More Time, Better Returns?
Extended Maternity Leave and Sick Leave

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Abstract

In 2025, Spain extended paid parental leave from 16 to 19 weeks per parent. The reform added one week to be taken during the child's first year and two further weeks that can be used flexibly until the child turns eight. Longer leave gives parents more time to recover from childbirth, care for their child, and adjust to parenthood. Using the eligibility cutoff created by the reform in a regression discontinuity design, and administrative Social Security data covering the universe of employed mothers, this paper estimates the causal effect of the additional leave entitlement on mothers' sickness absence after maternity leave ends. Mothers who became eligible for the longer leave have fewer sickness absences after returning to work, and the reduction is concentrated in sick leave related to mental health and stress. These findings suggest that extending parental leave can improve mothers' health after childbirth and may reduce the costs of sickness absence for workers, employers, and the social security system.

Keywords: Maternity Leave; Sick Leave; Maternal Postpartum Health; Spain

JEL-Codes: D19, I12, J13, J22.

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1 Introduction

Maternal health after childbirth is a major public health concern. About one in nine women in the U.S. report symptoms of postpartum depression (Ko, 2017), and in Sweden, 11 percent of new mothers show depressive symptoms two months after birth and 14 percent one year after (Rubertsson et al., 2005). Access to maternity leave may help: a growing body of research suggests that access to maternity leave is associated with improved maternal health outcomes. Earlier evidence links longer maternity leave to better mental health among mothers (Hyde et al., 1995; Staehelin, Bertea, and Stutz, 2007; Aitken et al., 2015). Fathers' leave may also benefit mothers (Persson and Rossin-Slater, 2024), in part by reducing maternal loneliness and stress, both linked to postpartum depression and anxiety (Chan et al., 2002; Honey, Morgan, and Bennett, 2003).

In 2025, Spain expanded parental leave entitlements for both mothers and fathers. Each parent became eligible for one additional week of paid leave, which can be taken at any point until the child turns one, and two further weeks that can be used until the child turns eight. The reform applies only to children born on or after 31 July 2025. This paper shows that mothers use all of the additional leave available during the child's first year, so mothers of children born after the cutoff spend three more weeks at home before returning to work than mothers of children born just before it. This difference allows this paper to estimate the effect of additional time at home on mothers' sick leave after they return to work.

Work-family conflict is a major source of stress (Shockley et al., 2017) and is associated with adverse physical and mental health outcomes (Backé et al., 2012; Berkman et al., 2015; O'Donnell et al., 2019). Public and organizational policies that promote workplace flexibility may mitigate these effects (Moen et al., 2016; Pichler and Ziebarth, 2017; Stearns and White, 2018), but most of this evidence comes from small samples of workers in specific firms or industries and focuses on interventions that give workers more autonomy over their day-to-day workloads, such as shorter hours, remote work, or sick leave days. Mothers bear a disproportionate share of the costs of limited flexibility, both directly, through the career penalties of family formation, and indirectly, because fathers' inability to respond to domestic shocks adds to the health costs of childbearing for mothers (Persson and Rossin-Slater, 2024).

The extension of paternity leave has also been associated with a more equal division of household tasks. Farré and González (2019) shows that fathers in Spain who were eligible for paternity leave in 2007 spent almost an hour more per day on childcare in 2009–10 than ineligible fathers. Patnaik (2019) assesses the effect of the Quebec Parental Insurance Plan in Canada and shows that exposed fathers

spent more time at home and devoted more time to housework each day. In Germany, fathers who took paternity leave in 2007 devoted 1.2 more hours to their family per weekday, plus an additional 1.4 hours to childcare on Saturdays and 1.6 hours on Sundays (Tamm, 2019). They also increased the time spent on housework (washing, cooking, cleaning) by 0.5 hours per weekday. In France, Pailhé, Solaz, and Tô (2024) find that households where the father took a two-week paternity leave share child-rearing tasks (bathing, changing, bedtime routines, and night care) more equally two months after childbirth, with the effect being stronger among first-time parents. In Sweden, fathers in large private companies who take longer-than-average leave are more involved in childcare-related tasks (Haas and Hwang, 2008).

Longer parental leave may affect more than the division of childcare and housework. In Great Britain, postpartum women whose partners took two weeks of paternity leave reported better health than those whose partners took none, after controlling for selected observable characteristics (Redshaw and Henderson, 2013). More recent evidence points to a broader role for fathers' leave in shaping maternal health, suggesting that policies that let parents spend more time at home may benefit mothers (Persson and Rossin-Slater, 2024). One possible channel is that fathers reduce maternal loneliness and stress, both of which have been linked to the onset of postpartum depression and anxiety symptoms (Chan et al., 2002; Honey, Morgan, and Bennett, 2003). However, nearly all existing studies of paternity leave examine so-called "Daddy Month" reforms, which are inflexible by design: they produce a lumpy leave-taking pattern in which fathers take leave only after mothers have returned to work (Duvander and Johansson, 2012; Dahl et al., 2016; Schober, 2014).

This paper studies the effect of extended maternity leave on maternal health and on sick leave claims after mothers return to work. Using the 2025 Spanish reform, which gave mothers three additional weeks of paid leave for children born on or after 31 July 2025, it compares mothers whose children were born just before and just after the cutoff. This paper finds that the additional leave reduces sick leave claims in the first year after return. These results are in line with recent evidence that small increases in time at home can yield large health gains for mothers. Persson and Rossin-Slater (2024) show that a small rise in the average number of leave days taken by fathers substantially improves maternal health, and argue that flexible leave policies can be highly cost-effective: families know best when staying home is most valuable relative to the cost of missed work, so they obtain large benefits from few days used.

This paper makes three contributions. First, most evidence on maternity leave and maternal health is correlational, comparing mothers who take longer and shorter leave (Hyde et al., 1995; Staehelin, Bertea, and Stutz, 2007; Aitken et al., 2015). This

paper instead uses a national reform that exogenously increases the leave available to mothers, so mothers on either side of the 31 July 2025 cutoff differ in time at home but not in other observable ways. Second, existing causal evidence on parental leave and maternal health focuses on fathers' leave, mostly under inflexible "Daddy Month" reforms (Duvander and Johansson, 2012; Dahl et al., 2016; Schober, 2014), or on a small increase in fathers' leave days (Persson and Rossin-Slater, 2024). This paper studies mothers' own leave and asks whether a short extension, three weeks on top of an already existing entitlement, is enough to change health outcomes. Third, the paper uses administrative sick leave claims, which allows it to follow health after mothers return to work rather than only in the postpartum period. This speaks to work-family conflict at the point where it is most binding, in a large, economy-wide sample rather than in specific firms or industries.

The outline of this paper is as follows. Section 2 provides background on the institutional setting. Section 3 discusses the dataset and provides descriptive statistics on the subsamples of eligible and ineligible mothers used in the main analysis. Section 4 discusses identification and estimation of treatment effects in the regression discontinuity design. Section 5 provides the regression analysis of the effects of the maternity leave extension on sick leave uptake after returning to work, and Section 6 concludes this paper with a summary of our findings.

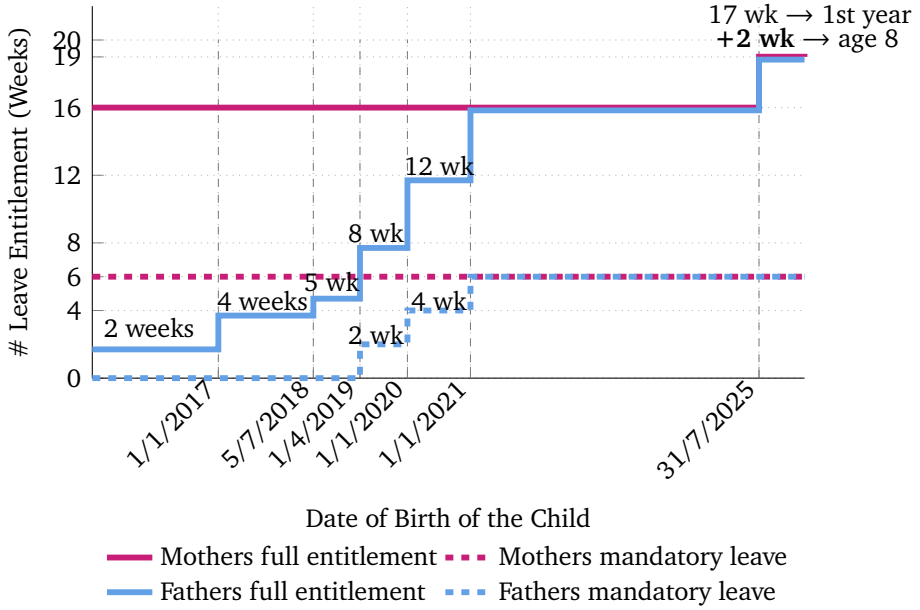
2 Institutional Setting

Spain has substantially expanded paternity leave entitlements over the past two decades. In 2007, it introduced 13 days of paid paternity leave as part of a broader law on gender equality, and this entitlement remained unchanged until 2017. Paternity leave then increased in steps, from four weeks in 2017 to five in 2018, eight in 2019, twelve in 2020, and sixteen in 2021 (Figure 1). From 2021, fathers are therefore entitled to the same 16 weeks as mothers, and the leave is individual and non-transferable. Maternity leave, in contrast, changed little over this period. Since 1989, mothers have been entitled to 16 weeks of leave, of which six weeks immediately after birth are mandatory and the remaining ten could be shared with fathers. In practice, very few mothers chose to share their leave (Farré and González, 2019), and this option was eliminated in 2021. Mothers' leave therefore remained at 16 weeks for more than three decades, until the 2025 extension of maternity and paternity leave, which is the source of variation used in this paper.

On 29 July 2025, Royal Decree-Law 9/2025 increased the 'childbirth and childcare leave' for both parents from 17 to 19 weeks per parent, and up to 32 weeks for single-

parent families. The distribution is as follows: (i) six uninterrupted weeks immediately following birth; (ii) 11 additional weeks (or 22 in single-parent cases), to be taken in weekly blocks – either consecutively or intermittently – until the child reaches 12 months; (iii) two extra flexible weeks (four in single parent cases), available until the child turns eight. The extension of maternity leave may influence mothers' health and labor market outcomes after they return to work.

Figure 1. Parental Leave Entitlements by Date of Birth



Note– Own calculations following Boletin Oficial de Estado (2016, 2009, 2018, 2019, 2025). WK means week.

Additional leave provides parents with more time to recover from childbirth, care for their child, and adjust to the demands of parenthood, which could reduce stress and improve overall well-being. Figure A3 illustrates the evolution of maternity leave uptake during 2025. The sharp increase following the policy implementation is consistent with the introduction of the expanded leave entitlement and suggests substantial take-up among eligible mothers.

3 Data

The analysis draws on multiple Spanish administrative datasets from the National Institute of Social Security (INSS) and the General Treasury of Social Security (TGSS), provided by the Social Security Data Office. These datasets span the period from January 2016 to the end of June 2026 and are updated regularly, with only a short delay as new information becomes available.

Affiliation records. The affiliation records contain monthly information on labour market participation, including the timing and duration of employment spells, the economic sector, the type and duration of employment contracts, and the province of employment. They also include demographic and socioeconomic characteristics such as age, sex, and migrant background.

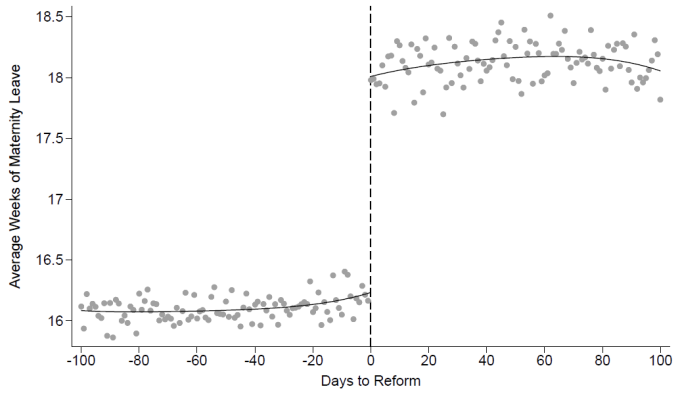
Birth records. The birth records include all maternity and paternity leave spells associated with births between January 2016 and June 2026. The dataset covers more than 2.5 million births with a recorded maternity leave spell and nearly 2.2 million births with a recorded paternity leave spell. Since these records originate from the Social Security system, they only include parents who claimed at least part of their statutory maternity or paternity leave entitlement.

For the main analysis, I exclude leave spells associated with multiple births.

Because the data do not contain a unique child identifier, it is not possible to directly identify mother-father pairs or compute the total amount of parental leave taken at the household level.

Sick leave records. The sickness absence records cover the universe of certified sick leave spells from 2016 through July 2026. For each spell, the data include the individual's month and year of birth, sex, the start and end dates of the absence, the recovery date (allowing the duration of the spell to be calculated), the type of leave, and the medical diagnosis coded according to the International Classification of Diseases (ICD-10-CM). The records also contain information on the worker's province and the employer's economic activity, classified according to the five-digit CNAE industry classification. These data allow me to examine both the incidence and duration of sickness absence before and after childbirth, as well as heterogeneity across diagnoses, industries, and worker characteristics.

Figure 2. Maternity Leave Uptake in 2025



Note– Data from Social Security (INSS) and the General Treasury of Social Security (TGSS).

3.1 Limitations and missing variables

The paper is still work in progress, and several limitations of the current dataset are worth acknowledging. First, the administrative records do not contain information on individuals' educational attainment or marital status, preventing the inclusion of these characteristics as controls.

Furthermore, mothers and fathers cannot be linked within the data, as individuals are observed separately. Consequently, it is not possible to determine whether parents coordinated the timing of their maternity and paternity leave. The data only allow us to infer that, when both parents were employed at the time of childbirth, each was required to take the mandatory six weeks of leave immediately following the birth.

Another limitation concerns the measurement of fertility histories. The total number of children an individual has is not fully observed, as children can only be identified if they were born after 2016 while the parent was employed and therefore appeared in the administrative records. Consequently, the observed number of children may underestimate individuals' actual fertility histories.

To address some of these limitations and further strengthen the empirical analysis, an additional data linkage is currently underway. In particular, I am working on merging the Social Security records with administrative data from the National Institute of Statistics (INE) containing information on the circumstances of childbirth, including whether delivery occurred through a caesarean section. This additional information will make it possible to account for differences in childbirth-related health conditions that may influence mothers' subsequent sickness absence, helping to distinguish the effects of extended parental leave from those associated with the physical circumstances of childbirth.

3.2 Variables

For each individual i, the sickness absence (SA) share during the first three months after the end of maternity is defined as

$$\text{SA Share}_i = \frac{\sum_{t=1}^{T} \min\left(1, \sum_j SA_{ijt}\, FTE_{ijt}\right)}{\sum_{t=1}^{T} \min\left(1, \sum_j FTE_{ijt}\right)}.$$

where t indexes calendar days within the follow-up period, j indexes concurrent employment relationships, SA_{ijt} is an indicator equal to one if individual i is on sickness absence in job j on day t (and zero otherwise), and FTE_{ijt} denotes the full-time equivalent (FTE) associated with that employment relationship.

The daily contribution is capped at one in both the numerator and denominator. This avoids double-counting when an individual holds multiple concurrent jobs whose combined FTE exceeds one or is simultaneously on sickness absence from more than one employment relationship. Consequently, the outcome measures the proportion of person-time under observation spent on sickness absence while accounting for differences in working time due to part-time employment.

4 Empirical Strategy

The regression specification follows a regression discontinuity difference-in-differences (RD–DiD) design. I exploit the sharp eligibility cutoff created by the maternity leave reform on 31 July 2025, comparing mothers who gave birth just before and just after the policy threshold. To account for seasonality and other time-invariant differences around the cutoff, I difference this discontinuity with the corresponding discontinuities observed in the same calendar period in the non-reform years (2024, 2023, and 2022). Under the assumption that, in the absence of the reform, any discontinuity at the cutoff would have evolved similarly across years, the interaction term identifies the causal effect of eligibility for the additional maternity leave.

$$y_{idp} = \alpha + \beta_1 \mathbf{1}[d \geq c] + \beta_2 R_i \times \mathbf{1}[d \geq c] + f(d-c) + \mathbf{1}[d \geq c] \times f(d-c) + \mathbf{x}_i'\gamma + \theta_p + \varepsilon_{idp}.$$

Here, y_{idp} denotes the outcome of interest for mother i, whose child was born on calendar day d during period p. The main outcome is the mother's subsequent sickness absence after the end of maternity leave. The cutoff c corresponds to July 31, 2025, the first date on which children became eligible for the expanded maternity leave entitlement. The indicator $\mathbf{1}[d \geq c]$ equals one for births occurring on or after the cutoff and zero otherwise.

Specifically, the primary specification compares the outcomes of mothers and fathers of children born in August-November 2025 and April-July 2025 ("reform sample"), relative to the difference in outcomes in the same months in the previous three years(August-November 2024, 2023 and 2022 versus April-July 2024, 2023, 2022; "non-reform sample"). Then, the variable R_i equals one for observations in the reform sample (births around the April–November 2025 births) and O otherwise.

The function $f(d-c)$ is a flexible polynomial in the running variable, centered at the policy cutoff, and is allowed to differ on either side of the threshold. Finally, $\mathbf{x}_i$

is a vector of individual-level control variables, θ_p denotes period fixed effects, and ε_{idp} is the error term.

5 Results

Figure 3 presents the main result. It shows the probability that a mother takes sick leave within 30 days of returning to work, by week of birth relative to the eligibility cutoff. Panel (b) shows the reform sample of 2025. Among mothers whose children were born in the weeks immediately before the cutoff, the probability of sick leave is approximately 4.8 percent. At the cutoff it falls sharply, to approximately 4.1 percent for mothers whose children were born immediately after it. This is a reduction of about 0.7 percentage points, or roughly 15 percent relative to the pre-cutoff mean. The discontinuity is visible in the raw binned averages and does not depend on the fitted lines. The averages on each side of the cutoff are otherwise stable, which indicates that the drop is not part of a broader trend in birth dates.

Panel (a) repeats the exercise for the non-reform sample of 2024, using the same calendar cutoff. No decline appears at the threshold. The probability of sick leave is approximately 3.5 percent just before the cutoff and approximately 3.7 percent just after it, so if anything it is slightly higher on the right. This placebo exercise addresses the main alternative explanations for the 2025 result. Seasonal patterns in births, in the composition of mothers who give birth at different times of the year, or in sick leave behaviour across calendar weeks would also generate a discontinuity in 2024. The absence of one supports the interpretation that the fall in 2025 reflects eligibility for the longer leave and not a calendar effect. The level of sick leave is also somewhat higher in the 2025 sample than in 2024, which does not affect the identification, since the design rests on the comparison across the cutoff within each year.

Figure 3. Probability of Taking Sick Leave Within 30 Days of Returning to Work

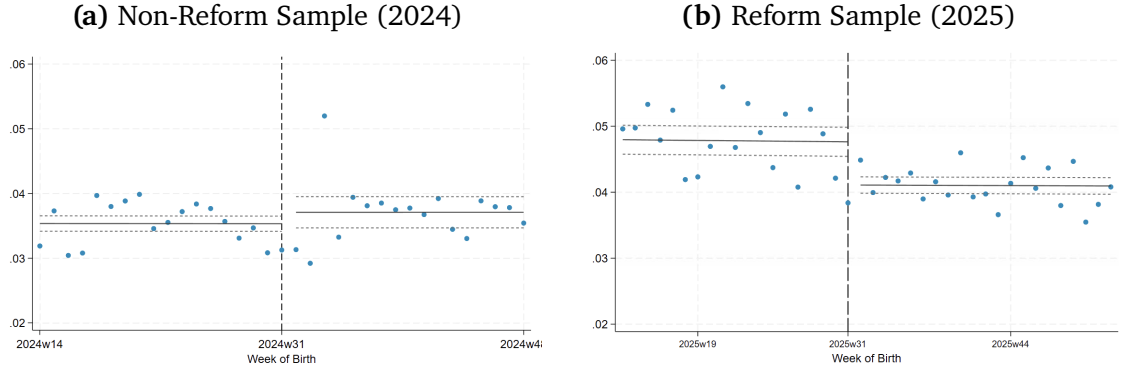
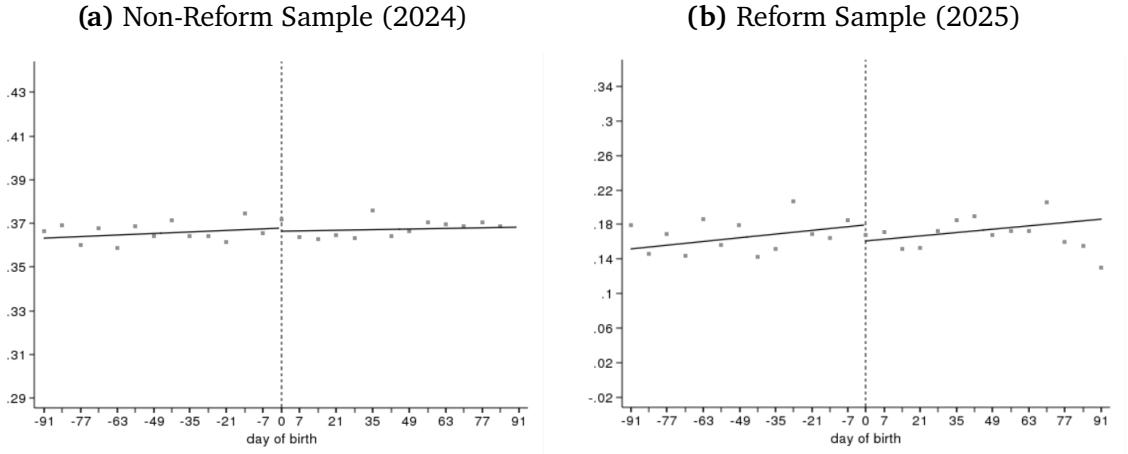


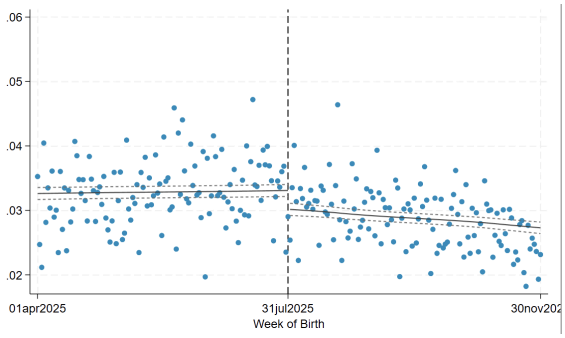
Figure 4 examines whether the reduction in sick leave is related to absences for mental health reasons. In the reform sample (panel b), the probability of a mental health-related sick leave within 30 days of returning to work is lower just after the cutoff than just before it, which is consistent with the main result in Figure 3. Mothers who became eligible for the longer leave therefore appear to be somewhat less likely to take a mental health-related sick leave after returning to work. In contrast, the non-reform sample (panel a) displays no discontinuity at the cutoff, which indicates that this pattern is not driven by calendar effects.

Figure 4. Probability of Taking a Mental Health-Related Sick Leave Within 30 Days After Returning to Work



Finally, Figure 5 extends the analysis by examining sickness absence over the first year following mothers' return to work. The figure shows a gradual decline in the probability of taking sickness leave around the eligibility threshold, with a lower predicted probability after the cutoff. This pattern suggests that the potential effects of the additional leave entitlement may extend beyond the immediate return-to-work period. In particular, the decline in sickness absence appears to persist over the subsequent months, although the magnitude and statistical significance of this pattern need to be assessed through the corresponding regression estimates.

Figure 5. Probability of Taking Sick Leave Within 1 year of Returning to Work



Taken together, the graphical evidence points to a reduction in sickness absence following the expansion of parental leave in Spain, particularly in the first 30 days after mothers return to work. The comparison with the non-reform sample supports the interpretation that this pattern may be related to the additional leave entitlement.

6 Heterogeneity

To be added...

7 Conclusion

To be added...

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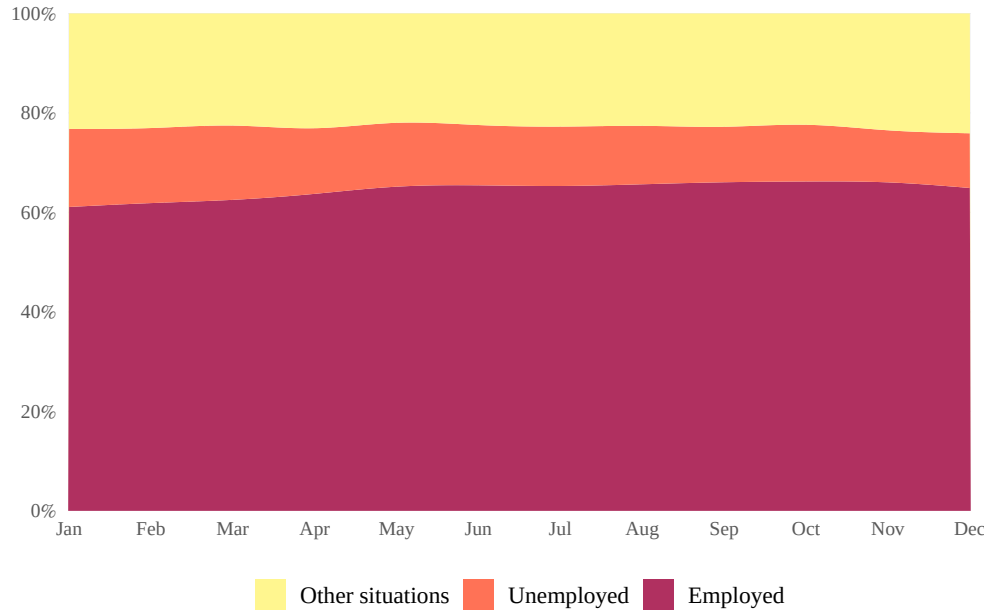
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Appendix

A Definitions of Health-Related Outcomes

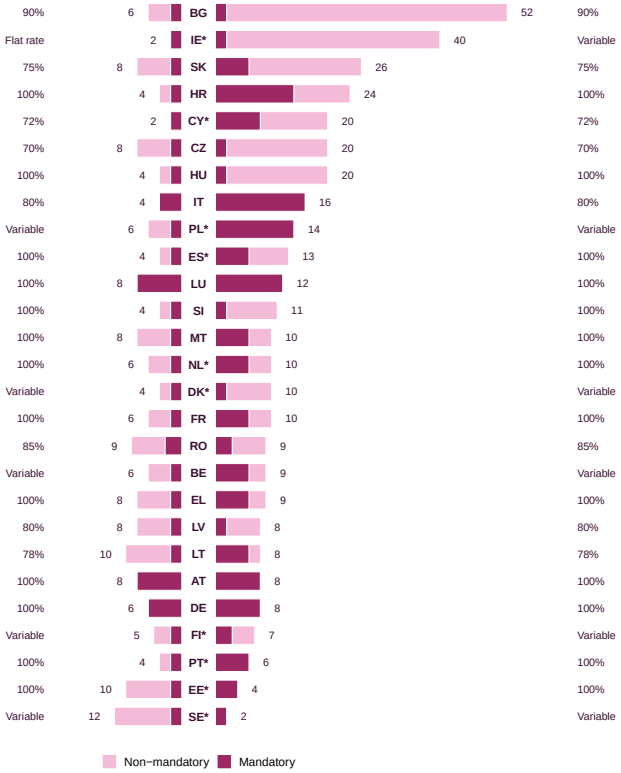
B Additional Results

Figure A1. Employment Status of Mothers at the Time of Childbirth



Note– Own calculations based on data from the Spanish National Statistics Institute (INE) 2025, Estadística de Nacimientos. The INE collects birth data from Civil Registry records and related administrative sources.

Figure A2. Maternity Leave across EU countries



Note– Own calculations based on data from the European Parliamentary Research Service