wage replacement rates or even unpaid leave, such as Canada and the United States (Baker and Milligan, 2008; Han et al., 2009). We also use eligibility for paid leave extension as an instrument for program participation in two-stage least squares (2SLS) estimates.

Turning to short- and long-run labor market outcomes, our reduced form and 2SLS estimates reveal that employment in the formal sector follows an inverse U-shape pattern over 10 years around leave-taking. Up to four months after initial leave-taking, eligible mothers have similar trajectories to ineligible mothers. Once the mandatory leave period of 120 days expires, our reduced-form (2SLS) results show that eligible women experience a transitory increase in formal employment, peaking at 3.7 (9.6) percentage points in the seventh month and subsequently fading away. One year later, the policy has no lasting impact on maternal employment. Aggregate statistics from survey data also point to no evidence that the policy has impacts on the informal sector or paternal labor market outcomes. Our findings are consistent with evidence from high-income countries indicating that, apart from the mechanical short-term effect on employment, extensions in maternity leave have little to no impacts on maternal labor market outcomes (Bartel et al., 2023).

Our next key finding is that firms and eligible women appear to engage in strategic employment to extract rents from the government. Leveraging unique information on the causes of job separation, we find that both the firms (through involuntary terminations) and workers (through voluntary quits) drive the short-term decline in separation. A closer examination uncovers two additional facts. First, consistent with moral hazard, eligible women who would have quit in the absence of the EC program defer their separations by the exact length of extended leave. Second, firms hire more replacement workers shortly before the leave-taking and defer employment termination of eligible women by the exact length of extended leave, pointing to some coordination between firms and workers to extract rents from social insurance programs.[3]

Having demonstrated that paid leave extensions do not promote long-run labor market

[3] In Brazil, workers are eligible for unemployment insurance and severance pay if their employers terminate their employment contracts. Van Doornik et al. (2023) find that informal labor markets facilitate collusion between firms and workers to extract rents from the unemployment insurance system.

benefits for mothers, we analyze whether the policy can be rationalized on the grounds of redistribution. We find no support for this. Although *all* workers from participant firms are entitled to extended leave after childbirth, take-up is greater among the college-educated, white, non-disabled, and highest-wage ones. These disparities raise equity concerns about the design of leave policies: Informal workers, who represent one-third of the working-age population in Brazil and have lower socioeconomic status than formal workers, are ineligible for maternity leave. Among formal workers eligible for extended leave, leave-taking is greater for high-socioeconomic-status women. Combined with the lack of evidence that mothers are more attached to the labor force in the long run, our results highlight that voluntary extensions in paid maternity leave funded by taxpayers impose a cost to economic efficiency.

Our final analysis shows that job security and information transmission about the EC program can increase leave-taking and mediate patterns of deferred separations. Among the first women to give birth within the firm after EC adoption, we show that high-socioeconomic-status women take up extended leave more often than low-socioeconomic-status ones. This gap in take-up, however, quickly fades away as more women in the firm extend their leaves, suggesting that information transmission about the policy can boost participation among workers from disadvantaged groups. Leveraging firm tenure as a proxy for job security, we also find that the take-up rates are higher and the deferred job separations occur less frequently for higher-tenure women. This result suggests that enhancing job security can reduce disparities in leave-taking and mitigate the incentive effects of the policy.

This paper builds on a vast literature studying the labor market consequences of maternity leave policies (Ruhm, 1998; Akgunduz and Plantenga, 2013; Rossin-Slater, 2017; Canaan et al., 2022; Bartel et al., 2023), speaking directly to works investigating whether *extensions* in paid maternity leave impact maternal labor market outcomes (Baker and Milligan, 2008; Lalive and Zweimüller, 2009; Kluve and Tamm, 2013; Schönberg and Ludsteck, 2014; Carneiro et al., 2015; Dahl et al., 2016; Olivetti and Petrongolo, 2017; Gallen, 2019; Timpe, 2022; Ginja et al., 2023). Much of the evidence is primarily focused on high-income countries. Low- and middle-income countries are often constrained by data and the recent enactment of maternity leave reforms, and the few exceptions of empirical research rely on cross-sections of countries (Fallon et al., 2017; Ahmed and Fielding, 2019; Aslim et al., 2021), survey data (Uribe et al., 2019; Vu and Glewwe, 2022), or health outcomes (Albagli and Rau, 2019). In a recent survey, Banerjee et al. (2023) state that "more research needs to be done to understand both how pregnancy affects consumption smoothing, as well as the career trajectory of women; and how to design effective leave policies given the presence of informal labor markets (in developing countries)."

We make three main contributions to this literature. First, this paper provides a comprehensive overview of the short- and long-run labor market impacts of extended maternity leave in a large developing country. We also relate our findings to evidence from high-income countries and discuss how the presence of the informal sector influences our findings. Second, the voluntary nature of the extended leave program in our context lends a rich description of which firms provide it. This description also complements the literature on the incidence of non-wage benefits (Woodbury, 1983; Sorkin, 2018; Aizawa et al., 2022), especially female-friendly policies (Gruber, 1994; Hotz et al., 2018; Goldin et al., 2020).[4] Third, related to a handful of previous studies documenting that the duration and the replacement rate of extended maternity leave benefits can generate disparities in leave-taking across income groups (Lalive and Zweimüller, 2009; Rossin-Slater et al., 2013), we examine which factors can mediate these patterns. We provide suggestive evidence that information transmission about the policy and that higher levels of job security after childbirth can counter unequal leave-taking across socioeconomic groups. These findings indirectly indicate that distributional concerns can justify the mandated maternity leave extensions with universal coverage.

Our results also relate to the extensive literature on (dis)incentive effects of social insurance programs, such as unemployment insurance (Chetty, 2008; Kolsrud et al., 2018; Gerard and Gonzaga, 2021), disability insurance (Diamond and Sheshinski, 1995; Bound et al., 2004; Autor et al., 2014), health insurance (Arrow, 1993; Einav et al., 2013), and paid sick leave (Johansson and Palme, 2005). Our main contribution to this literature is to document the presence of incentive effects in the context of voluntary maternity leave policies. We provide suggestive evidence of a particular form of moral hazard, in which both firms and workers strategically defer job separations to extract rents from the government.

The remainder of this paper is structured as follows. Sections 2 and 3 describe the institutional context and data. Section 4 outlines the research design. Section 5 presents the main results. In Sections 6 and 7, we discuss the implications of our findings for redistribution

[4] Recent papers have investigated how the voluntary provision of female-friendly amenities or policies, such as maternity leave, affects workforce composition and firm value (Tate and Yang, 2015; Corradini et al., 2022; Liu et al., 2023). We complement this literature by documenting that larger, higher-paying, and more productive firms are more likely to provide these policies.

and which strategies can mediate unequal access to extended leave. Section 8 concludes.

2 Institutional Background

This section outlines the institutional context. We describe female labor force participation and the differences between the mandatory and voluntary maternity leave policies.

2.1 Female Labor Market

The Brazilian labor market is characterized by sizable gender differences. Despite significant progress over the past two decades, in which the ratio of female to male labor force participation rate rose from 0.52 in 1990 to 0.73 in 2010, gender gaps in employment are still persistent (Agénor and Canuto, 2015). Records from the 2015 National Household Sample (PNAD) Survey, Table A.1, Appendix A, reveal that labor force participation rates for men aged between 25 and 44 are over 85 percent, whereas female labor force participation rates are nearly 62 percent. Among women who are employed, 68.9 percent are in the formal sector and 40.8 percent are full-time workers.

Like in many other countries, women in Brazil bear a heavier load of household chores, with almost 92 (54) percent of women (men) reporting having done chores. They also face substantial childcare responsibilities and child penalties (Kleven et al., 2019). Table A.2, Appendix A, shows that only 40 (91) percent of working-age mothers (fathers) of children with less than one year old work, and 24 (79) percent work full-time hours. These disparities inevitably translate into large income gaps: on average, men earn about 60 percent more than women, and these gaps are not explained by differences in educational level.

2.2 Maternity Leave Policies

Mandatory Maternity Leave. Since the enactment of the Federal Constitution in 1988, women who hold formal employment at the time of pregnancy are guaranteed paid maternity leave by their employers for 120 days.[5,6] Women receive their full wages during this period,

[5]The 1988 Federal Constitution increased the length of maternity leave from 12 weeks to 120 days. Exploiting the timing of enactment in a difference-in-differences design restricted to the period between 1986 and 1991, Carvalho et al. (2006) find no impacts on maternal labor market outcomes.

[6]Women who adopt or obtain legal custody to adopt, regardless of the age of the child, are entitled to paid maternity leave. Women who experience miscarriage and obtain legal permission to abort are also

and the government reimburses their employer. Except for formal employment, there are no specific requirements, such as minimum working time, work history, or salary threshold, to qualify for maternity leave. Women with formal employment are entitled to job protection starting from their pregnancy up to five months after giving birth, a period during which they are safeguarded against dismissal. Any termination by an employer during this job-protected period is deemed unlawful.[7] In contrast to formal workers, women employed in the informal sector are not entitled to maternity leave or job protection.

Mandatory maternity leave typically begins at some point between the last month of pregnancy and childbirth. The leave period may be extended for an additional two weeks due to medical reasons. Throughout their pregnancy, women are allowed to take time off from work for up to six medical appointments. If their job poses health risks, they are also allowed to request a temporary transfer to a different position.

Voluntary Maternity Leave Extension. With the goal of supporting female labor hoarding and continued breastfeeding after childbirth, the federal government launched the EC program in January 2010.[8] Any firm can decide whether they wish to participate in the EC program. Participant firms, in turn, are required to extend the maternity leave by 60 days with full wage replacement. Participant firms can deduct the wage bill costs of the extended leave from income taxes as long as they are under the real tax basis regime.[9] Stolar (2018) estimates that 85 percent of the wage bill costs are passed through to the government, whereas firms cover the remaining 15 percent of these costs. Fringe benefits, such as health insurance and childcare assistance, are exclusively borne by firms. As of 2018, the EC program has an annual cost equivalent to 0.013 percent of the Brazilian Gross Domestic Product (GDP).

entitled to paid maternity leave. The full 120 days of leave are guaranteed in cases of preterm birth after 23 weeks of pregnancy.

[7]Job protection starts when the woman becomes pregnant, regardless of having communicated the pregnancy to her employer. Pregnant women with temporary contracts or during the probationary period have job protection.

[8]The EC program was first created in September 2008 (Law 11,770). Because tax incentive programs must be incorporated into federal budget planning at least one year before starting operations, the EC program was only launched in January 2010, after the enactment of Decree 7,052 in December 2009.

[9]Brazil has three tax regimes on a federal level: simplified ("Simples Nacional"), presumed tax regime (in which firms report presumed profits), and real tax basis (in which actual profits are calculated). Only firms under the real tax basis regime can deduct the wage bill costs of extending maternity leave from taxable income. In 2012, firms under this tax regime represented about 80 percent of corporate tax revenues from the federal government (Rabello and Oliveira, 2015).

Extending maternity leave is a voluntary decision that firms and workers from participant firms make. Firms can decide whether they wish to opt into the EC program. Once participant firms opt into it, maternity leave extension must be offered to all female workers giving birth who, in turn, can choose whether they wish to take it up to 30 days after the birth. The voluntary extension must start immediately after the end of the mandatory leave period of 120 days, and there is no job protection after the extended leave period of 60 days.

3 Data

This paper uses two primary data sources: data on firms that adopted the EC program and the matched employer-employee records covering the entire formal sector. Appendix B provides a detailed description of the data and the sample construction.

EC program. The Brazilian Internal Revenue Service (*Receita Federal do Brazil*) provides a list of all firms that have adopted the EC program since its inception. It contains detailed information on firms' names and tax identifiers, start and end dates of adoption, and location.

Labor Market Data. Labor market information comes from RAIS, the matched employer-employee data provided by the Ministry of Labor. It consists of a comprehensive overview of the formal sector in Brazil (Szerman, 2023). To incorporate 60 months before the adoption of the EC Program into the main analysis, we use annual RAIS data for the period between 2004 and 2019. In addition to individual-level tax identifiers that allow us to track workers over time and across firms, the worker-level data also include demographic characteristics (e.g., age, disability status, educational level, gender, and race), average annual wages, number of hours worked, occupation, and the start and end dates in which workers take maternity leave. Since maternity leave is mandatory, our individual-level data has the universe of all formal workers who give birth. The RAIS data also record detailed information at the firm level, such as industry, location, total number of employees, and wage bill.[10]

Minor Data Sources. We rely on several minor data sources. We use data from the 2015 National Household Sample (PNAD) Survey, which is a representative survey at the national level covering the entire labor market, including the formal and informal sectors. We use this

[10]Wages are adjusted to 2019 Brazilian *reais* using the inflation index from Central Bank of Brazil (2023).

survey to compute aggregate statistics about transitions to the informal sector and parental labor market outcomes after childbirth. In addition, to map occupations into non-routine tasks and routine tasks, we apply the task classification from Spitz-Oener (2006) and the version adapted to the Brazilian data from Gonzaga and Guanziroli (2019).

Sample Construction. We begin by making several restrictions to the EC program dataset. First, we restrict the sample to firms that never had canceled their participation in the EC program. To avoid duplicate observations, we maintain the earliest date on which each firm had opted into the program. Figure C.1 displays the number of firms participating in the EC program. Since its inception, the total number of participant firms has amounted to 19,519. About 80 percent of these firms joined the EC program during the first two years, with more than half (56 percent) and one-fourth adopting it in 2010 and 2011, respectively. Second, because we aim to have a balanced panel of labor market outcomes at least 60 months after the initial leave-taking and 2019 is the last year in which the RAIS data are available, we further limit the sample to 17,999 firms that participate in the EC program between 2010 and 2014.

Using unique firm-level tax identifiers, we match the list of 8,602 participant firms to RAIS data. Our match rate is 48 percent. We then restrict the sample to female workers who take mandatory maternity leave at some point between 2009 and 2015. In line with our research design, we further narrow our sample to those taking leave within a window of 360 days around the date on which their firms join the EC program.[11]

Which, and Why, Firms Adopt Extended Maternity Leave? We provide novel evidence of which firms are more likely to offer extended maternity leave as firm policy by voluntarily adopting the EC program. Using RAIS records from 2009, Table 1 reports summary statistics for non-participants (Column (1)) and participants (Column (2)) firms. We find several statistically significant differences between both groups. On average, participant firms are larger (in number of employees and establishments) and higher-paying than non-participant firms. Leveraging proxies for firm quality, such as AKM firm effects (Abowd et al., 1999), average wages, firm age, and foreign ownership, to overcome the limitation that we do not observe firms' total factor productivity, we document that participant firms

[11]Table D.1, Appendix D, displays means for each step of sample construction.

are more productive along these dimensions.[12] They are also concentrated in specific sectors, such as construction and transformation industries, and are located in more developed regions in the country. Concerning workforce composition, participant firms have a higher share of male, college-educated, and highly skilled workers.[13] This evidence adds to our scant understanding of the types of firms that provide family-friendly amenities in the workplace.[14]

Despite the lack of a representative survey investigating firms' motivations for (not) participating in the EC program, anecdotal evidence indicates that information frictions and financial constraints are important barriers to participation.[15] A qualitative survey from Family Talks and 4Daddy (2022) reveals that participant firms are also more likely to provide family-friendly amenities, such as hybrid arrangements and flexible schedules after childbirth, lactation rooms, and fringe benefits like childcare allowance or on-site childcare. Motivated by global trends, these firms are more likely to publicly announce their commitment to gender equality in the workplace.[16]

4 Empirical Strategy

4.1 Research Design and Summary Statistics

A natural candidate to estimate the causal impacts of extending maternity leave is the regression discontinuity design. Eligible women at the participant firms who wish to take a longer maternity leave must request an extension up to 30 days after birth. Conceptually,

[12]To estimate the firm wage premia, we use the largest connected set of all workers from the matched employer-employee data between 2003 and 2010. We regress hourly wages on individual and firm fixed effects, controlling for year dummies, age, age squared, tenure, and occupation and education dummies.

[13]In addition to the educational level, we use two other measures of worker skills: levels of corporate hierarchy and task composition. The former categorizes occupations into managerial, high-skill professional, low-skill white-collar, and blue-collar occupations. The latter maps occupations into non-routine (analytical, interactive, and manual) and routine (cognitive and manual) tasks.

[14]In the US, Goldin et al. (2020) find that firms that voluntarily offer more generous paid parental leave policies are larger, have a larger share of the workforce in the childbearing ages, and belong to the professional, technical, and finance sectors.

[15]In the qualitative survey from Family Talks and 4Daddy (2022), many firms report a lack of knowledge about the EC program and skepticism about its financial viability as reasons for not participating in the program. In addition, by rule, only firms under the real tax basis regime can deduct the wage costs of the program from income taxes. Even when firms are eligible to pass these costs on to the government, cash-constrained firms report challenges with cash flow because they must immediately incur the costs of extending maternity leave, which can only be deducted later.

[16]For instance, they are more likely to get certified by or adhere to equality movements, such as the UN Global Compact, Great Place to Work, and Women's Empowerment Principles. Their employees also report feeling comfortable about requesting flexible hours and agreeing with the firm's policy on maternity leave.

this requirement would permit comparing women who give birth up to one month prior to EC adoption and, as a result, are eligible for an extension to those who are ineligible for giving birth before the cutoff date. Our data, however, reveals that firms do not distinguish between such cases once they adopt the EC program. They offer extended leave to all women approaching the end of their mandatory leave. Figure C.3, Appendix C, confirms the lack of clear discontinuities in the likelihood of extending leave near the adoption dates.

The institutional details alternatively suggest that our sample can be split into three cases of extension eligibility: (i) *ineligible* women who start their maternity leave six or more months prior to EC adoption and, after 120 days of compulsory leave, they must return to work or quit (14,717 workers and 1,528 firms); (ii) *eligible* women who start their leave after EC adoption (16,785 workers and 2,241 firms); and (iii) women who start their leave up to six months following EC adoption and could be eligible to extend it (31,132 workers and 3,075 firms). Exploiting the gradual take-up of the leave extension across firms, our research design compares labor market outcomes of women who take their maternity leave between 360 and 180 days *before* EC adoption and are *ineligible* for an extension to those who take their leave up to 180 days *after* EC adoption and are *eligible* to extend it. We track these women over a period spanning five years around the beginning of the mandatory leave.

Using labor market and demographic information from the RAIS data, Columns (1) and (2) of Table 2 present summary statistics for eligible and ineligible women from the final estimation sample. Although it excludes women starting their maternity leave up to six months after EC adoption, Column (3) also displays summary statistics for them. We note that these groups are similar along most dimensions, including age, disability, education, and race. The only exception is, consistent with the increased length of the mandatory maternity leave, that ineligible women spend, on average, 123 days on leave. Meanwhile, maternity leave for eligible workers lasts nearly 146 days, suggesting that not all women choose to extend their leave period to six months.

4.2 Main Econometric Specification

Let t_i^{ml} be the calendar time, in days, in which woman i takes maternity leave, and $t_{f(i)}^{ec}$ be the calendar time, also in days, in which firm f, where woman i works at the time of maternity leave, joins the EC program. The running variable $R_i \equiv t_i^{ml} - t_{f(i)}^{ec}$ represents the difference between the dates on which woman i takes maternity leave and her firm f joins the EC program. We define eligibility for leave extension, E_i, as an indicator variable equal to zero if $R_i \in [-180 - x, -180]$ and equal to one if $R_i \in [0, x]$. To enlarge the sample size and increase statistical power, our preferred choice is $x = 180$. We later show that our main results are robust to narrower choices of x. To assess the impact of extended maternity leave on labor market outcomes, our empirical strategy compares eligible and ineligible women, before and after EC adoption. We estimate the following reduced-form specification:

$$y_{ifmr} = \alpha_m + \beta_r \times E_i + X_i\gamma + \epsilon_{ifmr}, \tag{1}$$

in which subscripts i, f, m, and r stand for woman, firm, calendar month (rather than month-year) in which the woman takes maternity leave, and month-year relative to the beginning of maternity leave; α_m are calendar month fixed effects; E_i is an indicator variable for eligibility for extended leave; and X_i is the vector of worker-level controls, such as race, disability status, educational level fixed effects, age, and square age. Calendar month fixed effects control for possible seasonal shocks. Standard errors are clustered at the firm level.

We estimate Equation (1) for each month-year r ranging from 60 months before to 60 months after the beginning of maternity leave. Therefore, the coefficients of interest — β_r — illustrate the dynamic effects of eligibility for extended maternity leave on a monthly basis over a period spanning 10 years around leave-taking. Indicators for employment, separation, and hiring are several of the outcomes of interest. To mitigate concerns related to selection into the EC program, the final sample includes all firms that have implemented it. The main difference is that *only* women who take maternity leave after their firms have adopted the EC program are eligible for extending their leave. The effect of extended maternity leave comes from comparing eligible women to counterfactual women who are ineligible for an extension. The key identifying assumption is that labor market outcomes for eligible women would have trended similarly to ineligible women if no EC adoption had occurred. We test this assumption by assessing whether the coefficients of interest prior to the fourth month since leave-taking, when the leave extension phases in exclusively for eligible women, are statistically indistinguishable from zero.

4.3 Threats to Identification

Several issues could potentially threaten our empirical strategy. First, there may be concerns about differences in baseline characteristics between eligible and ineligible women, and these differences can influence the take-up of extended maternity leave or labor market outcomes. We assess whether this is the case by conducting a balance test regressing eligibility status on various demographic variables. Figure 1 indicates no significant correlations between these variables, suggesting that eligible and ineligible women are comparable along most individual characteristics, including race, disability, educational level, and location.[17] The only exception is age: Eligible women are slightly older than ineligible ones, and the point estimate of 0.129 (s.e. = 0.078) is only marginally significant at the 10 percent level. We believe this result reflects the rising trend of the age at which women give birth over time rather than selection into eligibility based on age (OECD, 2018). Yet, we note that Equation (1) also flexibly controls for age.

Second, given that the EC program was created sixteen months before coming into force in 2010, there is a concern about the strategic timing of births. Anticipating that the new regulation would be in force later, women may have postponed motherhood. These cases are unlikely because firms, not workers, have discretion over the implementation of the program. There remain two other concerns. First, EC adoption might be correlated with the number of women who would likely benefit from maternity leave extension. We find no support for this concern. Table 1 reveals that, if anything, participant firms have a *lower* share of women in the workforce. Figure C.2, Appendix C, and Table 2 also display that the total number of eligible and ineligible women is quite balanced.[18] Second, the timing of EC adoption could coincide with the timing of births, confounding the estimated effects. For instance, pregnant women might have called on their employers to adopt the EC program, allowing them to benefit from extended maternity leave. To mitigate this concern, one of our robustness checks from Section 5.4 shows that the results are insensitive to excluding eligible women who give birth right after EC adoption from the sample.

[17] Figure C.4, Appendix C, corroborates that eligible and ineligible women are also similar in job characteristics prior to leave-taking.

[18] The total number of observations is slightly higher for eligible women, consistent with the increasing formalization rates among firms over time in the country.

5 Results

5.1 The Effects on Take-Up Rates

We begin with impacts on the take-up of extended leave. Figure 2 illustrates the patterns that we observe in the data among women who are ineligible for leave extension (on the left of the figure) and those who are eligible for it (on the right). Eligibility is determined by the date of EC adoption. For ineligible women, the likelihood of extended maternity leave is quite low, with nearly 10 percent of the sample taking it. Among eligible women, the take-up rates are markedly higher, reaching 45 percent.

Table 3 reports the aggregate impacts of eligibility for extended leave on the take-up. Column (4), which refers to our preferred specification from Equation (1), documents that eligible women present an incomplete take-up rate of 35.7 (s.e. = 0.055) percent, equivalent to an increase in the number of days on leave of 23 (s.e. = 3.225) days. The remaining columns corroborate that our estimates are robust to excluding individual characteristics and calendar month fixed effects and to including firm fixed effects in the set of controls.

Evidence from high-income countries indicates an almost universal take-up of highly paid leave and much lower utilization of unpaid or less generous paid leave (Olivetti and Petrongolo, 2017; Rossin-Slater, 2017). Interestingly, the low take-up rates of extended leave with full wage replacement from the Brazilian context sharply contrast with the nearly universal take-up rates from high-income countries providing full or high wage replacement, such as Denmark (Rasmussen, 2010), Germany (Kluve and Tamm, 2013) and Norway (Carneiro et al., 2015; Dahl et al., 2016). Instead, our findings are comparable to countries providing low wage replacement rates or even unpaid leave, such as Canada (Baker and Milligan, 2008) and the United States (Han et al., 2009).

5.2 The Effects on Employment

Prior to the EC program, women had two options after the mandatory leave period. They could either return to work or they could separate, voluntarily or involuntarily, from their employer after the job protection period. The launch of the EC program introduces a third option: separating, voluntarily or involuntarily, from their employer after the leave extension period. Unlike mandatory maternity leave, which entitles job protection up to five months after birth, there is no job protection by the end of the extended leave period.

We assess the impact of eligibility for extended leave on the likelihood of formal employment. In addition to the reduced-form estimates from Equation (1), we present two-stage least squares (2SLS) estimates of the following system of equations:

$$y_{ifmr} = \alpha_m^1 + \gamma_r \times T_{ifmr} + X_i\gamma^1 + \nu_{ifmr} \tag{2}$$

$$T_{ifmr} = \alpha_m^2 + \omega \times E_i + X_i\gamma^2 + \varepsilon_{ifmr}, \tag{3}$$

in which T_{ifmt} is an indicator variable for woman i's take-up of extended leave, and the remaining set of subscripts and variables are similar to Equation (1).

Interpreting our 2SLS estimates in the local average treatment effect (LATE) framework requires additional assumptions (Imbens and Angrist, 1994). The first assumption is that eligibility weakly increases the take-up of extended leave. Column (4) of Table 3 validates it. Second, the exclusion restriction implies that eligibility only affects labor market outcomes through the take-up of paid leave extensions. Although it is impossible to directly test the exclusion restriction, several pieces of evidence suggest this is a reasonable assumption. First, institutional features from the EC program indicate that the regulation does not provide other perks to eligible women beyond the extension in paid maternity leave. Second, before the EC adoption, there is little evidence of systematic differences in workers' labor market outcomes across the eligibility status, with coefficients before the fourth month of leave-taking close to zero (Figures 3 and 4). The fact that the increase in employment is confined to the months around the leave extension makes it difficult to rationalize with other explanations than the take-up of extended leave. Third, our results are consistent with evidence from high-income countries that paid leave extensions have no long-term impacts on maternal labor market outcomes (Bartel et al., 2023) and are robust to the inclusion of more granular levels of fixed effects, such as calendar month and firm fixed effects. These pieces of evidence support that eligibility for extended leave is unlikely to capture other factors, besides its take-up, that could influence labor market outcomes. Under these assumptions, we interpret our 2SLS estimates as the average causal effect of leave extensions for women who take longer maternity leaves should they be eligible for extensions.

Figure 3 and Column (1) of Table D.3, Appendix D, demonstrate that our reduced form estimates of employment in the formal sector follow an inverse U-shape pattern over a period of 10 years around leave-taking. The coefficients are statistically equal to zero up to four months after its beginning, validating our empirical strategy. In the fifth and sixth months, mothers eligible for leave extension are 1 (s.e. = 0.002) and 3.3 (s.e. = 0.005) percentage points more likely to be employed relative to ineligible mothers. Column (3) of Table D.3, Appendix D, indicates that the corresponding 2SLS estimates are 2.7 (s.e. = 0.006) and 8.6 (s.e. = 0.019) percentage points. The reduced form differences peak in the seventh month, reaching 3.7 percentage points (a 4 percent increase), and disappear around the tenth month. The transitory increase in employment is due to a higher probability of staying in the same firm, instead of switching firms (Figure C.5, Appendix C). Consistent with rigid working hours and little flexibility in work schedules in the country, we also find that part-time employment does not change.[19] Five years later, there is no evidence that maternity leave extension generates lasting employment effects, with only 67 percent of the sample remaining employed in the formal sector (Column (5) of Table D.3).

Our findings are consistent with previous evidence from high-income countries pointing to limited long-run impacts of parental leave extensions on maternal labor market outcomes (Bartel et al., 2023). Papers exploiting major reforms providing more generous maternity leave coverage in Germany document little to no impact on maternal labor market participation (Kluve and Tamm, 2013; Schönberg and Ludsteck, 2014). In a review of a series of policy reforms that extended the duration of paid leave in Norway, Dahl et al. (2016) show that these reforms had little (if any) effect on parental earnings and participation in the labor market. In Canada, Baker and Milligan (2008) find that short maternity leaves do not generate lasting impacts, whereas much longer extensions of paid maternity leaves, even without full wage replacement, can increase job retention. Tax records from the United States indicate that the enactment of paid maternity leave in California led to a decline in maternal employment and wages ten years after giving birth (Bailey et al., 2019).

5.3 The Effects on Separation

The richness of our matched employer-employee records, which contain information on causes of separation, permits a closer examination of *who* takes the initiative to separate:

[19] In contrast, Ginja et al. (2023) exploit a Swedish reform that increased the duration of parental leave by three months and find an increase in the probability that women switch firms once parental leave expires. They interpret these voluntary switches as evidence that women engage in job searches while on leave.

employers (involuntary termination), employees (voluntary quit), or none of these options.[20] In line with our previous employment results, Figure 4(a) and Table D.4, Appendix D, show that leave extensions are associated with fewer separations in the fifth month after initial leave-taking. The reduced-form and 2SLS estimates (Columns (1) and (3)) indicate declines of 2.3 (s.e. = 0.004) and 5.8 (s.e. = 0.014) percentage points. Once the extended leave period expires, separations gradually bounce back until the eleventh month and then become statistically insignificant. Involuntary terminations and voluntary quits represent equally important drivers of separations (Figures 4(b)–4(d) and Table D.5, Appendix D).

We argue that our results are consistent with firms and workers strategically deferring job separations to extract rents from the government. On the worker side, women who would have quit in the absence of the EC program postpone their separations due to the extended paid leave. Figure 4(c) and Table D.5, Appendix D, show that the magnitude of the decline in voluntary quits in the fifth month is roughly similar to the increase in the seventh month. This difference of two months — the exact length of extended leave — is consistent with moral hazard responses. Our findings illustrate that this market failure can also arise in paid parental leave programs and add new evidence to a set of social insurance programs with moral hazard problems, such as unemployment insurance (Chetty, 2008; Kolsrud et al., 2018; Gerard and Gonzaga, 2021), disability insurance (Diamond and Sheshinski, 1995; Bound et al., 2004; Autor et al., 2014), health insurance (Arrow, 1993; Einav et al., 2013), and paid sick leave (Johansson and Palme, 2005).

On the firm side, involuntary terminations appear to be, to some extent, driven by coordination between firms and workers. While it is clear why a worker would defer voluntary quits due to the extended paid leave, it is less obvious why firms and workers would coordinate to defer involuntary terminations. In Brazil, workers are only eligible for severance pay and unemployment insurance if they are laid off by their employers (not if they quit). As a result, collusion between firms and workers to extract rents from the UI system is widespread (Van Doornik et al., 2023). Figure 4(b) shows that, like voluntary quits, involuntary terminations are deferred by the exact length of extended leave. Additional evidence from Figure C.6, Appendix C, reports that firms also hire more replacement workers from the same occupation for eligible women shortly before the initial leave-taking. This suggests that firms and workers collude to terminate the employment contract of eligible workers once the extended

[20] Examples of other separation causes include retirement, death, and job transfer.

leave period expires and, therefore, firms anticipate the hiring of replacement workers.[21] It is worth noting that our analysis, however, does not disprove other potential reasons for involuntary terminations, such as discrimination against mothers or worker shirking.

5.4 Additional Results

Effects on Wages. We next turn to the effects on wages. Because monthly wages from the RAIS data have been reported since 2015 and we are interested in uncovering the dynamic impacts, we use an alternative sample of firms that adopted the EC program in 2016 and 2017. We track workers over two years comprising 12 months before and after leave-taking.

To handle zeroes in monthly wages and ensure that our estimates can be interpreted as semi-elasticities, we estimate Poisson regressions (Chen and Roth, Forthcoming). The term "unconditional wages" refers to wages of the complete estimation sample, in which we impute zero wages to individuals outside the formal sector. We also present results using conditional wages, in which we do not assign zero wages to individuals outside the formal sector. In this case, the estimation sample refers to stayers. Figure C.7, Appendix C, shows that, in the first four months after initial leave-taking, our estimates are statistically insignificant. Among eligible women, there is a temporary increase in unconditional wages in the second semester. This increase disappears for stayers, corroborating that the effects on unconditional wages are mechanically driven by the temporary increase in formal employment.

The Role of the Informal Sector. A key feature of low- and middle-income countries is the presence of a large informal sector. The informal sector accounts for around a third of these countries' economic activity, whereas the share in high-income countries is about 15 percent (Delechat and Medina, 2020). Given that the informality rate is also high in Brazil and that informal workers are not entitled to the mandatory leave of 120 days, let alone the voluntary leave extension of 60 days, an important question for the interpretation of our results is to what extent informality influences them.[22]

[21] To handle zeroes in new hires, we follow recommendations from Chen and Roth (Forthcoming) and estimate Poisson regressions adapted from Equation (1) in Figure C.6, Appendix C.

[22] To capture formal employment, the 2015 PNAD Survey asks whether respondents have a booklet (*carteira de trabalho*) that records their employment history in the formal sector (Ulyssea, 2018). Using records from the 2015 PNAD Survey, Column (2) of Table A.2, Appendix A, shows that 23 percent of women without children aged between 25 and 44 who have worked during the survey reference period do not have a formal employment contract.

Although the RAIS data does not allow us to observe transitions from the formal to informal sectors or even to identify partners of women from our analysis sample, we use records from the 2015 PNAD Survey data to uncover additional descriptive facts about the Brazilian labor market. First, child penalties are large (de Medeiros, 2022; Kleven et al., 2023). Employment among women aged between 25 and 44 sharply declines after childbirth and partially recovers as children get older. Yet, only 52 percent of women with a child aged 6 report having worked in the week of reference, whereas this figure is 74 percent for childless women (Panel A of Table A.2, Appendix A). Second, the informal sector and part-time work constitute represent employment buffers for women (de Medeiros, 2022). Conditional on working, about 80 and 19 percent of women with a child aged 6 months old are employed in the formal sector and have full-time work.[23] By contrast, 65 and 31 percent (77 and 53 percent) of women with a child aged 6 years old (childless women) are employed in the formal sector and have full-time work (Panel A). Third, men appear to be unaffected by leave extensions because aggregate statistics for men with and without children are strikingly similar (Panel B). These three facts suggest that the informal sector only partially absorbs women leaving the formal sector after childbirth and that paternal labor market outcomes are likely unaffected by paid maternity leave extensions.

Robustness Checks. We perform additional checks to ensure that our results are not sensitive to choices in our main specification. First, Table D.6 and Figure C.8, Appendix C, confirm that our results are not driven by choosing a window of 180 days between the dates on which women take maternity leave and their firms adopt the EC program as our baseline specification. Although narrower windows inevitably lead to noisier estimates due to smaller sample sizes, our conclusions are preserved when we consider alternative windows of 60 and 120 days. Second, Table D.6 and Figure C.8, Appendix C, also show that our findings are insensitive to excluding women who give birth within 60 days after EC adoption from the sample in order to mitigate concerns that the timing of EC adoption coincides with the strategic timing of births. Third, Table 3 corroborates that the inclusion of a battery of fixed effects and individual controls does not change our results.

[23] Similarly, Table D.3, Appendix D, also shows that a large share of workers from our final sample leaves the formal sector after leave-taking. By the end of the first and fifth years following initial leave-taking, only 80 and 67 percent of the sample remain formally employed.

6 Heterogeneity

Thus far, our analysis points to three key findings. First, there is an incomplete take-up of 35 percent. Second, increasing the duration of paid maternity leave has no impact on maternal labor market outcomes over the long run. Third, firms and workers appear to strategically defer job separations to extract rents from the government.

We next examine whether the policy can be justified on the grounds of redistribution. Table 4 assesses heterogeneous impacts based on individual characteristics by presenting estimates of interactions between eligibility status and individual characteristics. We find that take-up of extended leave is higher for college-educated, white, non-disabled, and highest-wage workers. By contrast, we do not observe significant differences by type of occupation.

The finding that women with higher socioeconomic status (SES) are more likely to take extended leave is in line with evidence from high-income countries. Despite the almost complete take-up of paid leaves in Norway, eligible mothers tend to be more educated than ineligible ones because a minimum level of labor earnings is required for eligibility (Dahl et al., 2016). In the United States, Han et al. (2009) finds that leave-taking of unpaid and partially paid leaves is greater for college-educated and married mothers because they are more likely to be eligible for leave policies and able to afford unpaid leave. Our findings reinforce that, even in contexts with full eligibility and wage replacement, the voluntary nature of the policy also precludes low-SES mothers from taking extended leave.

In addition, our findings raise equity concerns about the design of extensions in leave policies. Informal workers, who are more likely to have lower levels of income, education, and labor force attachment, are already ineligible for both mandatory and extended maternity leaves, making them more vulnerable after childbirth. Among eligible workers in the formal sector, the nature of the EC program implies that the government indirectly makes transfers from taxpayers to high-SES mothers. These transfers impose a cost to economic efficiency since mothers do not appear to be more attached to the labor force in the long run.

7 Closing the Gap

This section asks whether job security and information transmission about the EC program increase the take-up of extended leave and mediate patterns of deferred job separations.

The Role of Information Transmission. Given the low take-up rate of extended leave, especially among low-SES women, a natural question is whether the lack of knowledge about the program can explain our findings. We ask whether workplace interactions with coworkers can increase information transmission, boosting the take-up of extended leave (Dahl et al., 2014). To capture this margin of response, we investigate whether women learn about the policy through past claims from other coworkers who had previously taken extended leave. We estimate a modified version of our original Equation (1):[24]

$$y_{ifmr} = \alpha_m + \sum_{g \in G} \beta_g \times E_i \times I_{if}(g) + X_i\gamma + \epsilon_{ifmr}, \tag{4}$$

in which the eligibility status interacts with an indicator variable for whether woman i is a member of a group $g \in G$, $I_{if}(g)$, and the remaining variables are similar to before. The indicator $I_{if}(g)$ reflects the order g in which woman i has given birth after EC adoption among workers within the firm f. At a cost of larger standard errors, we separately present results for women who are among the first to the tenth to give birth.[25]

Point estimates in blue circles from Figure 5 display a weak heterogeneity in the order of leave-taking after EC adoption, with take-up rates ranging from 36.6 percent (s.e. = 0.066) among the first women giving birth to 45.6 percent (s.e. = 0.094) among the tenth ones.

We further analyze whether information transmission can mitigate the unequal take-up rates. Two patterns arise. First, using college education as a proxy for socioeconomic status and restricting our attention to women who are among the first to give birth, we note that leave-taking is greater for high-SES mothers (orange triangles in Figure 5) than for low-SES ones (grey squares).[26] Second, the leave-taking gap between high- and low-SES mothers quickly declines as more women take extended leave. Both patterns suggest that formal education and information transmission can mitigate the unequal take-up rates and bridge the gap in program participation, especially for disadvantaged groups. Although our analysis does not rule out other potential explanations, such as changing norms at the workplace or firm adjustments to the increased prevalence of extended maternity leave, the finding that

[24] One possible explanation is that workers require more time to learn about the EC program. Figure C.3, Appendix C, rejects this hypothesis by showing that the take-up rates are constant over time.

[25] One concern is that our results might be driven by selection into identification in fixed effect models because some firms might be over-represented in groups with a larger number of workers taking extended leave (Miller et al., 2023). We note that our results are robust to the inclusion and exclusion of firm fixed effects in the set of controls from Equation (4).

[26] The results for other proxies for SES, such as race, disability, and wage distribution, are similar.

only low-SES women without a college education are affected makes these explanations unlikely.

The Role of Job Security. Besides the duration and replacement rate of benefits, another important feature of the design of parental leave policies is the availability of job protection. Out of 146 countries with information on job protection, 82 of them do not guarantee it (Rossin-Slater, 2017). In Brazil, women with formal employment are entitled to job protection from pregnancy up to five months after giving birth. The voluntary extended leave does not guarantee job protection, potentially influencing workers' willingness to take it up and the subsequent labor market outcomes. We assess whether this is the case.

A key empirical challenge to analyzing the extent to which job protection (or lack thereof) affects our results is that there is no formal assignment of different levels of job protection because eligible and ineligible are entitled to the same level of job protection. The fact that both firms and workers can voluntarily opt into the EC program poses additional empirical challenges. We propose an indirect test: Due to firm-specific human capital investments and firing costs increasing in tenure (Gonzaga et al., 2003), we argue that higher-tenure workers are more valuable for firms to retain (Jacobson et al., 1993; Lazear, 2009) and, therefore, enjoy *more job security*. We test whether there are differential labor market impacts across tenure levels by adding interactions between the number of months working at the firm and the eligibility status to Equation (1). Put differently, we estimate the following model:

$$\begin{aligned} y_{ifmr} = \alpha_m + \beta_{0r} \times E_i + \delta_{1r} \times t_i + \delta_{2r} \times t_i^2 + \delta_{3r} \times t_i^3 + \\ \theta_{1r} \times t_i \times E_i + \theta_{2r} \times t_i^2 \times E_i + \theta_{3r} \times t_i^3 \times E_i + X_i\gamma + \epsilon_{ifmr}, \end{aligned} \tag{5}$$

in which t_i is the total number of months that woman i has been working in the firm f by the time she starts her maternity leave, and the remaining variables are similar to Equation (1). With the estimated parameters in hand, we calculate the marginal impact of eligibility for extended leave that varies with the number of months of experience.

Figure 6(a) displays the heterogeneous results for tenure ranging from 1 to 10 years. We observe that take-up is monotonically non-decreasing in tenure: Lower-tenure women are less likely to voluntarily take extended maternity leave, and the take-up rate increases in the first five years of tenure and, thereafter, becomes stable.

Turning to other labor market outcomes three, six, nine, and twelve months after leave-taking, Figure 6(b) shows that the reduced-form impacts on the likelihood of employment in the first months after leave-taking are stronger for lower-tenure women and become monotonically weaker as tenure increases. One year later, differences across tenure disappear. Figure 6(c) also reports that separation rates in the sixth (ninth) are lower (higher) for lower-tenure women, and there are no differences in separation over time for higher-tenure women. These patterns together illustrate that firms are more likely to lay off women with lower tenure and that strategic deferred job separations are more prevalent among low-tenure women.

Our results underscore the importance of considering job protection as a key feature of extended leave policies (Baker and Milligan, 2008; Rossin-Slater, 2017; Stearns, 2018). Previous works have highlighted that increasing replacement rates and the duration of maternity leave benefits can boost leave-taking among disadvantaged women and decrease the gap across socioeconomic groups (Lalive and Zweimüller, 2009; Schönberg and Ludsteck, 2014; Carneiro et al., 2015). The finding that higher job security is associated with greater leave-taking and fewer deferred job separations further suggests that enhancing job protection after maternity leave can serve the dual purpose of mitigating leave-taking inequities and decreasing the policy's incentive effects.

8 Conclusion

This paper provides novel empirical evidence on the labor market consequences of paid maternity leave extensions from four to six months in a large developing country. We document that larger, higher-paying, and more productive firms are more likely to voluntarily adopt a government-funded program offering longer leave to workers. This result adds to scant evidence of the types of firms that provide family-friendly policies in the workplace.

We also find that, unlike high-income countries with full wage replacement and nearly universal take-up rates, only 35 percent of eligible workers ultimately extend their leave. The incomplete take-up also does not translate into lasting impacts on maternal labor market outcomes in both the formal and informal sectors. Instead, we show that the policy generates some unintended consequences for redistribution. First, firms and workers appear to strategically engage in deferred job separations to extract rents from the government. Second, although *all* workers holding formal employment from firms that participate in the EC program are entitled to extend their leave, college-educated, white, non-disabled, and highest-wage workers primarily do so. We show that job security and information transmission about leave extensions have the potential to reduce socioeconomic disparities in leave-taking and mediating patterns of deferred job separations. Our results together suggest that distributional concerns can rationalize mandated maternity leave extensions with universal coverage.

This paper has several limitations left for future research. First, our results do not necessarily imply that this policy does not generate social benefits, such as better health conditions and cognitive abilities for children and improved mental health for mothers (Albagli and Rau, 2019). Quantifying these impacts is beyond the scope of this paper. Second, despite the lack of clear economic benefits of leave extensions in our context, mothers might enjoy utility gains from extended leave that could justify the costs of the policy. Identifying whether this is the case requires a welfare framework outlining the incentive-insurance trade-offs. Third, due to data limitations, this paper does not delve into normative assessments of how parental leave policies should be designed given the presence of a large informal sector. These are examples worthy of their own papers.

References

Abowd, J. M., F. Kramarz, and D. N. Margolis (1999). High Wage Workers and High Wage Firms. *Econometrica 67*(2), 251–333.

Agénor, P.-R. and O. Canuto (2015). Gender Equality and Economic Growth in Brazil: A Long-Run Analysis. *Journal of Macroeconomics 43*, 155–172.

Ahmed, S. and D. Fielding (2019). Changes in Maternity Leave Coverage: Implications for Fertility, Labour Force Participation and Child Mortality. *Social Science & Medicine 241*, 112573.

Aizawa, N., C. Mommaerts, and S. Rennane (2022). Explaining Heterogeneity in Use of Non-wage Benefits: The Role of Worker and Firm Characteristics in Disability Accommodations. *AEA Papers and Proceedings 112*, 376–380.

Akgunduz, Y. E. and J. Plantenga (2013). Labour Market Effects of Parental Leave in Europe. *Cambridge Journal of Economics 37*(4), 845–862.

Albagli, P. and T. Rau (2019). The Effects of a Maternity Leave Reform on Children's Abilities and Maternal Outcomes in Chile. *The Economic Journal 129*(619), 1015–1047.

Arrow, K. J. (1993). Uncertainty and the Welfare Economics of Medical Care. *American Economic Review*, 941–973.

Aslim, E. G., I. Panovska, and M. A. Taş (2021). Macroeconomic Effects of Maternity Leave Legislation in Emerging Economies. *Economic Modelling 100*, 105497.

Autor, D., M. Duggan, and J. Gruber (2014). Moral Hazard and Claims Deterrence in Private Disability Insurance. *American Economic Journal: Applied Economics 6*(4), 110–141.

Bailey, M. J., T. S. Byker, E. Patel, and S. Ramnath (2019). The Long-Term Effects of California's 2004 Paid Family Leave Act on Women's Careers: Evidence from US Tax Data. Technical report, National Bureau of Economic Research.

Baker, M. and K. Milligan (2008). How Does Job-Protected Maternity Leave Affect Mothers' Employment? *Journal of Labor Economics 26*(4), 655–691.

Banerjee, A., R. Hanna, B. Olken, and D. Sverdlin-Lisker (2023). Social Protection in the Developing World. *Working Paper*.

Bartel, A., M. Rossin-Slater, C. Ruhm, M. Slopen, and J. Waldfogel (2023). The Impacts of Paid Family and Medical Leave on Worker Health, Family Well-Being, and Employer Outcomes. *Annual Review of Public Health 44*, 429–443.

Bound, J., J. B. Cullen, A. Nichols, and L. Schmidt (2004). The Welfare Implications of Increasing Disability Insurance Benefit Generosity. *Journal of Public Economics 88*(12), 2487–2514.

Canaan, S., A. Lassen, P. Rosenbaum, and H. Steingrimsdottir (2022). Maternity Leave and Paternity Leave: Evidence on the Economic Impact of Legislative Changes in High Income Countries.

Carneiro, P., K. V. Løken, and K. G. Salvanes (2015). A Flying Start? Maternity Leave Benefits and Long-Run Outcomes of Children. *Journal of Political Economy 123*(2), 365–412.

Carvalho, S. S. d., S. P. Firpo, and G. Gonzaga (2006). Os Efeitos do Aumento da Licença-Maternidade sobre o Salário e o Emprego da Mulher no Brasil. *Instituto de Pesquisa Econômica Aplicada (Ipea)*.

Central Bank of Brazil (2023). Calculadora do Cidadão. *Central Bank of Brazil*, Accessed on https://www3.bcb.gov.br/CALCIDADAO/publico/corrigirPorIndice.do?method=corrigirPorIndice in September 2023.

Chen, J. and J. Roth (Forthcoming). Logs with Zeros? Some Problems and Solutions. *The Quarterly Journal of Economics*.

Chetty, R. (2008). Moral Hazard Versus Liquidity and Optimal Unemployment Insurance. *Journal of Political Economy 116*(2), 173–234.

Corradini, V., L. Lagos, and G. Sharma (2022). Collective Bargaining for Women: How Unions Can Create Female-Friendly Jobs.

Dahl, G. B., K. V. Løken, and M. Mogstad (2014). Peer Effects in Program Participation. *American Economic Review 104*(7), 2049–2074.

Dahl, G. B., K. V. Løken, M. Mogstad, and K. V. Salvanes (2016). What Is the Case for Paid Maternity Leave? *Review of Economics and Statistics 98*(4), 655–670.

de Medeiros, M. O. (2022). *Motherhood Penalty in Labor Market: Evidence from Brazil*. Ph. D. thesis, PUC-Rio.

Delechat, C. C. and L. Medina (2020). Back to Basics: What Is the Informal Economy? *Finance & Development 57*(004).

Diamond, P. and E. Sheshinski (1995). Economic Aspects of Optimal Disability Benefits. *Journal of Public Economics 57*(1), 1–23.

Einav, L., A. Finkelstein, S. P. Ryan, P. Schrimpf, and M. R. Cullen (2013). Selection on Moral Hazard in Health Insurance. *American Economic Review 103*(1), 178–219.

Fallon, K. M., A. Mazar, and L. Swiss (2017). The Development Benefits of Maternity Leave. *World Development 96*, 102–118.

Family Talks and 4Daddy (2022). Relatório: Pesquisa Licenccas Maternidade e Paternidade nas Empresas. pp. Accessed on https://familytalks.org/pdf/ebooks/relatorio_pesquisa_parentalidade_nas_empresas.pdf.

Gallen, Y. (2019). The Effect of Parental Leave Extensions on Firms and Coworkers. Technical report, Working Paper.

Gerard, F. and G. Gonzaga (2021). Informal Labor and the Efficiency Cost of Social Programs: Evidence from Unemployment Insurance in Brazil. *American Economic Journal: Economic Policy 13*(3), 167–206.

Ginja, R., A. Karimi, and P. Xiao (2023). Employer responses to family leave programs. *American Economic Journal: Applied Economics 15*(1), 107–135.

Goldin, C., S. P. Kerr, and C. Olivetti (2020). Why Firms Offer Paid Parental Leave: An Exploratory Study. Technical report, National Bureau of Economic Research.

Gonzaga, G. and T. Guanziroli (2019). Returns to Experience Across Tasks: Evidence from Brazil. *Applied Economics Letters 26*(20), 1718–1723.

Gonzaga, G., W. F. Maloney, and A. Mizala (2003). Labor Turnover and Labor Legislation in Brazil. *Economia 4*(1), 165–222.

Gruber, J. (1994). The Incidence of Mandated Maternity Benefits. *American Economic Review*, 622–641.

Han, W.-J., C. Ruhm, and J. Waldfogel (2009). Parental Leave Policies and Parents' Employment and Leave-Taking. *Journal of Policy Analysis and Management 28*(1), 29–54.

Heath, R. and S. Jayachandran (2018). The Causes and Consequences of Increased Female Education and Labor Force Participation in Developing Countries. In *The Oxford Handbook of Women and the Economy*. Oxford University Press.

Hotz, V. J., P. Johansson, and A. Karimi (2018). Parenthood, Family Friendly Workplaces, and the Gender Gaps in Early Work Careers. Technical report, National Bureau of Economic Research.

Imbens, G. W. and J. D. Angrist (1994). Identification and Estimation of Local Average Treatment Effects. *Econometrica 62*(2), 467–475.

Jacobson, L. S., R. J. LaLonde, and D. G. Sullivan (1993). Earnings Losses of Displaced Workers. *American Economic Review*, 685–709.

Johansson, P. and M. Palme (2005). Moral Hazard and Sickness Insurance. *Journal of Public Economics 89*(9-10), 1879–1890.

Kleven, H., C. Landais, and G. L. Mariante (2023). The Child Penalty Atlas. *Working Paper*.

Kleven, H., C. Landais, and J. E. Søgaard (2019). Children and Gender Inequality: Evidence from Denmark. *American Economic Journal: Applied Economics 11*(4), 181–209.

Kluve, J. and M. Tamm (2013). Parental Leave Regulations, Mothers' Labor Force Attachment and Fathers' Childcare Involvement: Evidence from a Natural Experiment. *Journal of Population Economics 26*, 983–1005.

Kolsrud, J., C. Landais, P. Nilsson, and J. Spinnewijn (2018). The Optimal Timing of Unemployment Benefits: Theory and Evidence from Sweden. *American Economic Review 108*(4-5), 985–1033.

Lalive, R. and J. Zweimüller (2009). How Does Parental Leave Affect Fertility and Return to Work? Evidence from Two Natural Experiments. *The Quarterly Journal of Economics 124*(3), 1363–1402.

Lazear, E. P. (2009). Firm-Specific Human Capital: A Skill-Weights Approach. *Journal of Political Economy 117*(5), 914–940.

Liu, T., C. A. Makridis, P. Ouimet, and E. Simintzi (2023). The Distribution of Nonwage Benefits: Maternity Benefits and Gender Diversity. *The Review of Financial Studies 36*(1), 194–234.

Miller, D. L., N. Shenhav, and M. Grosz (2023). Selection into Identification in Fixed Effects Models, with Application to Head Start. *Journal of Human Resources 58*(5), 1523–1566.

OECD (2018). Age of Mothers at Childbirth and Age-Specific Fertility. *OECD Family Database*.

Olivetti, C. and B. Petrongolo (2017). The Economic Consequences of Family Policies: Lessons from a Century of Legislation in High-Income Countries. *Journal of Economic Perspectives 31*(1), 205–230.

Rabello, G. G. and J. M. d. Oliveira (2015). Tributação sobre Empresas no Brasil: Comparação Internacional.

Rasmussen, A. W. (2010). Increasing the Length of Parents' Birth-Related Leave: The Effect on Children's Long-Term Educational Outcomes. *Labour Economics 17*(1), 91–100.

Rossin-Slater, M. (2017). Maternity and Family Leave Policy. Technical report, National Bureau of Economic Research.

Rossin-Slater, M., C. J. Ruhm, and J. Waldfogel (2013). The Effects of California's Paid Family Leave Program on Mothers' Leave-Taking and Subsequent Labor Market Outcomes. *Journal of Policy Analysis and Management 32*(2), 224–245.

Ruhm, C. J. (1998). The Economic Consequences of Parental Leave Mandates: Lessons from Europe. *The Quarterly Journal of Economics 113*(1), 285–317.

Schönberg, U. and J. Ludsteck (2014). Expansions in Maternity Leave Coverage and Mothers' Labor Market Outcomes After Childbirth. *Journal of Labor Economics 32*(3), 469–505.

Sorkin, I. (2018). Ranking Firms Using Revealed Preference. *The Quarterly Journal of Economics 133*(3), 1331–1393.

Spitz-Oener, A. (2006). Technical Change, Job Tasks, and Rising Educational Demands: Looking Outside the Wage Structure. *Journal of Labor Economics 24*(2), 235–270.

Stearns, J. (2018). The Long-Run Effects of Wage Replacement and Job Protection: Evidence from Two Maternity Leave Reforms in Great Britain. *Available at SSRN 3030808*.

Stolar, L. B. (2018). A Hora de Voltar: Consequências da Ampliação da Licença-Maternidade para Emprego e Renda. *Working Paper*.

Szerman, C. (2023). The Employee Costs of Corporate Debarment in Public Procurement. *American Economic Journal: Applied Economics 15*(1), 411–41.

Tate, G. and L. Yang (2015). Female Leadership and Gender Equity: Evidence from Plant Closure. *Journal of Financial Economics 117*(1), 77–97.

Timpe, B. (2022). The Labor Market Impacts of America's First Paid Maternity Leave Policy.

Ulyssea, G. (2018). Firms, informality, and development: Theory and Evidence from Brazil. *American Economic Review 108*(8), 2015–2047.

Uribe, A. M. T., C. O. Vargas, and N. R. Bustamante (2019). Unintended Consequences of Maternity Leave Legislation: The Case of Colombia. *World Development 122*, 218–232.

Van Doornik, B., D. Schoenherr, and J. Skrastins (2023). Strategic Formal Layoffs: Unemployment Insurance and Informal Labor Markets. *American Economic Journal: Applied Economics 15*(1), 292–318.

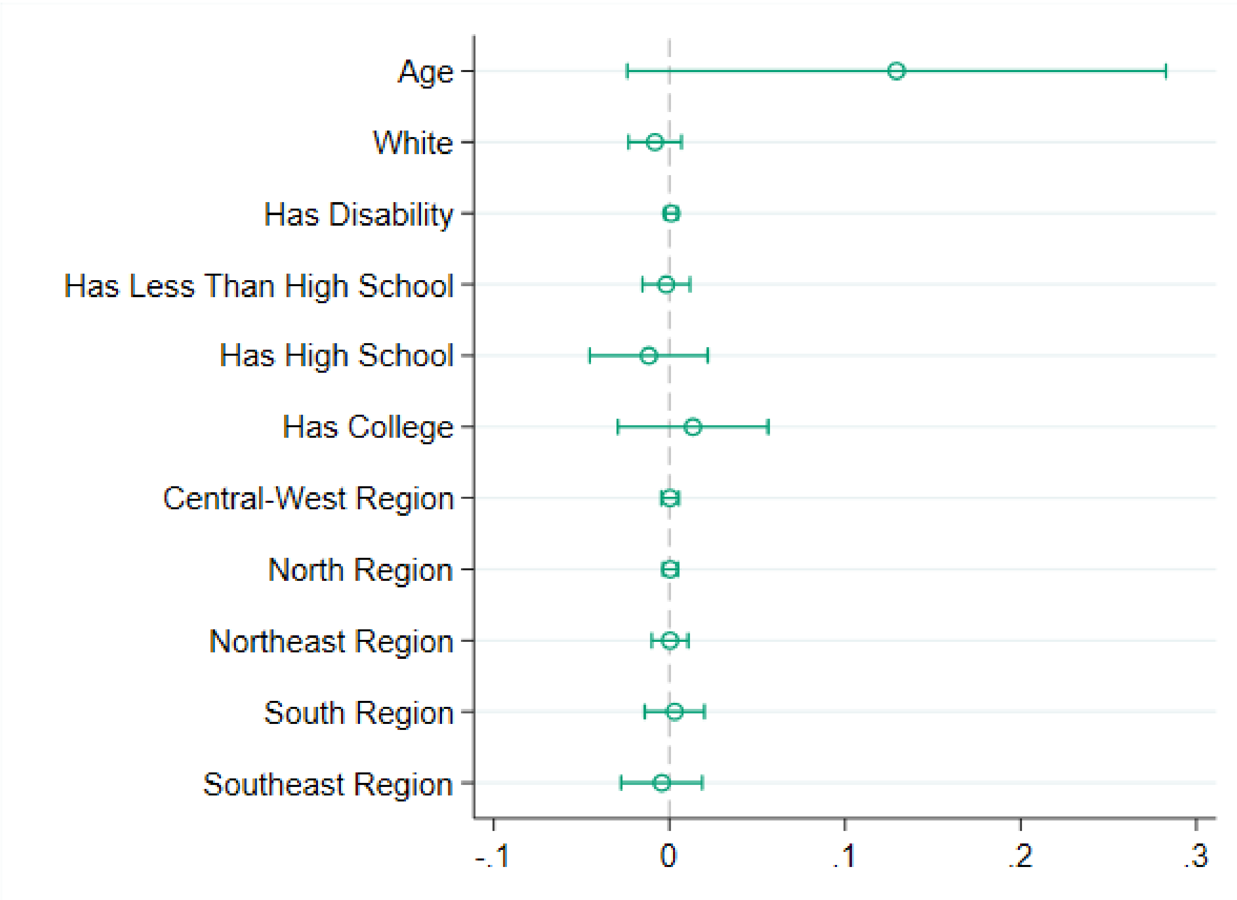
Vu, K. and P. Glewwe (2022). Maternity Benefits Mandate and Women's Choice of Work in Vietnam. *World Development 158*.

Woodbury, S. A. (1983). Substitution Between Wage and Nonwage Benefits. *American Economic Review 73*(1), 166–182.

WORLD Policy Analysis Center (2023). Infant Caregiving Public Use Data.

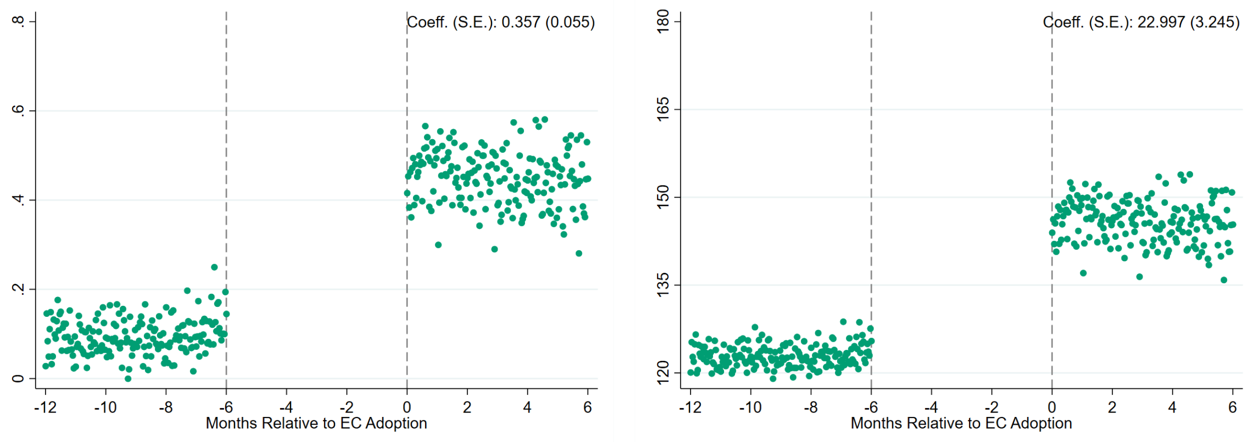
9 Figures and Tables

Figure 1: Balance Tests of Individual Characteristics



Note: This figure reports point estimates of a balance test that investigates to what extent eligible and ineligible women have different characteristics. The balance test consists of regressing eligibility status for an extension on various individual characteristics, measured at the time women start their mandatory maternity leave, from RAIS data. Individual characteristics include age, race, disability, educational level, and location. Standard errors are clustered at the firm level. Further details can be found in Table D.2, Appendix D.

Figure 2: Take-Up of Extended Maternity Leave Relative to EC Adoption

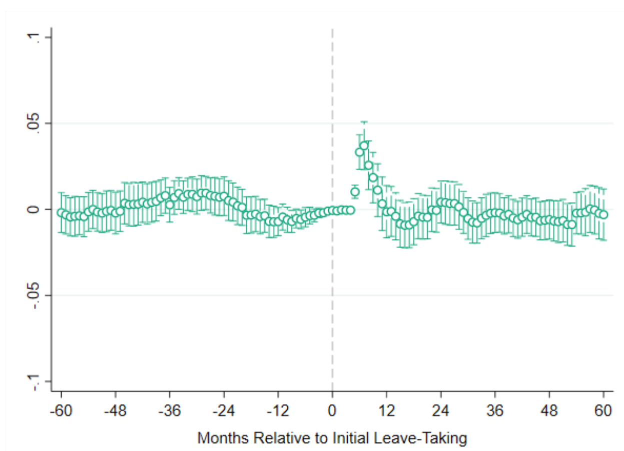


(a) Extended Leave

(b) Number of Leave Days

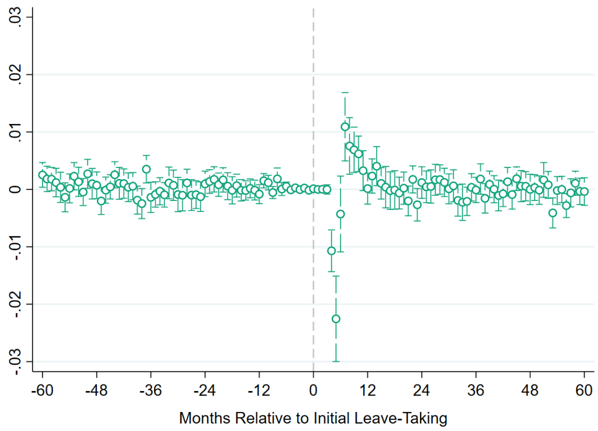
Note: These figures report binned scatter plots showing averages of the likelihood of taking extended maternity leave (Panel (a)) and the number of days on maternity leave (Panel (b)) across the running variable. The running variable is defined as the difference, in days, between the dates on which women take maternity leave and their firm joins the EC program. On the top right corners, we report point estimates and standard errors after regressing eligibility status on the likelihood of taking extended maternity leave and the number of days on maternity leave. Table 3 reports additional point estimates for alternative regression models.

Figure 3: Reduced-Form Effects of Extended Maternity Leave on Employment

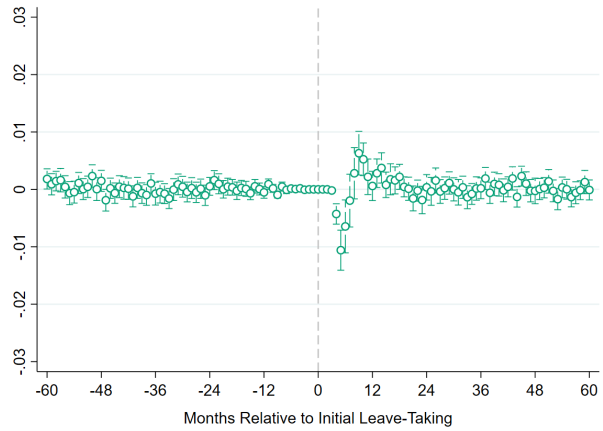


Note: This figure reports point estimates of the reduced-form effects (or intent-to-treat) of extended maternity leave on employment in the formal sector over a monthly basis. More details can be found in Table D.3, Appendix D.

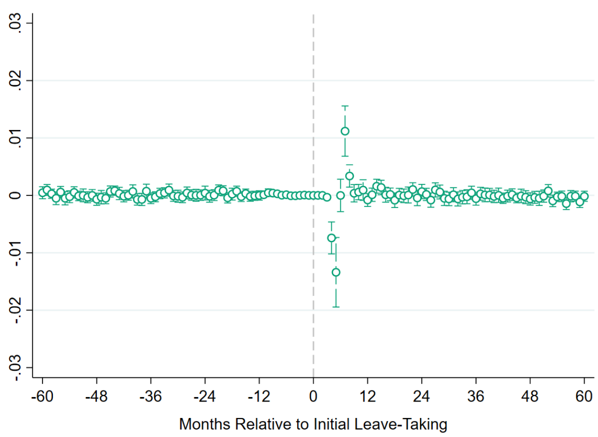
Figure 4: Reduced-Form Effects of Extended Maternity Leave on Separation



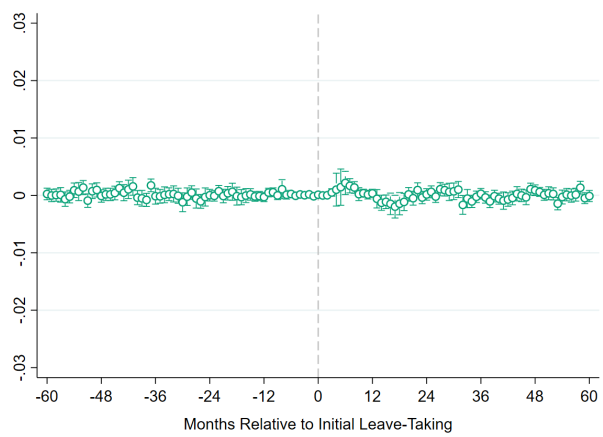
(a) Separation



(b) Involuntary Termination



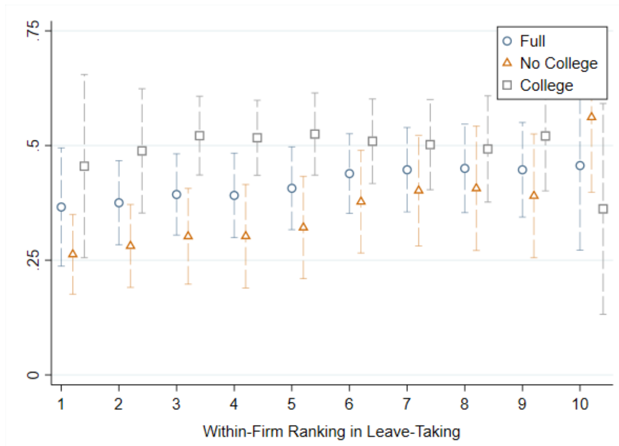
(c) Voluntary Quit



(d) Other Separation Causes

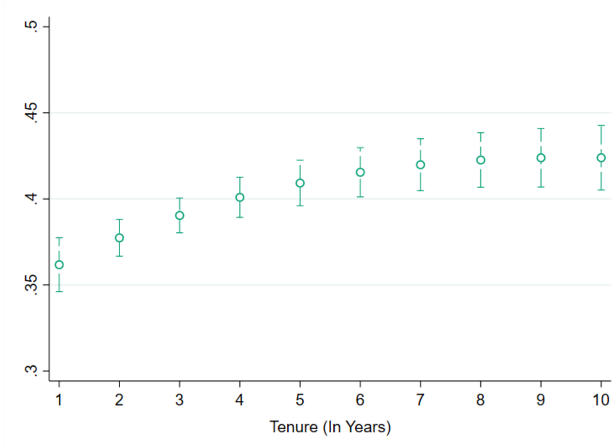
Note: These figures report point estimates of the reduced-form effects (or intent-to-treat) of extended maternity leave on different measures of separation in the formal sector over a monthly basis. Panel (a) refers to the likelihood of separation as the outcome variable. Panels (b) to (d) consider the likelihoods of involuntary termination, voluntary quit, and other separation causes as the outcome variables. More details can be found in Table D.4, Appendix D.

Figure 5: The Role of Information Transmission

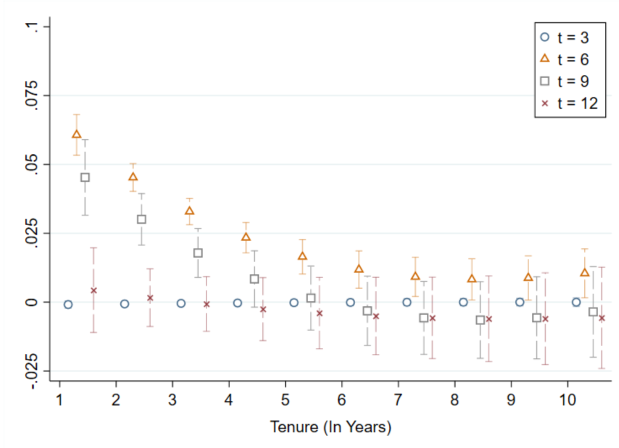


Note: To assess the role of information transmission, blue circles display heterogeneous take-up of extended maternity leave by order of leave-taking within the firm after EC adoption. This figure also reports point estimates for high-SES (orange triangles) and low-SES workers (grey squares), in which we use college education as a proxy for socioeconomic status.

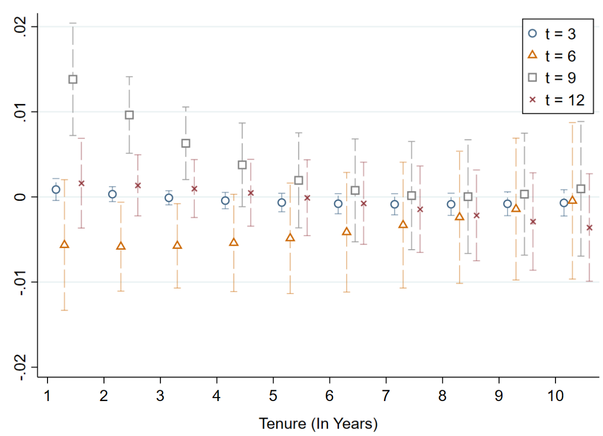
Figure 6: The Role of Job Security



(a) Take-Up



(b) Employment



(c) Separation

Note: To assess the role of job security, these figures display heterogeneous effects of extended maternity leave by firm tenure (in years). Panel (a) refers to the likelihood of taking extended maternity leave as the outcome variable. Panels (b) and (c) consider likelihoods of employment and separation — three (blue circles), six (orange triangles), nine (grey squares), and twelve (red x) months after the firm joins the EC program — as the outcome variables.

Table 1: Summary Statistics: Non-Participants vs. Participants of the EC Program

	(1)	(2)	(3)	(4)
	Mean		Diff.	S.E.
	Non-Participants	Participants	(1)-(2)	
Firm Characteristics				
# Employees	36.943	595.325	-558.383***	(30.164)
Wage Bill	56532.793	1567938.982	-1511406.190***	(79541.807)
Average Earnings Per Employee	855.363	1902.279	-1046.917***	(37.113)
Single-Establishment Firm	0.948	0.731	0.217***	(0.010)
# Establishments	1.168	4.711	-3.543***	(0.168)
Private Sector	0.985	0.964	0.021***	(0.005)
Foreign-Owned	0.000	0.000	0.000	(0.001)
Above-Median AKM Firm Effect	0.517	0.750	-0.234***	(0.021)
Above-Median Firm-Level Average Wage	0.513	0.776	-0.263***	(0.021)
Firm Creation Year	2003.933	1996.118	7.816***	(0.268)
Industry Composition				
Agriculture	0.011	0.009	0.002	(0.004)
Transformation Industry	0.127	0.246	-0.119***	(0.014)
Construction	0.040	0.069	-0.028***	(0.008)
Commerce	0.457	0.278	0.178***	(0.021)
Housing & Food	0.067	0.031	0.036***	(0.011)
Transp., Storage & Commun.	0.051	0.065	-0.014	(0.009)
Real Estate	0.135	0.130	0.005	(0.015)
Education	0.021	0.009	0.012*	(0.006)
Health and Social Services	0.025	0.020	0.005	(0.007)
Other Services	0.046	0.051	-0.005	(0.009)
Other Sectors	0.022	0.092	-0.071***	(0.006)
Location Composition				
Central-West Region	0.081	0.052	0.028*	(0.012)
North Region	0.034	0.052	-0.018*	(0.008)
Northeast Region	0.125	0.105	0.021	(0.014)
South Region	0.237	0.206	0.031	(0.018)
Southeast Region	0.523	0.584	-0.061**	(0.021)
Workforce Composition				
Female	0.437	0.360	0.077***	(0.016)
White	0.666	0.670	-0.004	(0.016)
Has Disability	0.002	0.007	-0.005***	(0.001)
Has Less Than High School	0.443	0.352	0.091***	(0.016)
Has High School	0.460	0.406	0.054***	(0.016)
Has College	0.097	0.242	-0.144***	(0.009)
Full-Time Worker	0.965	0.973	-0.008	(0.006)
Manager	0.042	0.063	-0.021***	(0.006)
Professional	0.101	0.191	-0.090***	(0.010)
Low-Skill White Collar	0.191	0.206	-0.015	(0.012)
Low-Skill Blue Collar	0.666	0.540	0.126***	(0.016)
Non-Routine Analytic Task	0.060	0.098	-0.038***	(0.004)
Non-Routine Interactive Task	0.198	0.195	0.003	(0.006)
Routine Cognitive Task	0.414	0.388	0.027***	(0.007)
Routine Manual Task	0.281	0.275	0.006	(0.008)
Non-Routine Manual Task	0.047	0.044	0.002	(0.003)

Note: ***: significant at 1% level; **: significant at 5% level; *: significant at 10% level. To characterize which firms participate in the EC program, this table presents means for a rich set of firm characteristics, industry composition, location composition, and workforce composition. Means are computed from 2009, the year before the EC program implementation. Columns (1) and (2) provide characteristics for non-participant and participant firms. Column (3) presents the difference between the first two columns and Column (4) reports the standard errors. Further details can be found in Section 3.

Table 2: Summary Statistics: Worker-Level Sample

	(1) Eligible		(2) Ineligible		(3) Others	
	Mean	SD	Mean	SD	Mean	SD
Leave Characteristics						
Takes More Than 120 Days of Leave	0.45	0.50	0.10	0.30	0.38	0.49
Duration (# Days) of Leave	145.96	29.81	122.96	14.06	141.18	28.83
# Children	1.09	0.30	1.07	0.27	1.09	0.30
First Leave	0.91	0.29	0.93	0.26	0.91	0.29
Second Leave	0.09	0.28	0.07	0.25	0.09	0.28
Third or More Leave	0.00	0.05	0.00	0.05	0.00	0.05
Individual Characteristics						
Age	30.28	5.18	30.15	5.28	30.05	5.26
White	0.70	0.46	0.71	0.45	0.70	0.46
Has Disability	0.01	0.12	0.01	0.12	0.02	0.12
Has Less Than High School	0.08	0.28	0.09	0.28	0.09	0.29
Has High School	0.41	0.49	0.43	0.49	0.42	0.49
Has College	0.50	0.50	0.49	0.50	0.49	0.50
Central-West Region	0.05	0.22	0.05	0.22	0.05	0.22
North Region	0.03	0.16	0.02	0.15	0.03	0.16
North Region	0.03	0.16	0.02	0.15	0.03	0.16
South Region	0.18	0.39	0.18	0.38	0.19	0.39
Southeast Region	0.65	0.48	0.66	0.47	0.64	0.48
N (Workers)	16,785	-	14,717	-	31,132	-
N (Firms)	2,241	-	1,528	-	3,075	-
N (Establishments)	7,834	-	6,519	-	11,690	-

Note: This table presents summary statistics (mean and standard deviation) for a rich set of leave and worker characteristics using information from RAIS data. Summary statistics are computed from 2009, the year before the implementation of the EC program. From Section 4, we consider three groups of workers: eligible workers who start their maternity leave after EC adoption (Columns (1) and (2)), ineligible workers who start their leave six or more months prior to EC adoption (Columns (3) and (4)), and other workers who start their leave up to six months following EC adoption (Columns (5) and (6)).

Table 3: Take-Up of Extended Maternity Leave

	(1)	(2)	(3)	(4)	(5)
Panel A: Extended Leave					
Eligibility	0.357***	0.356***	0.383***	0.357***	0.383***
	(0.055)	(0.055)	(0.060)	(0.055)	(0.060)
Mean Dep. Var (Ineligible)	0.09	0.09	0.09	0.09	0.09
Panel B: Number of Leave Days					
Eligibility	22.997***	22.992***	24.500***	23.041***	24.500***
	(3.245)	(3.230)	(3.512)	(3.225)	(3.512)
Mean Dep. Var (Ineligible)	122.96	122.96	122.96	122.96	122.96
Sample Size	31,502	31,502	31,502	31,502	31,502
Individual Controls	×	×	×	✓	✓
Calendar Month FE	×	✓	✓	✓	✓
Firm FE	×	×	✓	×	✓

Note: ***: significant at 1% level; **: significant at 5% level; *: significant at 10% level. This table reports the reduced-form effects of eligibility for extended maternity leave on leave-taking considering a variety of specifications. Panel A refers to the likelihood of extending leave as the outcome variable, while Panel B considers the number of leave days as the outcome variable. Individual controls include race, disability status, educational level fixed effects, age, and square age. The means of dependent variables are computed from ineligible workers. Standard errors are clustered at the firm level. Further details can be found in Section 4.

Table 4: Heterogeneous Take-Up by Worker Characteristics

	(1) Extended Leave	(2) # Days
Panel A: Education		
Eligibility × HS-	0.387***	22.724***
	(0.048)	(2.884)
Eligibility × HS	0.356***	20.920***
	(0.050)	(2.994)
Eligibility × College	0.422***	24.857***
	(0.088)	(5.299)
Mean Dep. Var [HS-]	0.302	137.378
Mean Dep. Var [HS]	0.250	134.295
Mean Dep. Var [College]	0.272	135.634
Panel B: Race		
Eligibility × White	0.412***	24.231***
	(0.057)	(3.423)
Eligibility × Non-White	0.342***	20.131***
	(0.060)	(3.583)
Mean Dep. Var [White]	0.279	136.103
Mean Dep. Var [Non-White]	0.231	133.070
Panel C: Disability		
Eligibility × With Disability	0.323***	18.983***
	(0.076)	(4.556)
Eligibility × W/o Disability	0.393***	23.100***
	(0.054)	(3.219)
Mean Dep. Var [With Disability]	0.228	132.898
Mean Dep. Var [W/O Disability]	0.266	135.252
Panel D: Wage Distribution		
Eligibility × Median 1	0.354***	20.772***
	(0.043)	(2.561)
Eligibility × Median 2	0.428***	25.149***
	(0.084)	(5.037)
Mean Dep. Var [Median 1]	0.245	133.996
Mean Dep. Var [Median 2]	0.285	136.441
Panel E: Occupation		
Eligibility × Manager	0.381***	22.419***
	(0.076)	(4.572)
Eligibility × Professional	0.369***	21.645***
	(0.067)	(4.061)
Eligibility × White Collar	0.386***	22.705***
	(0.081)	(4.839)
Eligibility × Blue Collar	0.429***	25.252***
	(0.044)	(2.653)
Mean Dep. Var [Manager]	0.250	134.442
Mean Dep. Var [Professional]	0.252	134.507
Mean Dep. Var [White Collar]	0.265	135.115
Mean Dep. Var [Blue Collar]	0.283	136.309

Note: ***: significant at 1% level; **: significant at 5% level; *: significant at 10% level. This table reports heterogeneous effects of eligibility for extended leave on the likelihood of extending leave (Column (1)) and on the number of days on leave (Column (2)). We present estimates from a modified version of Equation (1), in which we interact eligibility status with worker characteristics. These characteristics include educational level, race, disability, wage distribution, and occupation. The means of dependent variables for each subgroup of workers are computed from ineligible workers. Standard errors are clustered at the firm level.

A Appendix A: Gender Disparities in the Brazilian Labor Market

Table A.1: Descriptive Statistics for Women and Men in the Brazilian Labor Market

	(1)	(2)	(3)	(4)	(5)	(5)
	Aged 25-44		+ Formal Employment in Private Sector		+ Had a Child	
	Women	Men	Women	Men	Women	Men
Household Head	0.32	0.57	0.32	0.58	0.31	0.71
Urban	0.87	0.85	0.97	0.95	0.97	0.94
White	0.45	0.43	0.54	0.47	0.53	0.50
Age	34.42	34.31	33.52	33.84	31.44	32.46
Years of Education	9.88	9.09	11.40	10.12	11.59	9.97
Had a Child in the Last 12 Months	0.06	0.06	0.04	0.06	1.00	1.00
Economically Active in the Week of Reference	0.73	0.93	1.00	1.00	1.00	1.00
Worked in the Week of Reference	0.62	0.86	1.00	1.00	1.00	1.00
Formal Employment	0.69	0.75	1.00	1.00	1.00	1.00
Weekly Hours Worked	0.62	0.86	1.00	1.00	1.00	1.00
Full-Time Worker	0.41	0.72	0.86	0.93	0.88	0.94
Private Sector Employment	0.72	0.85	1.00	1.00	1.00	1.00
Formal Employment in the Private Sector	0.38	0.44	1.00	1.00	1.00	1.00
Did Household Chores in the Week of Reference	0.92	0.54	0.89	0.57	0.94	0.59
Work Income	1,532.28	2,028.53	1,689.37	2,060.58	1,643.53	2,024.19
Total Income	1,090.29	1,811.09	1,730.25	2,073.84	1,677.45	2,034.64
Household Income	3,438.36	3,524.53	4,335.97	3,796.16	4,247.45	3,328.02

Note: This table reports means using information from 2015 National Household Sample Survey (PNAD) data. The first two columns refer to a sample of individuals aged between 25 and 44. Columns (3) and (4) consider a sample of individuals aged between 25 and 44 who hold a formal employment in the private sector. The last two columns further restrict the sample to individuals who had a child in the last 12 months. The variables are indicators for household head, residing in an urban area and white, age, total years of education, indicators for having a child in the last 12 months, being economically active, having worked, and having done household chores in the week of reference, work income, total income, and household income. Conditional on having worked in the week of reference, we also report the following variables: an indicator for formal employment, the total number of hours worked per week, and indicators for being a full-time worker, working in the private sector, and having formal employment in the private sector. Source: 2015 PNAD.

Table A.2: Gender Disparities Across Child Age

	(1) Have Worked	(2) Formal Empl.	(3) Full-Time Work	(4) Formal Emp. in Priv. Sec.
Panel A: Women				
Full Sample	0.62	0.69	0.41	0.38
No Child	0.74	0.77	0.53	0.47
Has a Child	0.60	0.67	0.39	0.37
Child is 1 Month Old	0.27	0.73	0.17	0.46
Child is 3 Months Old	0.29	0.79	0.19	0.44
Child is 6 Months Old	0.35	0.80	0.23	0.43
Child is 1 Year Old	0.40	0.73	0.24	0.38
Child is 3 Years Old	0.47	0.67	0.29	0.34
Child is 6 Years Old	0.52	0.65	0.31	0.34
Panel B: Men				
Full Sample	0.86	0.75	0.72	0.44
No Child	0.88	0.77	0.73	0.45
Has a Child	0.85	0.75	0.72	0.43
Child is 1 Month Old	0.89	0.69	0.75	0.38
Child is 3 Months Old	0.90	0.72	0.78	0.40
Child is 6 Months Old	0.90	0.72	0.77	0.40
Child is 1 Year Old	0.91	0.74	0.79	0.43
Child is 3 Years Old	0.91	0.75	0.78	0.43
Child is 6 Years Old	0.91	0.76	0.78	0.43

Note: This table reports means for women (Panel A) and men (Panel B) aged between 25 and 44 using information from 2015 National Household Sample Survey (PNAD) data. Columns (1) to (4) refer to the following variables: indicators for having worked, having formal employment, having worked full time, and having formal employment in the private sector in the week of reference, respectively. Each row represents a sample restriction (e.g., no restriction, individuals without children, and individuals with at least one child). We also report means for individuals with a child in six different age categories. Source: 2015 PNAD.

B Appendix B: Data Appendix

We provide further details on the sample construction described in Section 3.

B.1 Sample Selection

We apply three major restrictions to the EC program dataset to construct a sample of participant firms. First, we eliminate those who had canceled their participation. Second, we keep the earliest date each firm had joined the program to avoid duplicate observations. Third, because we are interested in tracking women up to 60 months after their initial leave-taking, and 2019 is the last year in which labor market records are available, we maintain firms that had joined the program between 2010 and 2014. These restrictions altogether yield a sample of 17,999 firms to be matched with RAIS data through unique firm tax identifiers.

We find 8,602 firms (47.8 percent) in the RAIS data.[27] We note that RAIS records do not include certain types of firms also eligible to participate in the EC program, such as very small firms (e.g., micro-entrepreneurs). We further restrict our sample to women who take maternity leave.[28]

We note that RAIS records are constructed from a mandatory survey filled out by all formal firms every year, and this survey also asks for information on maternity leave. In case the leave period begins in the previous year, firms are required to report its start date as January 1^{st}. Similarly, for the case in which the leave period continues in the next year, firms must list its end date as December 31^{st}. For a given year, to calculate the correct start and end dates of each maternity leave, we match leaves starting on January 1^{st} to those ending on 31^{st} in the previous year. We therefore calculate the duration (total number of days) of each maternity leave that starts at some point between 2009 and 2017. We further narrow our sample to leaves that last either 120 days (mandatory maternity leave), 135 days (mandatory maternity leave plus two weeks extension for medical reasons), or 180 days (mandatory maternity leave plus voluntary leave extension). By limiting our attention to regular spells, required by law, we eliminate cases with errors in reporting information or shorter duration due to adoption or abortion. Consistent with our research design, the last

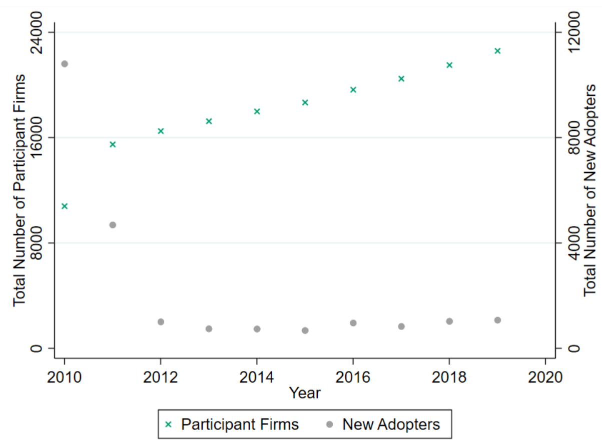
[27]The match rates vary over time: 47.7 percent (5,158 out of 10,807 firms) in 2010, 35.36 percent (1,659 out of 4,691 firms) in 2011, 64.03 percent (648 out of 1,012 firms) in 2012, 75.26 percent (563 out of 748 firms) in 2013, and 80.16 (594 out of 741 firms) percent in 2014.

[28]In rare cases of women holding more than one formal job, we maintain the highest-paying entries.

step consists of restricting our sample to women taking maternity leave within a window of 360 days around the date on which their employers joined the EC program. As explained in Section 4.1, we also eliminate women who start their maternity leave up to six months after EC adoption. These restrictions generate a final sample with 31,502 individuals and 2,711 firms.

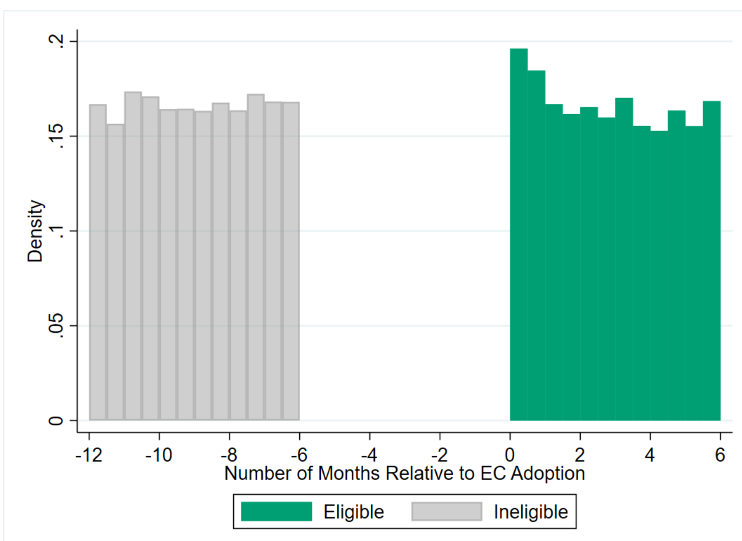
C Appendix C: Additional Figures

Figure C.1: Evolution of Firms with Extended Maternity Leave



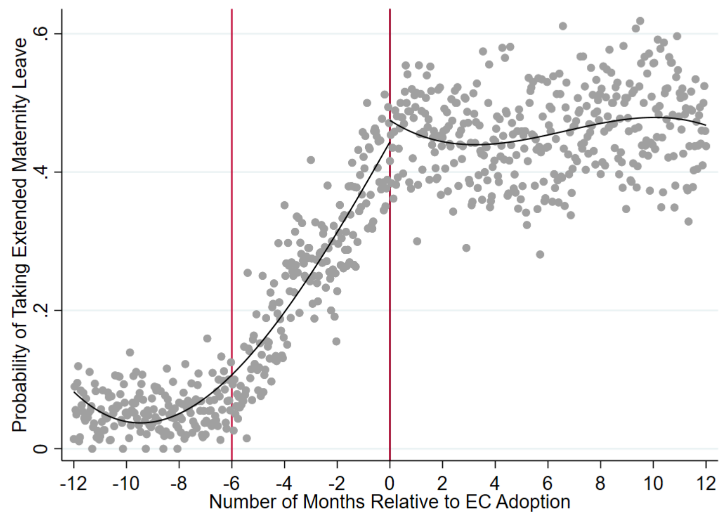
Note: On the left axis, green x marks show how the total number of firms participating in the EC program has rapidly increased since 2010. On the right axis, grey round dots represent the evolution of the number of new firms adopting the EC program each year. For instance, in 2010 (2019), 10,807 (1,076) firms joined the program. This information is obtained from EC program data, carried out by the Brazilian Internal Revenue Service.

Figure C.2: Histogram



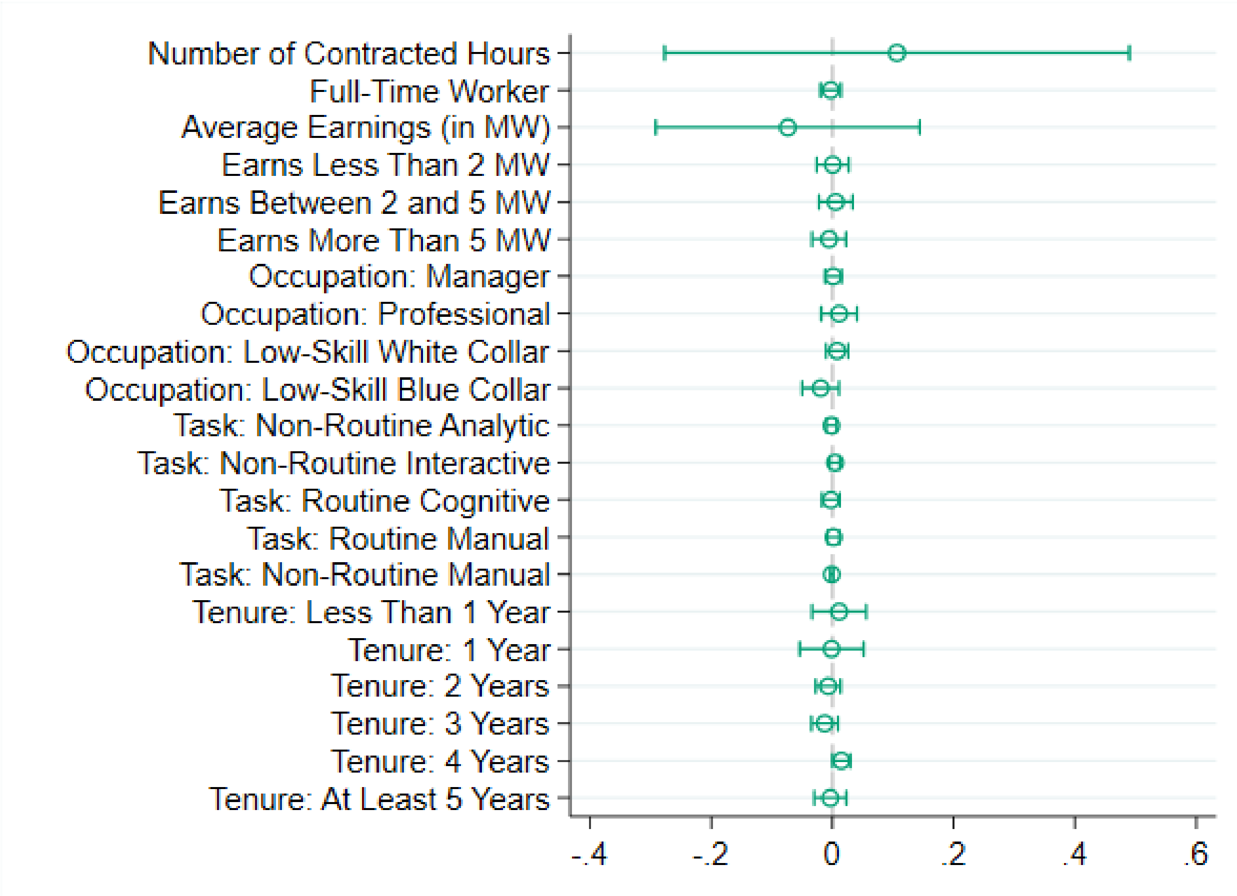
Note: Histogram depicts the distribution of the running variable, defined as the difference, in days, between the dates on which women take maternity leave and their firm joins the EC program. Further details about the sample construction can be found in Section 3.

Figure C.3: Regression Discontinuity Design: No First-Stage



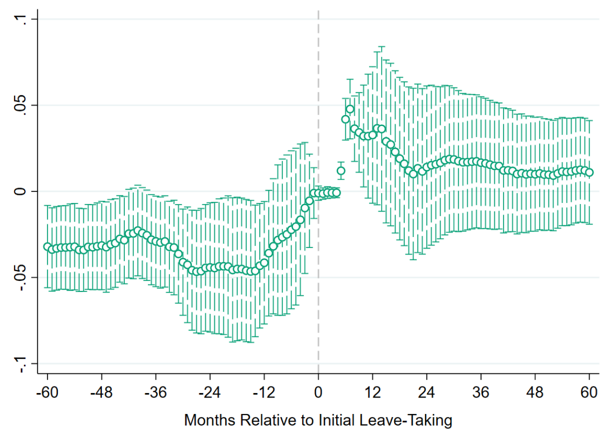
Note: This figure reports the likelihood of extending maternity leave across the running variable. The running variable is defined as the difference, in days, between the dates on which women take maternity leave and their firm joins the EC program.

Figure C.4: Balance Tests of Job Characteristics

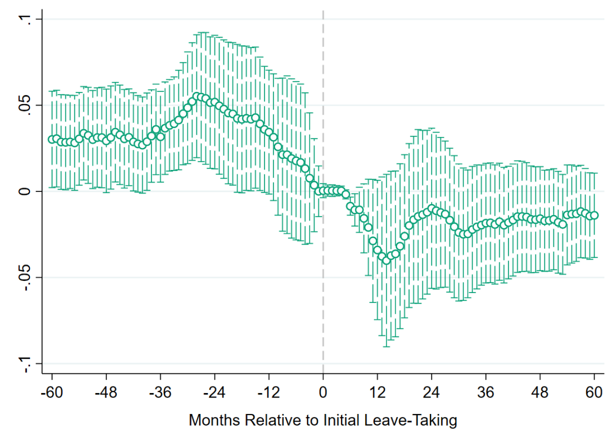


Note: This figure reports point estimates of a balance test that investigates to what extent job characteristics of eligible and ineligible women have different job characteristics. The balance test consists of regressing eligibility status for an extension on various job characteristics, measured at the time women start their mandatory maternity leave, from RAIS data. Job characteristics include hours, earnings, occupation, task routine, and tenure. Standard errors are clustered at the firm level.

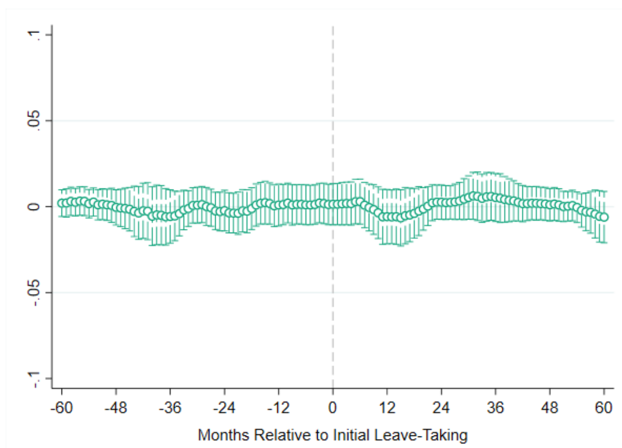
Figure C.5: Additional Reduced-Form Effects of Extended Maternity Leave on Employment



(a) Same Firm



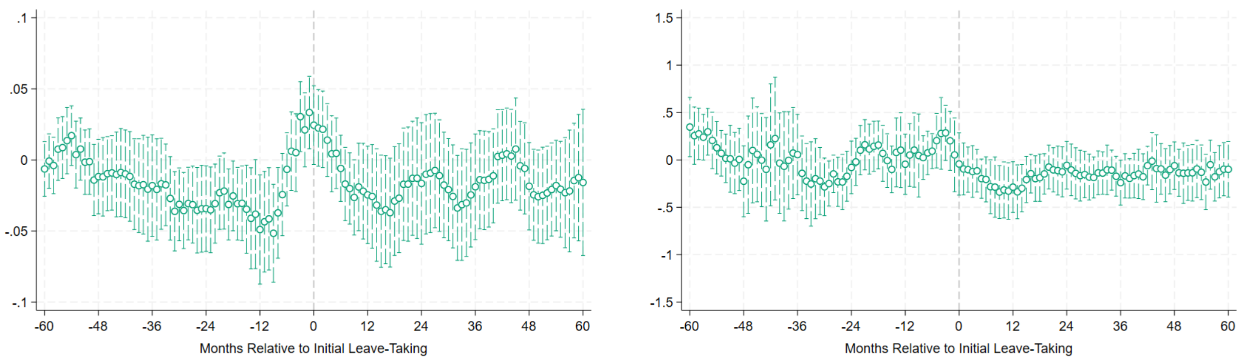
(b) Another Firm



(c) Part-Time Employment

Note: These figures report point estimates of the reduced-form effects (or intent-to-treat) of extended maternity leave on different measures of employment in the formal sector over a monthly basis. Panels (a) and (b) refer to the likelihood of employment in the same firm and in another firm. Panel (c) considers part-time employment as the outcome variable.

Figure C.6: Reduced-Form Effects of Extended Maternity Leave on the Hiring of Replacement Workers

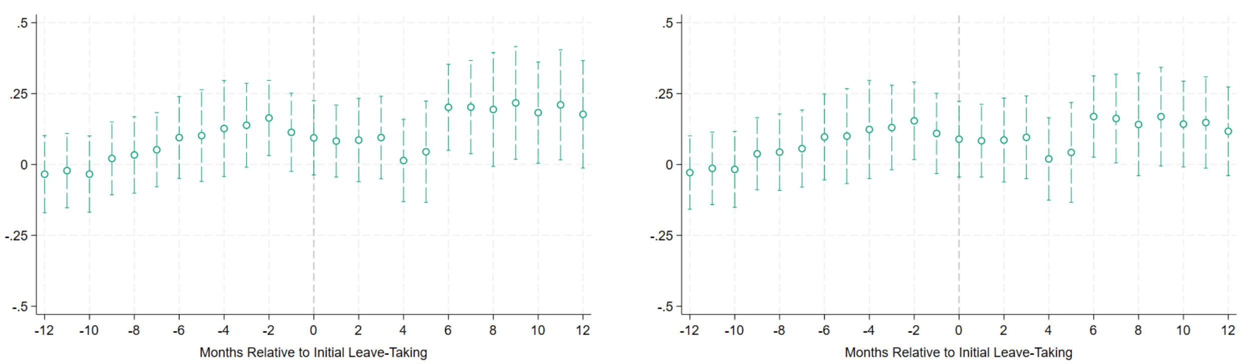


(a) Hire At Least One Replacement Worker

(b) Number of Replacement Workers

Note: These figures report point estimates of the reduced-form effects (or intent-to-treat) of extended maternity leave on the hiring of replacement workers over a monthly basis. Panel (a) (Panel (b)) refers to the likelihood of hiring a replacement worker from the same occupation (number of new hires from the same occupation) as the outcome variable. Panel (b) also reports Poisson estimates.

Figure C.7: Reduced-Form Effects of Extended Maternity Leave on Monthly Wages

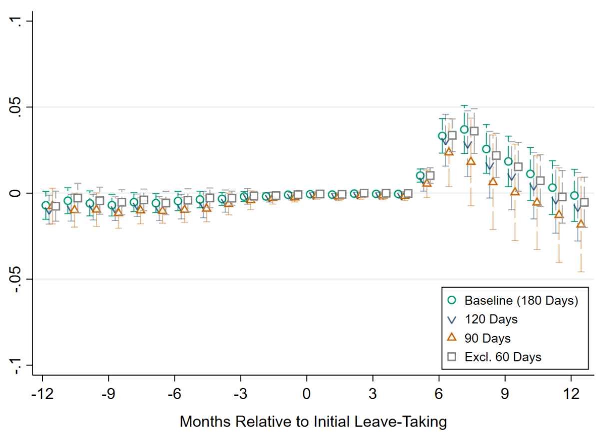


(a) Unconditional Monthly Wages

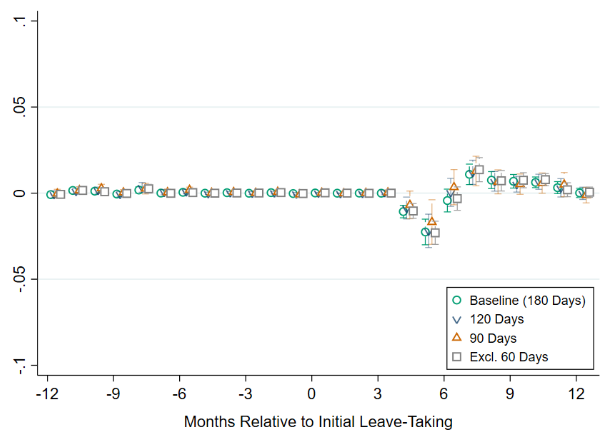
(b) Conditional Monthly Wages

Note: These figures report Poisson estimates of the reduced-form effects (or intent-to-treat) of extended maternity leave on monthly wages in the formal sector over a monthly basis. Panel (a) refers to unconditional wages, in which we impute zero monthly wages to individuals outside the formal sector, as the outcome variable. Panel (B) refers to conditional monthly wages, implying that we condition the sample to observations with positive monthly wages (stayers).

Figure C.8: Robustness: Selected Outcomes Across Different Samples



(a) Employment



(b) Separation

Note: These figures report point estimates of the reduced-form effects (or intent-to-treat) of extended maternity leave on employment (Panel (a)) and separation (Panel (b)) in the formal sector over a monthly basis. Green circles represent the point estimates after estimating the benchmark specification using a baseline window of 180. Blue v and orange triangles refer to the benchmark specification using windows of 120 and 90 days, whereas gray squares refer to the benchmark specification excluding women who give birth within 60 days after EC adoption from the sample. Further details can be found in Section 5.4.

D Appendix D: Additional Tables

Table D.1: Descriptive Statistics Across Sample Restrictions

	(1)	(2)	(3)	(4)	(5)	(6)
	RAIS		RAIS & EC Program		360 Days Window	
	Full	Female	Full	Female	Full	Female
Panel A: Individual Characteristics						
Female	0.40	1.00	0.30	1.00	1.00	1.00
Age	34.51	34.43	35.12	33.93	30.22	30.22
White	0.51	0.50	0.64	0.68	0.68	0.71
Has Disability	0.01	0.01	0.01	0.01	0.01	0.01
Has Less Than High School	0.42	0.29	0.47	0.31	0.08	0.08
Has High School	0.40	0.45	0.29	0.35	0.44	0.42
Has College	0.18	0.26	0.23	0.34	0.48	0.50
Central-West Region	0.09	0.08	0.10	0.07	0.07	0.05
North Region	0.05	0.05	0.04	0.03	0.03	0.02
Northeast Region	0.16	0.16	0.12	0.12	0.09	0.08
South Region	0.18	0.19	0.17	0.17	0.18	0.18
Southeast Region	0.52	0.52	0.58	0.62	0.64	0.66
Panel B: Job Characteristics						
Number of Contracted Hours	41.30	39.85	41.85	40.58	40.76	40.54
Full-Time Worker	0.91	0.85	0.92	0.86	0.90	0.88
Average Earnings (in BRL Reais)	2,512.75	2,253.58	3,794.80	3,442.58	4,144.74	4,351.98
Average Earnings (in MW)	2.91	2.61	4.40	3.99	4.80	5.04
Earns Less Than 2 MW	0.61	0.67	0.50	0.53	0.37	0.34
Earns Between 2 and 5 MW	0.28	0.23	0.28	0.25	0.34	0.34
Earns More Than 5 MW	0.11	0.10	0.23	0.22	0.29	0.31
Occupation: Manager	0.04	0.04	0.04	0.04	0.06	0.07
Occupation: Professional	0.18	0.27	0.16	0.22	0.29	0.28
Occupation: Low-Skill White Collar	0.19	0.27	0.20	0.36	0.37	0.39
Occupation: Low-Skill Blue Collar	0.59	0.42	0.60	0.37	0.28	0.27
Task: Non-Routine Analytic Task	0.07	0.08	0.07	0.07	0.09	0.09
Task: Non-Routine Interactive Task	0.17	0.21	0.18	0.23	0.26	0.26
Task: Routine Cognitive Task	0.39	0.45	0.37	0.44	0.46	0.46
Task: Routine Manual Task	0.32	0.24	0.33	0.24	0.18	0.17
Task: Non-Routine Manual Task	0.05	0.03	0.05	0.03	0.01	0.01
Tenure: Less Than 1 Year	0.44	0.40	0.41	0.39	0.09	0.08
Tenure: 1 Year	0.16	0.16	0.16	0.17	0.24	0.23
Tenure: 2 Years	0.09	0.09	0.09	0.10	0.19	0.18
Tenure: 3 Years	0.06	0.06	0.06	0.07	0.13	0.13
Tenure: 4 Years	0.04	0.04	0.05	0.05	0.09	0.09
Tenure: At Least 5 Years	0.22	0.25	0.23	0.23	0.27	0.29
N (Workers)	50,219,948	20,294,196	4,914,360	1,466,308	78,168	31,502
N (Firms)	2,453,124	1,754,630	8,081	6,925	5,218	2,709
N (Establishments)	3,185,547	2,177,521	502,207	230,769	20,509	11,536

Note: This table presents means for a rich set of worker and job characteristics. Means are computed from 2009, the year before the implementation of the EC program. Columns (1) and (2) refer to the full sample from RAIS. Columns (3) and (4) consider the RAIS sample matched to the list of firms that participate in the EC program between 2010 and 2014. Columns (5) and (6) further restrict the sample to workers taking leave within a window of 360 days around the date on which their firms join the EC program. Odd columns include female and male workers, whereas even columns restrict to female workers. Further details about sample restrictions can be found in Section 3.

Table D.2: Balance Test of Individual Characteristics

	(1) Age	(2) White	(3) Has Disability	(4) HS-	(5) HS	(6) College	(7) Central-West Region	(8) North Region	(9) Northeast Region	(10) South Region	(11) Southeast Region
Eligibility Status	0.129*	-0.008	0.001	-0.002	-0.012	0.013	0.000	0.001	0.000	0.003	-0.004
	(0.078)	(0.008)	(0.002)	(0.007)	(0.017)	(0.022)	(0.003)	(0.002)	(0.005)	(0.009)	(0.012)
Sample Size	31502	31502	31502	31502	31502	31502	31502	31502	31502	31502	31502
Mean Dep. Var (Ineligible)	30.15	0.71	0.01	0.09	0.43	0.49	0.05	0.02	0.08	0.18	0.66

Note: This table reports point estimates of a balance test that investigates to what extent eligible and ineligible women have different characteristics. The balance test consists of regressing eligibility status for an extension on various individual characteristics, measured at the time women start their mandatory maternity leave, from RAIS data. Individual characteristics include age, race, disability, educational level, and location. The means of dependent variables are computed from ineligible workers. Standard errors are clustered at the firm level. Further details can be found in Table 1.

Table D.3: Effects of Extended Maternity Leave on Employment

	(1)	(2)	(3)	(4)	(5)	(6)
	Reduced Form		2SLS		Mean	
Month	Coeff.	S.E.	Coeff.	S.E.	Eligible	Ineligible
-60	-0.002	(0.006)	0.004	(0.019)	0.616	0.610
-48	-0.002	(0.006)	0.003	(0.019)	0.679	0.674
-36	0.003	(0.005)	0.014	(0.017)	0.746	0.736
-24	0.008	(0.006)	0.025	(0.017)	0.823	0.810
-12	-0.007	(0.004)	-0.015	(0.011)	0.928	0.933
-9	-0.007	(0.003)	-0.016	(0.008)	0.959	0.965
-6	-0.005	(0.003)	-0.011	(0.007)	0.978	0.982
-3	-0.002	(0.001)	-0.005	(0.004)	0.991	0.993
1	-0.001	(0.000)	-0.002	(0.001)	0.998	0.999
2	-0.000	(0.000)	-0.001	(0.001)	0.999	0.999
3	-0.000	(0.000)	-0.001	(0.001)	0.999	0.999
4	-0.000	(0.000)	-0.001	(0.001)	0.998	0.998
5	0.010	(0.002)	0.027	(0.006)	0.992	0.981
6	0.033	(0.005)	0.086	(0.019)	0.979	0.945
7	0.037	(0.007)	0.096	(0.025)	0.944	0.905
8	0.026	(0.007)	0.068	(0.022)	0.897	0.870
9	0.018	(0.007)	0.050	(0.022)	0.863	0.842
10	0.011	(0.008)	0.032	(0.022)	0.836	0.822
11	0.003	(0.008)	0.011	(0.021)	0.815	0.809
12	-0.001	(0.008)	-0.000	(0.020)	0.800	0.798
24	0.004	(0.006)	0.012	(0.016)	0.757	0.749
36	-0.002	(0.006)	-0.004	(0.015)	0.726	0.725
48	-0.006	(0.006)	-0.014	(0.015)	0.700	0.703
60	-0.003	(0.008)	-0.007	(0.019)	0.673	0.674

Note: This table reports the reduced-form (Columns (1) and (2)) and 2SLS (Columns (3) and (4)) estimates of extended maternity leave on employment in the formal sector over a monthly basis. Columns (5) and (6) compute the means of employment for eligible and ineligible workers. Further details can be found in Figure 3.

Table D.4: Effects of Extended Maternity Leave on Separation

	(1)	(2)	(3)	(4)	(5)	(6)
	Reduced Form		2SLS		Mean	
Month	Coeff.	S.E.	Coeff.	S.E.	Eligible	Ineligible
-60	0.003	(0.001)	0.007	(0.003)	0.012	0.010
-48	0.001	(0.001)	0.002	(0.003)	0.013	0.012
-36	-0.001	(0.001)	-0.003	(0.003)	0.011	0.012
-24	0.001	(0.001)	0.002	(0.003)	0.010	0.010
-12	-0.001	(0.001)	-0.002	(0.002)	0.004	0.005
-9	-0.001	(0.001)	-0.001	(0.001)	0.002	0.003
-6	0.001	(0.000)	0.001	(0.001)	0.001	0.001
-3	-0.000	(0.000)	-0.000	(0.001)	0.000	0.000
1	-0.000	(0.000)	-0.000	(0.000)	0.000	0.000
2	0.000	(0.000)	0.000	(0.000)	0.000	0.000
3	-0.000	(0.000)	-0.000	(0.001)	0.001	0.001
4	-0.011	(0.002)	-0.028	(0.006)	0.006	0.017
5	-0.023	(0.004)	-0.058	(0.014)	0.014	0.037
6	-0.004	(0.003)	-0.012	(0.009)	0.037	0.042
7	0.011	(0.003)	0.027	(0.009)	0.049	0.039
8	0.008	(0.003)	0.019	(0.006)	0.038	0.031
9	0.007	(0.002)	0.017	(0.005)	0.031	0.025
10	0.006	(0.002)	0.016	(0.005)	0.025	0.019
11	0.003	(0.002)	0.008	(0.005)	0.021	0.019
12	0.000	(0.001)	0.000	(0.004)	0.018	0.018
24	0.001	(0.001)	0.003	(0.004)	0.015	0.014
36	-0.000	(0.001)	-0.000	(0.003)	0.013	0.013
48	-0.000	(0.001)	-0.000	(0.003)	0.013	0.013
60	-0.000	(0.001)	-0.001	(0.003)	0.011	0.011

Note: This table reports the reduced-form (Columns (1) and (2)) and 2SLS (Columns (3) and (4)) estimates of extended maternity leave on separation in the formal sector over a monthly basis. Columns (5) and (6) compute the means of separation for eligible and ineligible workers. Further details can be found in Figure 4(a).

Table D.5: Effects of Extended Maternity Leave on Separation Causes

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Dep. Var.	Involuntary Termination				Voluntary Quit				Other Causes			
	Reduced Form		Mean		Reduced Form		Mean		Reduced Form		Mean	
Month	Coeff.	S.E.	Eligible	Ineligible	Coeff.	S.E.	Eligible	Ineligible	Coeff.	S.E.	Eligible	Ineligible
-60	0.002	(0.001)	0.008	0.006	0.000	(0.001)	0.002	0.002	0.000	(0.001)	0.002	0.002
-48	0.001	(0.001)	0.008	0.006	-0.001	(0.001)	0.002	0.003	-0.000	(0.001)	0.003	0.003
-36	-0.001	(0.001)	0.006	0.007	-0.000	(0.000)	0.002	0.002	-0.000	(0.001)	0.003	0.003
-24	0.001	(0.001)	0.006	0.005	0.000	(0.001)	0.003	0.002	-0.000	(0.001)	0.002	0.002
-12	-0.001	(0.001)	0.002	0.002	-0.000	(0.000)	0.001	0.001	-0.000	(0.000)	0.001	0.001
-9	-0.001	(0.000)	0.000	0.001	0.000	(0.000)	0.001	0.000	-0.000	(0.000)	0.001	0.001
-6	0.000	(0.000)	0.000	0.000	0.000	(0.000)	0.000	0.000	0.000	(0.000)	0.001	0.000
-3	-0.000	(0.000)	0.000	0.000	0.000	(0.000)	0.000	0.000	0.000	(0.000)	0.000	0.000
1	0.000	(0.000)	0.000	0.000	0.000	(0.000)	0.000	0.000	-0.000	(0.000)	0.000	0.000
2	0.000	(0.000)	0.000	0.000	0.000	(0.000)	0.000	0.000	0.000	(0.000)	0.000	0.000
3	-0.000	(0.000)	0.000	0.000	-0.000	(0.000)	0.000	0.000	0.001	(0.000)	0.001	0.000
4	-0.004	(0.001)	0.001	0.006	-0.007	(0.001)	0.002	0.010	0.001	(0.001)	0.002	0.002
5	-0.011	(0.002)	0.005	0.016	-0.013	(0.003)	0.006	0.019	0.001	(0.002)	0.003	0.002
6	-0.006	(0.002)	0.020	0.026	-0.000	(0.001)	0.012	0.013	0.002	(0.001)	0.005	0.003
7	-0.002	(0.002)	0.028	0.030	0.011	(0.002)	0.018	0.007	0.002	(0.001)	0.003	0.002
8	0.003	(0.002)	0.027	0.024	0.003	(0.001)	0.009	0.005	0.001	(0.001)	0.003	0.001
9	0.006	(0.002)	0.025	0.019	0.000	(0.001)	0.004	0.004	0.000	(0.001)	0.002	0.002
10	0.005	(0.001)	0.019	0.014	0.001	(0.001)	0.004	0.004	0.000	(0.000)	0.001	0.001
11	0.002	(0.002)	0.017	0.015	0.001	(0.001)	0.003	0.003	0.000	(0.000)	0.001	0.001
12	0.001	(0.001)	0.013	0.013	-0.001	(0.001)	0.003	0.004	0.000	(0.000)	0.001	0.001
24	0.000	(0.001)	0.009	0.008	0.001	(0.001)	0.003	0.003	0.000	(0.001)	0.003	0.003
36	0.000	(0.001)	0.008	0.008	-0.001	(0.001)	0.003	0.003	0.000	(0.000)	0.002	0.002
48	-0.000	(0.001)	0.008	0.009	-0.001	(0.001)	0.002	0.003	0.001	(0.000)	0.002	0.001
60	-0.000	(0.001)	0.007	0.007	-0.000	(0.000)	0.002	0.002	-0.000	(0.000)	0.002	0.002

Note: This table reports the reduced-form and 2SLS estimates of extended maternity leave on separation causes in the formal sector over a monthly basis. We consider three separation outcomes: involuntary termination (Columns (1)–(4)), voluntary quit (Columns (5)–(8)), and other separation causes (Columns (9)–(12)). We also compute the means of these outcomes for eligible and ineligible workers. Further details can be found in Figures 4(b)–4(d).

Table D.6: Robustness: Take-Up of Extended Maternity Leave Across Different Samples

	(1)	(2)	(3)	(4)
Panel A: Extended Leave				
Eligibility	0.357***	0.357***	0.357***	0.357***
	(0.055)	(0.055)	(0.055)	(0.055)
Mean Dep. Var (Ineligible)	0.09	0.10	0.10	0.09
Panel B: Number of Leave Days				
Eligibility	23.041***	23.041***	23.041***	23.041***
	(3.225)	(3.225)	(3.225)	(3.225)
Mean Dep. Var (Ineligible)	122.96	123.05	123.11	122.96
Sample Size	31,502	21,288	16,173	25,673
Individual Controls	✓	✓	✓	✓
Calendar Month FE	✓	✓	✓	✓
Sample Restriction	180 days	120 days	90 days	Exc. 60 days

Note: This table assesses the robustness of the reduced-form effects of eligibility for extended maternity leave on leave-taking across different samples. Panel A refers to the likelihood of extending leave as the outcome variable, while Panel B considers the number of days on leave as the outcome variable. Column (1) refers to the benchmark specification with a window of 180 days and with the inclusion of individual controls and calendar month fixed effects, similar to Column (4) of Table 3. Columns (2) and (3) consider similar specifications with alternative windows of 120 and 90 days. Column (4) excludes women who give birth within 60 days after EC adoption from the sample. Individual controls include race, disability status, educational level fixed effects, age, and square age. The means of dependent variables are computed from ineligible workers. Standard errors are clustered at the firm level. Further details can be found in Section 5.4.