Fathers' Time-Use while on Paternity Leave: Childcare or Leisure?

Libertad González*

(Universitat Pompeu Fabra and Barcelona School of Economics)

Luis Guirola

(Universitat de Barcelona)

Laura Hospido

(Banco de España and CEMFI)

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Abstract: We study fathers' time-use during paternity leave by combining evidence on downstream labor-market outcomes with direct behavioral responses to a major sporting event. Using administrative data from Spain, which offers generous and non-transferable paternity leave, we first examine the impact of paternity leave extensions on parents' relative earnings trajectories. We find no measurable effect of paternity leave extensions on the child penalty. While several mechanisms could explain this null result, it is consistent with the possibility that a nontrivial share of fathers may not use paternity leave primarily for childcare. We then provide direct evidence on fathers' behavior by exploiting the precise timing of the 2022 Soccer World Cup, a large sports event with a strong male following. Our data cover the universe of paternity (and maternity) leave spells, allowing us to implement a difference-in-differences design using the World Cup dates (November 20-December 18, 2022) and surrounding periods, as well as the previous and subsequent years, to account for seasonality. We document a daily excess of more than 1,000 fathers (1.3%) on paternity leave during the exact dates of the tournament. Triple-differences analyses show that this pattern does not appear for maternity leave spells or for paternity leave among self-employed workers (with more flexible schedules). We interpret these results as direct evidence that (at least a fraction of) fathers use paternity leave for purposes unrelated to childcare.

JEL codes: J13, J16, J22

Keywords: Gender inequality, paternity leave, childcare, time use

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1. Introduction

Gender inequalities in labor market outcomes remain large across countries. According to the 2022 Survey of Income and Living Conditions, the gender gap in annual labor earnings (for ages 25-55) was about 39% in Germany and Italy, 28-30% in Spain and France, and 24-25% in Denmark and Sweden.[1]

Abundant research has linked gender gaps in labor market outcomes to persistent patterns of traditional specialization within households, such that women tend to work more in unpaid, domestic tasks, while men tend to specialize in market work, especially after having children (Cortés and Pan 2023).

For a long time, policies aimed at reducing gender inequalities focused on promoting women's (and, in particular, mothers') labor force participation. This includes tax benefits or cash subsidies for working mothers (Azmat and González 2010), subsidized childcare and maternity leave entitlements (Olivetti and Petrongolo 2017). These types of policies have been shown to have small effects on female employment, while barely affecting overall gender gaps or child penalties (Kleven et al. 2024).

More recently, attention has evolved towards policies that aim at increasing men's participation in household work. One popular policy instrument has been paternity leave mandates. These types of policies encourage men to take time off from work after parenthood, with the explicit goal of reducing gender inequalities in the home and in the labor market.

Research suggests that paternity leave policies have been ineffective in reducing gender gaps in labor market outcomes, in spite of high take-up rates (Canaan et al. 2023). Paternity leave extensions have been shown to have little or no effect on men's or women's participation, hours of paid work, or earnings, in the short or medium term

[1] Individuals with 0 annual earnings are included.

(Andresen and Nix 2024, Canaan et al. 2023, Farré and González 2019, Diallo et al. 2024). In addition, two recent papers using data for Sweden and Spain find that paternity leave extensions may have negative effects on child development and school outcomes (Farré et al. 2024, Karimi et al. 2023), suggesting that the quality of care provided by fathers may be lower than the counterfactual (maternal or formal early childcare).

One possible explanation is that paternity leave mandates do not succeed at changing gender norms regarding childcare, such that men take (paid) leave when it is granted, but they do not actually increase their participation in childcare, but instead use the leave for other purposes, e.g. leisure.[2] Once their leave entitlement is over, their (paid an unpaid) work behavior remains unaffected, as does women's. There is some suggestive evidence that this might be the case (Andresen and Nix 2024, Farré et al. 2024), but this is hard to show directly, in the absence of high-quality data on time-use linked to parental leave.

In this paper, we try to provide direct evidence on the extent to which fathers may be spending their time off from work during paternity leave on leisure activities (instead of childcare). We use unique administrative data on the universe of paternity and maternity leave-takers in Spain. Under current Spanish legislation, both mothers and fathers in Spain are entitled to 16 weeks of non-transferable paid leave (each), a statutory arrangement in place since 2021. The first six weeks immediately following the birth of a child are mandatory, continuous, and must be taken on a full-time basis by both parents. The remaining ten weeks of parental leave are optional and must be used within twelve months of the child's birth. These weeks may be taken either consecutively or in separate periods, and on a full-time or part-time basis, subject to agreement with the employer. In 2023, public expenditure in maternity and paternity leave was 3.4 billion euro.

[2] See Moriconi and Rodríguez-Planas (2021) for an analysis of the role of gender norms in explaining motherhood employment gaps across countries.

We first analyze whether the successive extensions of paternity leave since 2017 had any impact on the child penalty in Spain. We use longitudinal Social Security data to estimate the child penalty for parents having a child in the months surrounding each change in the maximum length of paternity leave, finding no significant difference between parents whose child was born shortly before or after an extension.

Next, we show that fathers and mothers use their (completely symmetric) leave entitlements differently. Men are more likely to take leave during the summer months, as well as split it into multiple spells, and take at least some of it part-time (relative to women).

Finally, we proceed to show that paternity leave reacts more to a specific leisure-related event (a highly salient sports competition). We document a significant increase in the number of men on paternity leave during the exact dates of the 2022 soccer World Cup, an event with very high viewership in Spain. This spike is not observed in maternity leave spells.

We show that, during the exact dates of the Qatar World Cup (November 20-December 18, 2022), there was a daily excess of more than 1,000 men on paternity leave, relative to the surrounding dates, and using the year before and after as controls (for seasonality). We also show triple-differences specifications where we find that this excess is not present in maternity leave spells (mothers tend to take the full 16 weeks immediately following birth), or in paternity leave spells among self-employed workers (with much more flexible schedules).

We interpret these results as direct evidence that (at least a fraction of) fathers take advantage of their paternity leave spells for activities unrelated to childcare. This may imply that these types of benefits are only partially effective at increasing gender balance in unpaid care work, and suggest that additional policies may be needed to effectively increase men's contribution to childcare, such as policies targeting gender norms directly or promoting more flexible work arrangements.

The rest of the paper is organized as follows. We lay out our empirical strategy in section 2. In section 3 we describe our data sources and present some descriptive evidence on the number of births and parental leave spells in Spain. We present our main results in section 4, and section 5 concludes.

2. Empirical strategy

2.1 Estimating differences in child penalties

To identify changes in child penalties, we estimate standard event-study models following the specification proposed by Kleven et al. (2019). The setup is based on comparing mothers' labor market outcomes relative to fathers' around the event of the first childbirth. The baseline specification stems from a balanced panel in which we observe each parent from several months before to several months after their first child is born. In our case, given that our data allows us to use monthly information, the event time *t* is indexed in relation to the month of the first childbirth, such that t=0 for the first month after the birth of the child, with *t* ranging from -24 to +24 months.

We estimate the following regression separately for men and women:

(1) $Y_{ist}^{g} = \sum_j \alpha_j^g I(j = age_{is}) + \sum_k \beta_k^g I(k = s) + \sum_{l \neq -9} \delta_l^g I(l = t) + \varepsilon_{ist}^g$

where Y_{ist}^{g} represents the outcome of interest for individual *i* of gender *g* at calendar time *s* and event time *t*. Note that the dependent variable Y_{ist}^{g} is indexed by both calendar time s and event time t. These are not two independent time dimensions. For each individual i, event time t is deterministically related to calendar time s as $t = s - s_i^*$, where s_i^* denotes the calendar month of the individual's first childbirth. We maintain both indices in the notation to emphasize that our specification includes event-time indicators (capturing the dynamic effect of childbirth) as well as calendar fixed effects, which absorb aggregate shocks, and age dummies that control for lifecycle trends. We exclude the event time dummy corresponding to t=−9, so that the event time coefficients, δ_t^g, capture the impact of parenthood relative to 9 months before birth:

(2) $P_t^g = \hat{\delta}_t^g / E\left[\tilde{Y}_{ist}^g | t\right]$,

where $\tilde{Y}_{ist}^g$ is the predicted monthly labor income net of the event time dummies, that is, the counterfactual in the hypothetical case of not having children:

(3) $\tilde{Y}_{ist}^g = \sum_j \hat{\alpha}_j^g I(j = age_{is}) + \sum_k \hat{\beta}_k^g I(k = s)$,

and $E\left[\tilde{Y}_{ist}^g | t\right]$ is the mean of the predicted values at time event *t*. Once the children effect has been estimated separately for men and women, we measure the child penalty as the percentage by which women fall behind men due to children at event time *t*:

(4) $P_t = \left(\hat{\delta}_t^{men} - \hat{\delta}_t^{women}\right) / E[\tilde{Y}_{ist}^{women} | t]$.

We consider the five more recent extensions of paternity leave in Spain, which took place between 2017 and 2021 (Farré et al. 2025). On January 1 of 2017, paid paternity leave was extended from 13 days to 4 weeks. On July 5 of 2018, it was increased to 5 weeks, on April 1 of 2019 to 8 weeks, on January 1 of 2020 to 12 weeks, and from January 1 of 2021 it is equalized to maternity leave, reaching 16 weeks for both parents (Figure A1). Given these extensions, we propose a local comparison around the date of each legislative change, and thus compare the parents of children born three months before and after, being *before* those born between: October-December 2016, April-June 2018, January-March 2019, October-December 2019 and October-December 2020, and *after* those born between: January-March 2017, July-September 2018, April-June 2019, January-March 2020, January-March 2021.

Hence, our baseline specification in (1) is extended with an additional term that indicates the child being born *after* a reform:

(5) $Y_{ist}^{g} = \sum_j \alpha_j^g I(j = age_{is}) + \sum_k \beta_k^g I(k = s) + \sum_{l \neq -9} \delta_l^g I(l = t) + \sum_{l \neq -9} \gamma_l^g I(l = t, after_i = 1) + \epsilon_{ist}^{g}$

To check for the significance of the differences in the estimated effects of children on monthly labor income, before and after the paternity extensions, we conduct an F-test of the estimated γ parameters, separately for fathers and mothers. Specifically, we test the null hypothesis that those coefficients are jointly equal to zero.

2.2 Use of paternity leave: The World Cup

Our identification relies on the precise timing of paternity leave spells. We estimate two sets of specifications. The first one is a standard difference-in-differences of the form:

(6) $N_{tdy} = \lambda_t + \mu_d + \delta_y + \beta\, WorldCup_{tdy} + u_{tdy}$

The dependent variable, N, is the number of men on paternity leave in day of the year t of calendar year y. The 2022 World Cup took place between November 20 and December 18, so that our main sample includes only dates in October to December (or November and December only). Our main control year is 2021 (we run additional specifications where we also include 2023 as a control). We control for year dummies (δ), day of the week dummies (μ), and day of the year (λ) fixed effects. Our main explanatory variable, *WorldCup*, takes value one for dates from November 20 to December 18 of 2022, and is thus the interaction of the event dates with the 2022 indicator.

Our main coefficient of interest is β, which captures the difference in the daily number of men on leave during the dates of the World Cup, compared with the surrounding dates (shortly before and after the event), and relative to the same difference in 2021, when there was no sports event in those dates. Our identifying assumption is that the same dates in the control year represent a good counterfactual for the number of men on leave during the World Cup of 2022, once controlling for the (potentially) different levels in the two years, and the seasonality in days of the week.

We also estimate additional, triple-differences specifications where we use women (or self-employed men) as additional control groups. We thus estimate the following equation:

(7) $N_{jtdy} = \lambda_t + \mu_d + \delta_y + T_j + \delta_y T_j + \lambda_t T_j + \mu_d T_j + \beta_1\ WorldCup_{tdy} + \beta_2\ T_j \cdot WorldCup_{tdy} + u_{jtdy}.$

We add an indicator T for observations corresponding to the treated group (men vs. women, or salaried workers vs. self-employed), as well as the interactions of the treated indicator with the date, day of the week, and year dummies. The coefficient of interest is now the interaction of the World Cup dummy with the indicator for the treated group, which captures the excess number of men on leave during the sports event, relative to the number of women on leave (or the number of salaried men relative to self-employed ones). The triple differences control for any additional factors that may drive the number of people on leave during the exact dates of the World Cup, such as for example any discontinuity in the number of births.

We estimate two separate triple-difference specifications: (a) comparing all men (treated) to all women (control), and (b) comparing salaried men (treated) to self-employed men (control). This approach is motivated by the observation that self-employed workers have greater discretion over their work schedules, which presumably makes it easier for them to adjust their leisure time to sports events, even when they are not officially on leave. Regarding women, we expect that their leave-taking patterns will react less to sports events, if they mainly use their leave entitlement to provide childcare.

3. Data and descriptive evidence

In this section, we describe the two datasets used in our empirical analysis. We rely on two distinct sources of administrative data, corresponding to the two components of our empirical strategy. First, we use the Continuous Sample of Working Histories (in

Spanish, *Muestra Continua de Vidas Laborales*, MCVL), a longitudinal 4% random sample of Social Security affiliates, to estimate child penalties around first birth. Second, we use the universe of maternity and paternity leave spells registered with the Spanish Social Security in 2021, 2022, and 2023, to study the timing of paternity and maternity leave use and its response to the 2022 World Cup. These latter administrative data were provided under a confidentiality agreement by the Spanish Social Security Administration.

The information from the individuals included in the MCVL is merged with rich data from the municipal census and the tax administration. From 2005 to 2023, the MCVL has a proper longitudinal design, following the same individuals over time if they are registered with the Social Security at least for one day in the year either as active affiliate or pensioner. In addition to those individuals who were present in the previous wave, the sample is refreshed each wave with new members to ensure that the sample remains representative. Moreover, the MCVL includes historical labor market information dating as far back as 1967, with some earnings data being available since 1980, allowing us to construct individuals' monthly employment histories. When an individual stops working for a few months but re-enters later, we identify that spell as a career break and assign value zero to earnings. Only those individuals who die, leave the country for good, or stop working completely and who never come back afterward as pensioners are no longer listed as Social Security affiliates in further MCVL waves.

The exact family relationship of the employees to the individuals with whom they live is not made explicit in the dataset, so that some assumptions are required to identify their children. We infer the birth of a worker's first child when we observe an individual of age 0 living together with an adult worker, if the adult individual is between 18 and 45 years old at the time of birth, and no other child is present in the same household at that time.

For the child-penalty analysis, our estimation sample consists of 11,901 employees (5,797 fathers and 6,104 mothers), contributing a total of 690,258 monthly observations from 2013 to 2023.

Concerning parental leave spells, Figure 1 illustrates the daily number of men and women on leave (averaged by week), from January of 2021 to December of 2023. During this entire period, there are about 70,000 women and 80,000 men on leave on any given day, a pattern that reflects the higher take-up rate of paternity leave relative to maternity leave, as benefit eligibility requires having accumulated sufficient prior employment and contribution periods. Note that there was no reform in the length of maternity or paternity leave entitlements during this period. Since January of 2021, mothers and fathers are entitled to 16 weeks of (non-transferable) paid leave each (Farré at al. 2025), and most parents take advantage of the full duration.[3]

Figure 2 shows that there were about 27,000 births per month in Spain during the same period. Since paternity and maternity leave are about 4 months long, these numbers suggest that the take-up rate is about 65% for maternity and 74% for paternity leave.[4] The leave can be taken at any time during the first year of the child's life, and it can be taken all at once or broken into multiple spells.

Descriptive evidence on the timing of leave

Figure 3 shows the number of men and women on leave in our sample period, by day of the year. We observe a spike in paternity leave spells during the summer months, which

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[3] Effective leave length (conditional on take-up) was 111 days for women and 106 days for men, in the sample of leave-takers who had a child in 2021 or 2022 (note that 16 weeks have 112 days).

[4] By take-up we mean the number of parents on leave over the total number of births. The difference between mothers and fathers is likely driven by the lower employment rate of women (who are thus less likely to be eligible). See Farré et al. (2025) for more details on take-up and utilization patterns.

is not observed in maternity leave spells (this pattern is also observed in Norway, see Andresen and Nix 2024). To document the statistical significance of this pattern, we conduct regressions of the following form:

(8) $N_{ty} = \delta_y + \beta_1 Men_{ty} + \beta_2 Summer_{ty} + \beta_3 Men \cdot Summer_{ty} + u_{tdy},$

where the dependent variable is the number (or log number) of men or women on leave on day t of year y, and our main explanatory variable is the interaction of men and summer. We control for year dummies (δ), and a summer indicator (taking value 1 for dates between June 21 and September 21). The results are shown in Appendix Table A1.

We find that there are significantly more men on leave during the summer, relative to the rest of the year, and compared to women. In fact, we observe no summer effect for women at all, while men are 7 log-points more likely to be on leave during the summer. This is suggestive of men using (part of) their leave to extend their summer vacation. It is also consistent with men being more likely to pick up childcare tasks during the summer break in daycare centers.

In Figure 4, we also show that men are much more likely to take their leave in multiple spells (50% of fathers versus 6% of mothers). They are also more likely to use at least some of their leave part time (10% of men vs. under 2% of women).

Our descriptive results show that women tend to take maternity leave in a single, full-time spell immediately following childbirth, while men take their corresponding leave in multiple spells, some of them part-time, and more often during the summer months. These patterns suggest that, in spite of maternity and paternity leave entitlements being symmetric, the mother is the main caregiver during the initial months of the child's life, while the father makes a more flexible use of his leave.

Descriptive evidence on the World Cup

Our main analysis tries to get closer to how parents use their time during their leave, and in particular whether they may time their leave strategically for leisure purposes. We focus on a very salient soccer competition: the 2022 World Cup, which took place in Qatar in November-December of 2022. Soccer is the most popular sport in Spain. In 2014, 61% of men and 36% of women report that soccer is in the top 3 of sports that they are most interested in, and about 78% of men (and 57% of women) report that they are followers of a specific soccer team.[5]

We conduct our main analysis at the daily level, in order to capture any differences in leave-taking behavior coinciding exactly with the sports event of interest. Figure 5 shows the daily number of men and women on parental leave during the months of September to December of 2021, 2022, and 2023. The two vertical lines indicate November 20 and December 18. Because the level as well as the trend are different in 2023 from the previous two years, we use 2021 as our main control year. We observe much stronger weekly seasonality for men than for women, which justifies the inclusion of day of the week fixed effects in all our specifications. Descriptively, the number of men on leave in the days before November 20 and after December 18 is higher in 2021 compared with 2022. The two lines get closer during the World Cup dates. This transitory convergence is not observed among women.

Figure 6 zooms in on the weeks surrounding the World Cup. We show the difference in the daily number of men (and women) on leave in 2022 relative to 2021 (weekly averages), from late October until the end of December. The overall levels are higher in 2021, but the difference almost disappears for men during the weeks of the sports event.[6]

[5] Spanish Center of Sociological Studies (CIS), June 2014 Barometer (study 3029).
[6] Note that the weeks of November 14-20 and December 19-25 overlap partially with the event (i.e. are "partially treated").

4. Main results: paternity leave, the child penalty, and the 2022 World Cup

The results of our child penalty estimation analysis are shown in Figure 7. The left-hand side graph depicts the estimated percentage effects of the first child for men and women before and after the different paternity leave extensions, while the right-hand side graph shows the estimated penalties. Across all reform cohorts, the estimated profiles overlap closely, and we do not observe any systematic differences in the magnitude or evolution of the child penalty across the successive reforms extending parental leave.

To formally assess the joint significance of the estimated γ parameters in regression model (5), we conduct an F-test separately for men and women. The resulting F-statistics (0.73 with a p-value of 0.936 for men, and 0.82 with a p-value of 0.829 for women) confirm that we fail to reject the null hypothesis that the γ coefficients are jointly equal to zero. These results indicate that the successive increases in paternity leave duration did not produce detectable changes in child penalties (parents' relative labor market trajectories).

These null effects on child penalties naturally raise the question of how fathers use their leave. If leave extensions do not increase paternal involvement in childcare, this could help explain the stability of the child penalty. To shed light on this potential mechanism, we next turn to our main analysis, which examines whether fathers' leave-taking behavior responds to major leisure-related events. In particular, we study the 2022 World Cup to assess whether fathers may be timing (portions of) their leave around leisure opportunities.

The results of our difference-in-differences specification (equation 6) are shown in Figure 8 (and Appendix Table A2). We show our main coefficient of interest (and its confidence interval) for the baseline specification, as well as three robustness checks. The baseline specification uses all days in November and December of 2021 and 2022. Our main result (the first coefficient in Figure 8) suggests that there were about 1,140 excess men on leave per day during the 2022 World Cup, relative to the surrounding dates (and to the previous year). This coefficient is precisely estimated and statistically different from zero. In terms of magnitude, the estimated excess represents an increase of about 1.3% with respect to the average daily number of men on leave during November 20-December 18 in the control year, which was about 85,000 (see Figure 3).

The second coefficient in Figure 8 includes all days in October as additional control dates, while the third and fourth come from "donut" specifications that exclude the seven days immediately before November 20 and after December 18, to exclude potential spillover effects of the World Cup into surrounding dates. These alternative estimates range between 925 and 1,480. These results are also robust to the inclusion of 2023 as an additional control year, as shown in Figure A2.

Figure 9 presents the results of our main triple-differences specification (equation 7), using women as the control group (see also Appendix Table A3). We display the main coefficient of interest and its confidence interval for the baseline specification, alongside robustness checks varying the dates included in the sample Again, the second specification incorporates October as control dates, while the two additional ones are their "donut" analogs, excluding the seven days immediately before and after the World Cup.

The baseline specification results indicate approximately 800 excess men on leave per day during the 2022 World Cup relative to women, representing a 1% increase over the control year.[7] Alternative estimates range from 661 to 1,009, all statistically significant at the 95% confidence level. This pattern persists when we include 2023 as an additional control year, with estimates ranging from 762 to 1,089 (Figure A3).

[7] Note that this DDD estimate decomposes the total effect reported before (1.3%) between baseline effect common to women (from the World Cup coefficient in Table A3 equal to 357) and the differential effect for men (the reported World Cup x Father coefficient of 782).

Turning to our triple-differences specification comparing salaried men to self-employed men (equation 7), Figure 10 (and Appendix Table A4) displays the results, with the same robustness checks as Figure 9. The baseline specification reveals around 959 excess salaried men on leave per day during the World Cup. Alternative estimates range from 959 to 1,307, all statistically significant. Figure A4 confirms the robustness of these results when including 2023 as an additional control year.

All in all, we find evidence of a spike in the number of men on paternity leave during the 2022 soccer World Cup of about 1%, relative to the surrounding dates, and using the previous years as a control. This spike is not found for self-employed men, who arguably have a more flexible schedule, and is much smaller for women. We interpret these results as men using paternity leave as a way to time their leisure, while women time maternity leave precisely following the date of birth of the child. These patterns suggest that, despite symmetric maternity and paternity leave, women remain the main caregivers after the birth of a child.

5. Conclusions

We examine the effects of paternity leave in Spain through two complementary analyses. We first study whether the successive extensions of paternity leave implemented between 2017 and 2021 reduced gender inequalities in labor market outcomes for affected parents. Using event-study methods and administrative data spanning a decade, we find no evidence that longer paid paternity leave entitlements narrowed the earnings gap between mothers and fathers following childbirth. This result adds to a growing literature showing that increasing the duration of paternity leave has a limited impact on gender inequalities in the labor market.[8]

[8] Persson and Rossin-Slater (2022) show that more flexibility in the use of parental leave for fathers can have positive effects on maternal health.

To shed light on this puzzle, we then investigate how fathers use their leave. Leveraging daily administrative records on the universe of maternity and paternity leave spells, as well as the precise timing of the 2022 soccer World Cup, we study whether a major leisure event influences the timing of paternity (or maternity) leave. We find that the number of fathers on paternity leave increased noticeably during the exact dates of the tournament, with no comparable increase for mothers or self-employed fathers. While women exhibit a small rise in leave-taking during this period, the differential response for men is substantial. Combined with additional descriptive evidence showing that fathers are more likely to split their leave, they take some of it part-time, and they tend to concentrate it during the summer months, our findings suggest that a nontrivial share of men may use (part of) their paternity leave for non-childcare purposes.

Taken together, our results indicate that simply granting longer paternity leave entitlements may not be sufficient to alter within-household specialization or reduce gender gaps in labor market outcomes.

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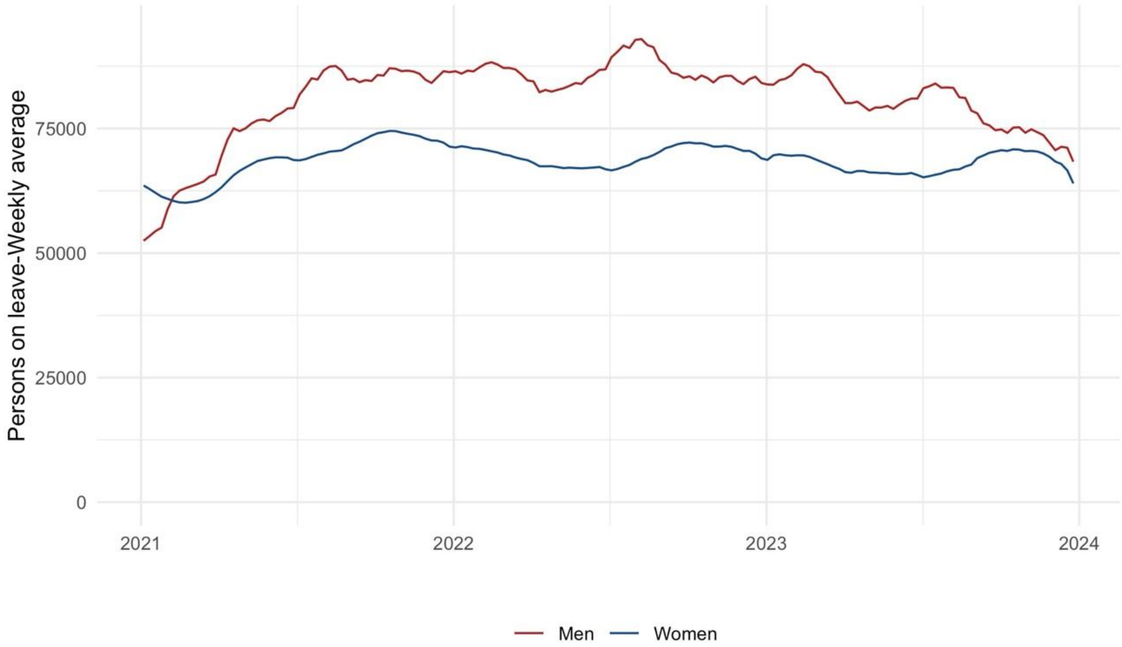
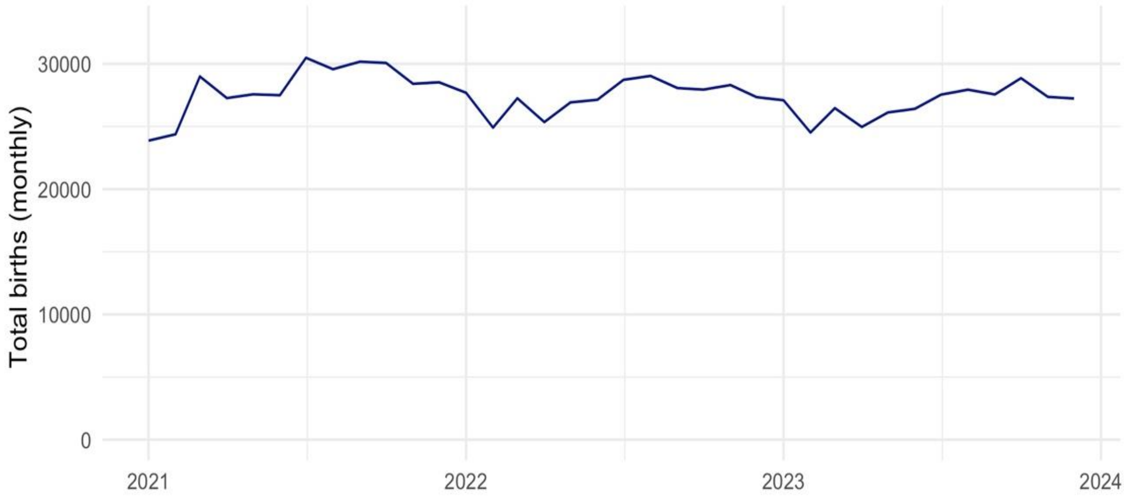
Figures

Figure 1. Daily number of men on paternity leave and women on maternity leave, 2021-2023



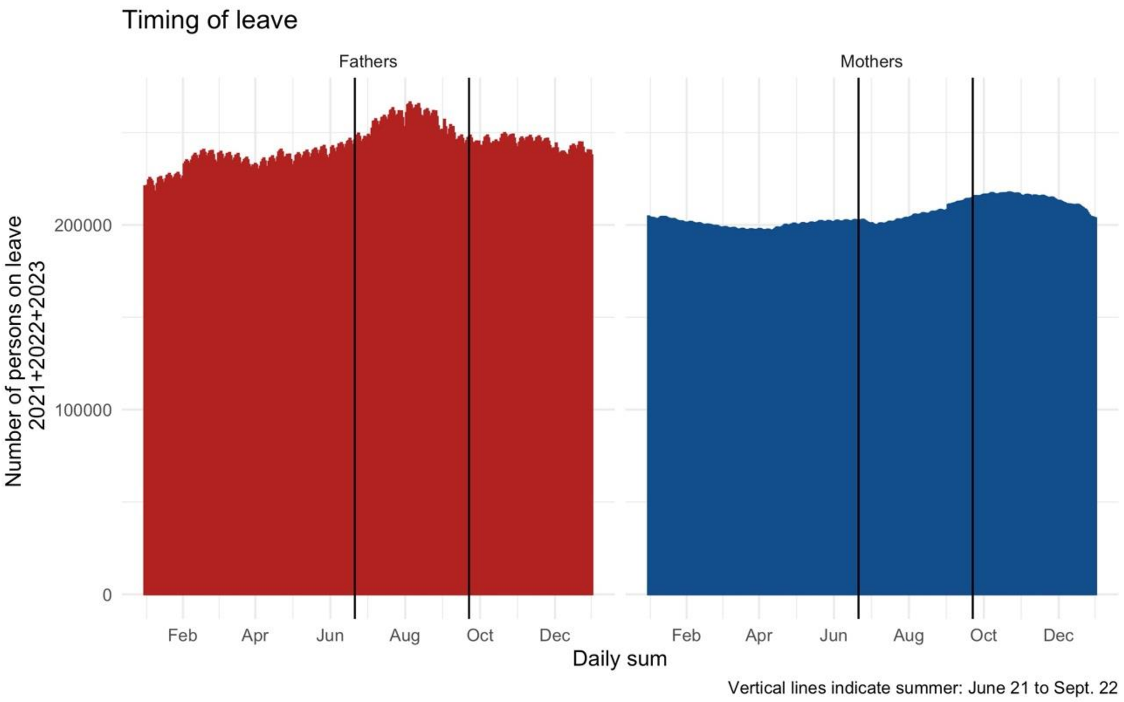
Note: The figure shows the daily number of men and women on paternity/maternity leave, averaged by week (vertical axis) from 2021 to 2023 (horizontal axis).
Source: Social Security data.

Figure 2. Monthly number of births in Spain, 2021-2023



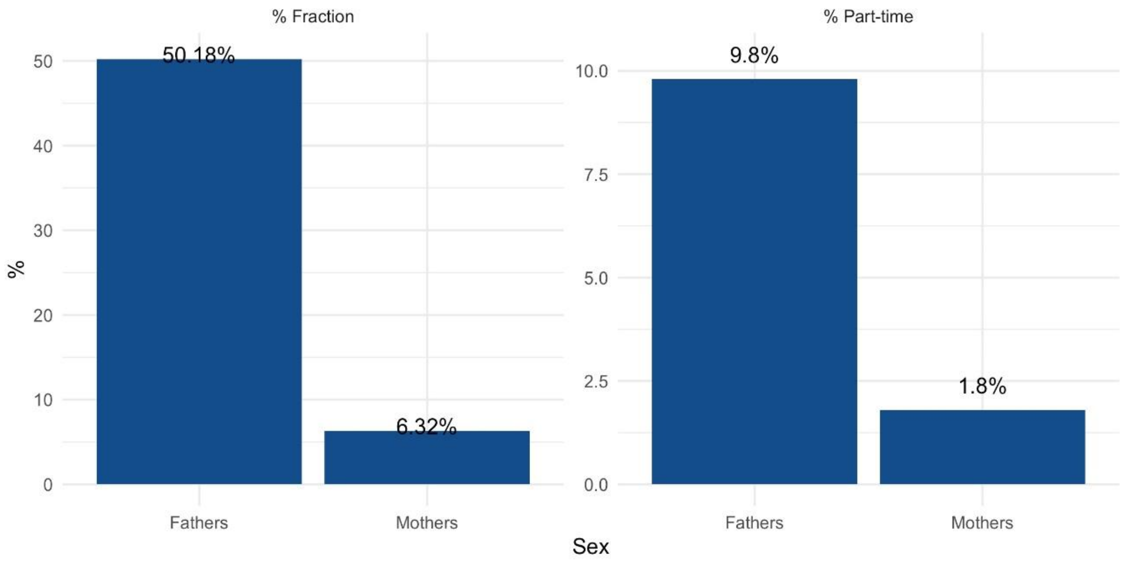
Note: The figure shows the total number of monthly births from 2021 to 2023.
Source: Spanish Statistical Institute.

Figure 3. Daily number of men on paternity leave and women on maternity leave (pooling years 2021, 2022, and 2023) by day of the year.



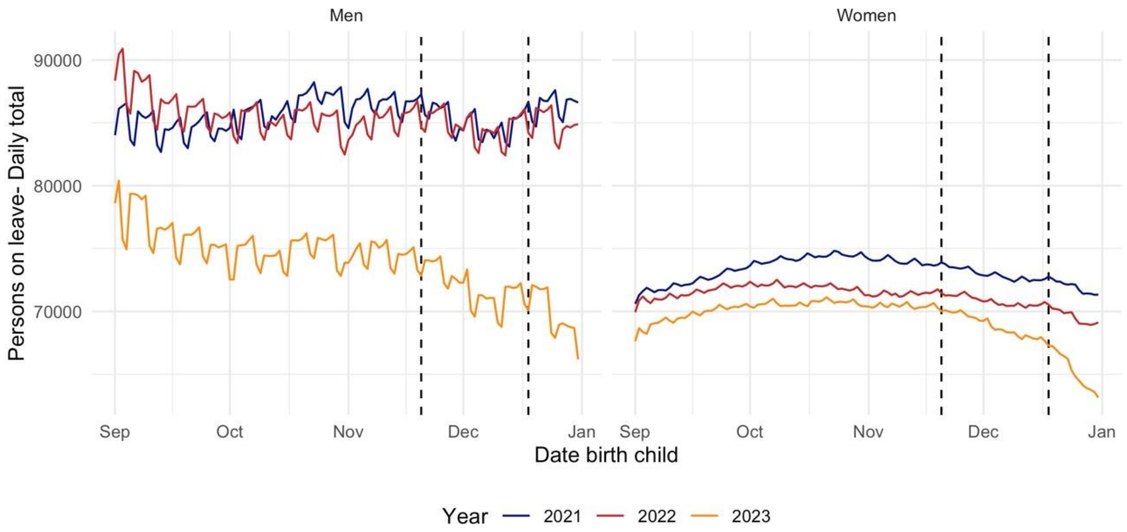
Note: The figure shows the average daily number of men and women on leave for each day of the year, pooling data from 2021, 2022, and 2023.
Source: Social Security data.

Figure 4. Percentage of men and women who take their leave in multiple spells or part-time



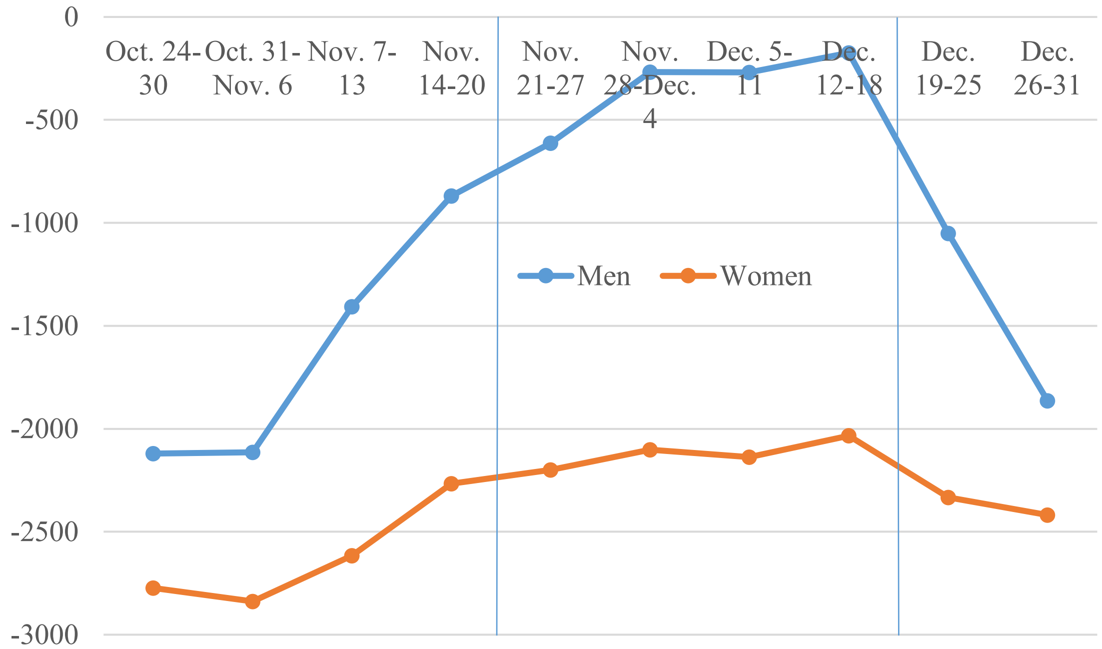
Note: We use data for all men and women who have a child (start their leave) in 2021 or 2022.
Source: Social Security data.

Figure 5. Daily number of men on paternity leave and women on maternity leave, September-December of 2021-23



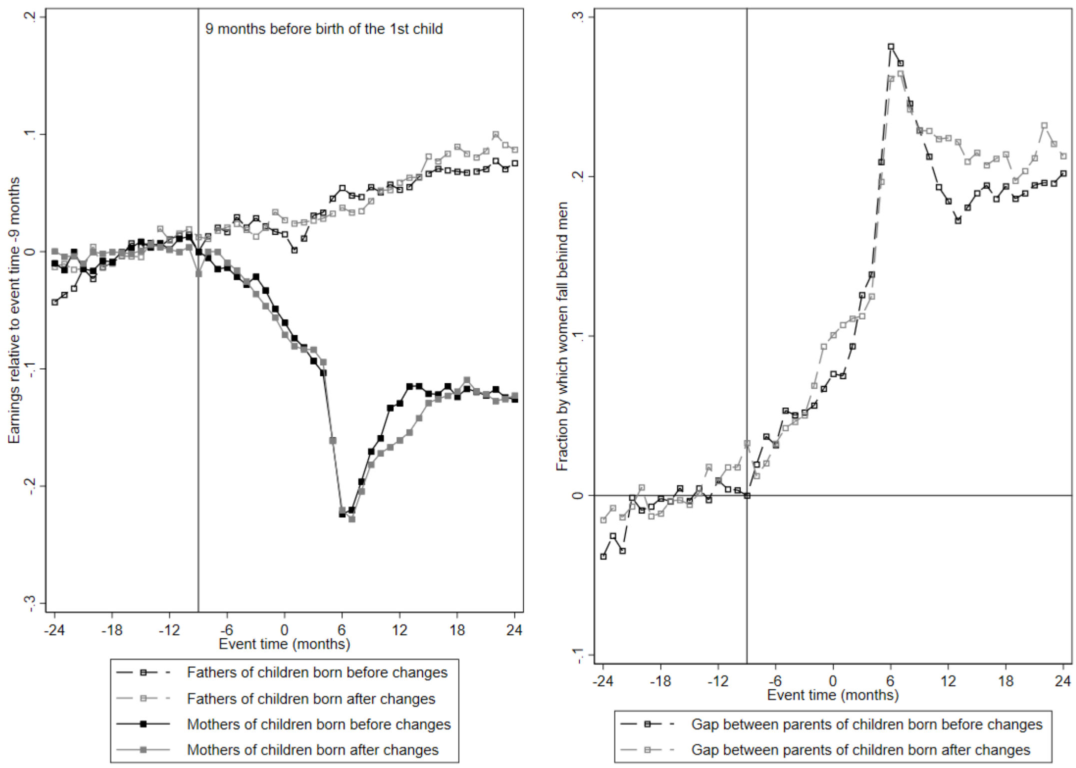
Note: The figure shows the total number of men and women on leave, on each day of September to December of 2021, 2022, and 2023. The vertical lines indicate November 20 and December 18, the dates of the World Cup (in 2022).

Figure 6. Difference in the number of men (women) on leave per day in 2022 vs. 2021 (weekly average)



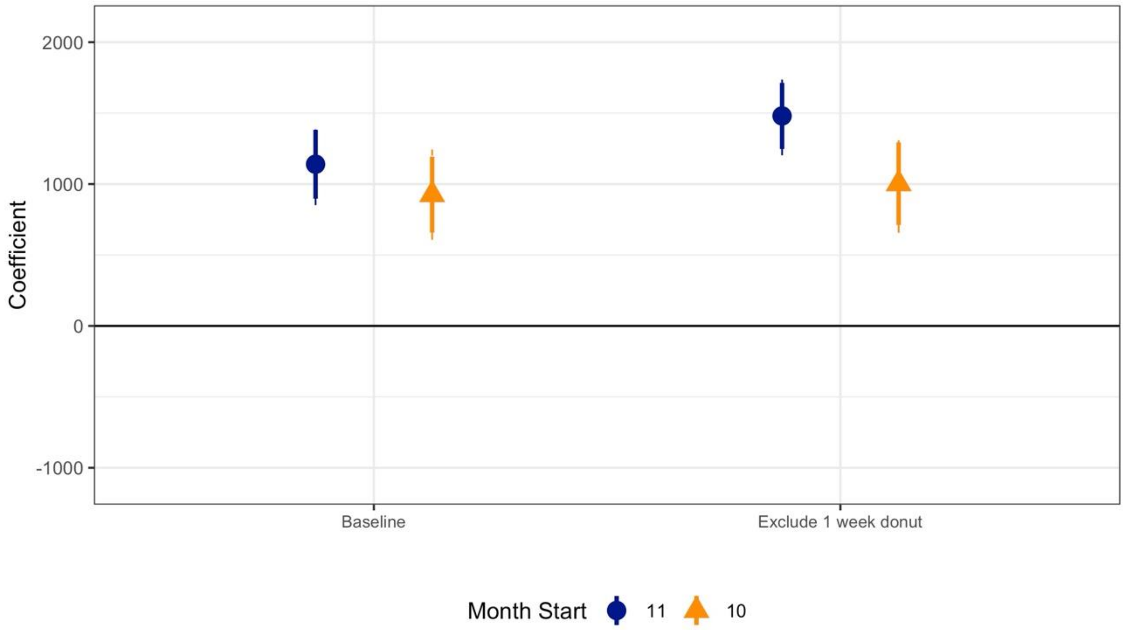
Note: The vertical lines indicate the weeks of the Qatar World Cup of 2022 (November 20-December 18).
Source: Social Security data.

Figure 7. The estimated effect of the first child on monthly labor income and estimated child penalties.



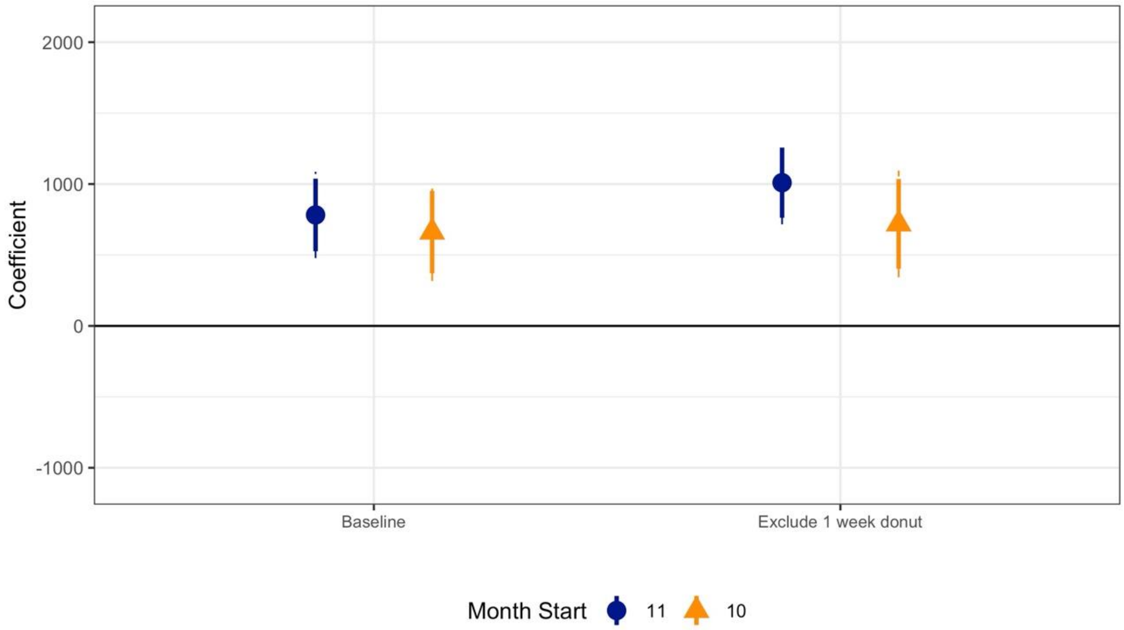
Source: MCVL.

Figure 8. The increase in the number of men on paternity leave during the World Cup (daily number of men, DiD with 2021 as the control year)



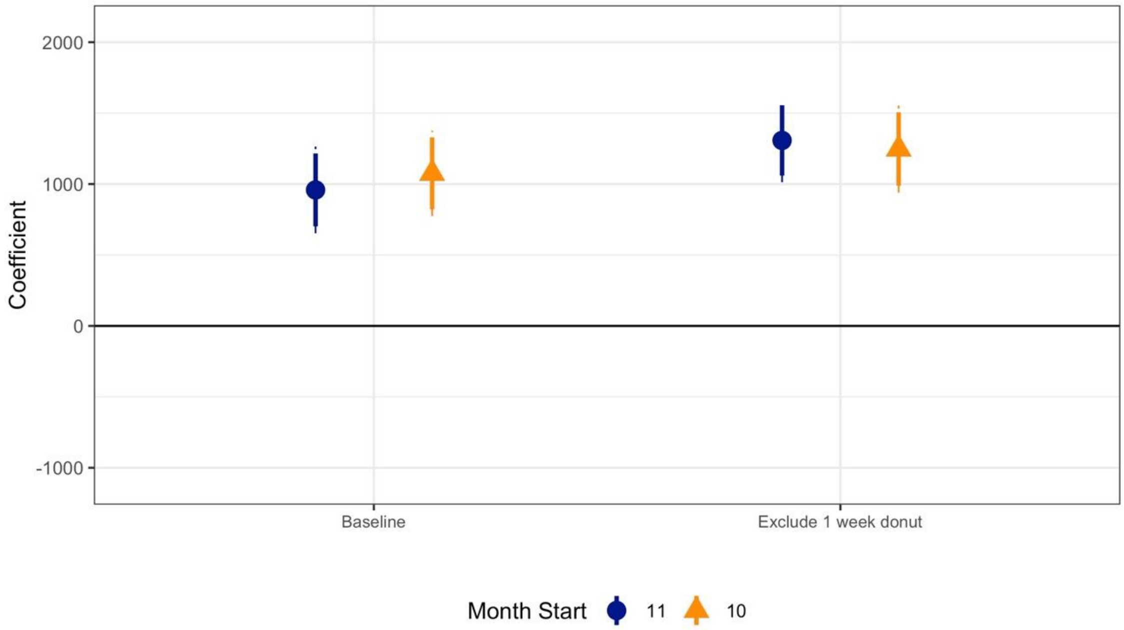
Note: Dots show the treatment effect estimated from the regression coefficient of the World Cup dates (20 Nov-18 Dec 2022) dummy (equation 6). The sample includes the stock of fathers on leave on each day of (October), November and December of 2021 and 2022. The regression includes fixed effects for year, day of the year, and day of the week. Solid and dashed vertical lines depict confidence intervals at 95% and 90%, respectively. The donut specification (on the right) excludes the seven days immediately before and after November 20 and December 18.

Figure 9. The increase in the number of men on paternity leave during the World Cup (daily number of men, triple differences with women as the control group and 2021 as the control year)



Note: Dots show the treatment effect estimated from the regression coefficient of the World Cup dates (20 Nov-18 Dec 2022) dummy interacted with the Men dummy (*T* in equation 7). The sample includes the stock of parents of each sex on leave for each day of (October), November and December of 2021 and 2022. The regression includes sex-specific fixed effects for year, day of the year, and weekday. Solid and dashed vertical lines depict confidence intervals at 95% and 90%, respectively. The donut specification (on the right) excludes the seven days immediately before and after November 20 and December 18.

Figure 10. The increase in the number of men on paternity leave during the World Cup (daily number of men, triple differences with self-employed men as the control group and 2021 as the control year)



Note: Dots show the treatment effect estimated from the regression coefficient of the World Cup dates (20 Nov-18 Dec 2022) dummy interacted with a dummy for the Salaried Men (*T* in equation 7). The sample includes the stock of fathers of each employment status (salaried and self-employed) on leave for each day on each day of (October), November and December of 2021 and 2022. The regression includes salaried (vs self-employed) specific fixed-effects for year, day of the year, and weekday. Solid and dashed vertical lines depict confidence intervals at 95% and 90%, respectively. The donut specification (on the right) excludes the seven days immediately before and after November 20 and December 18.

Figure A1. Maximum duration of the paid leave, in weeks.

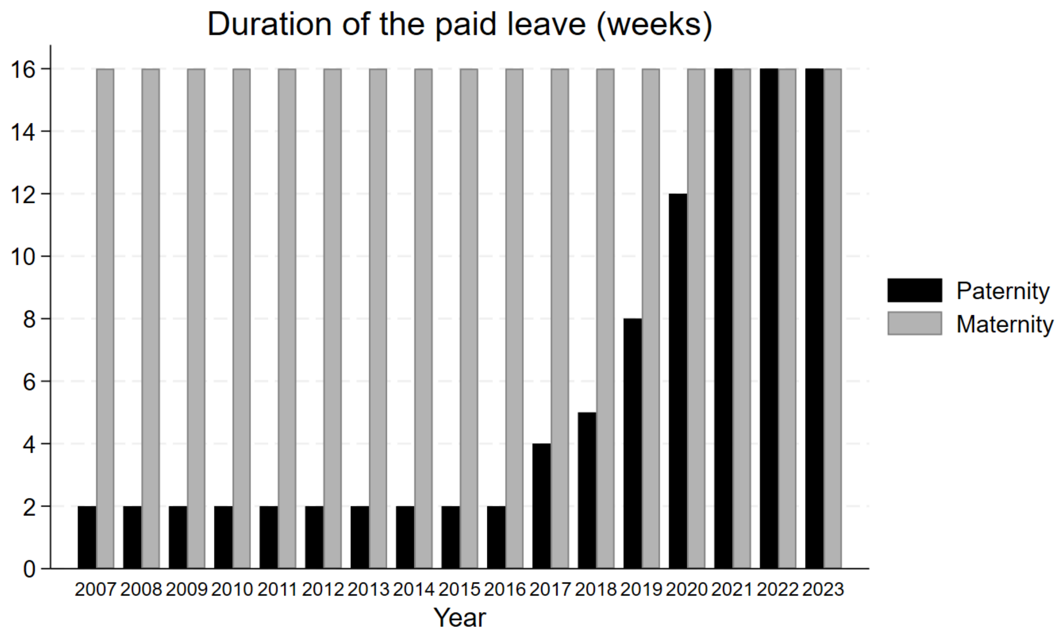
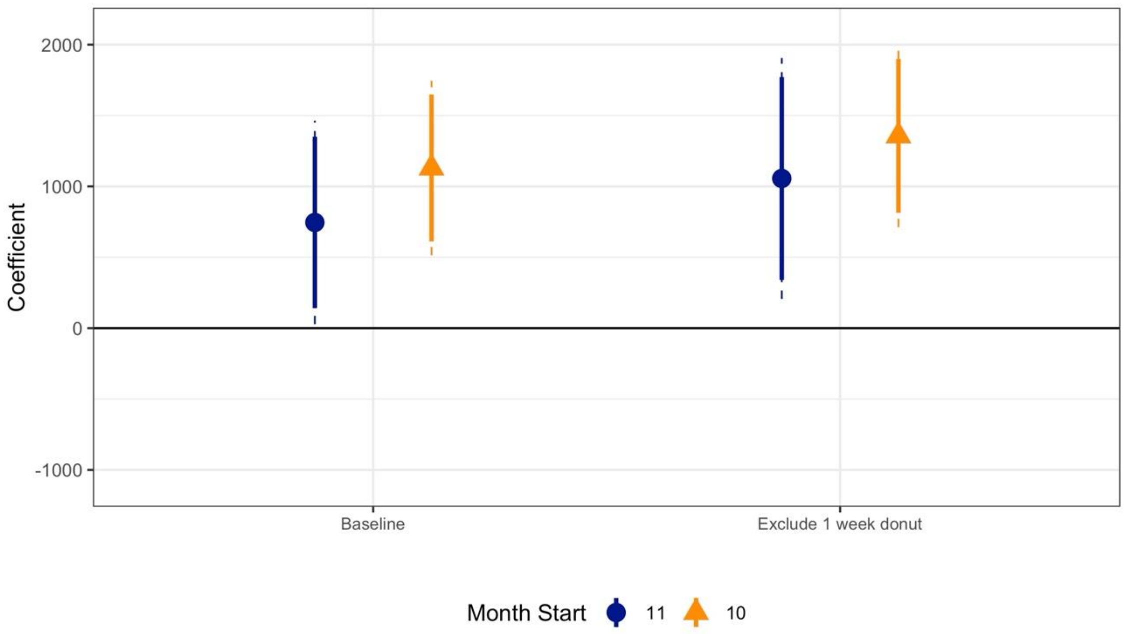
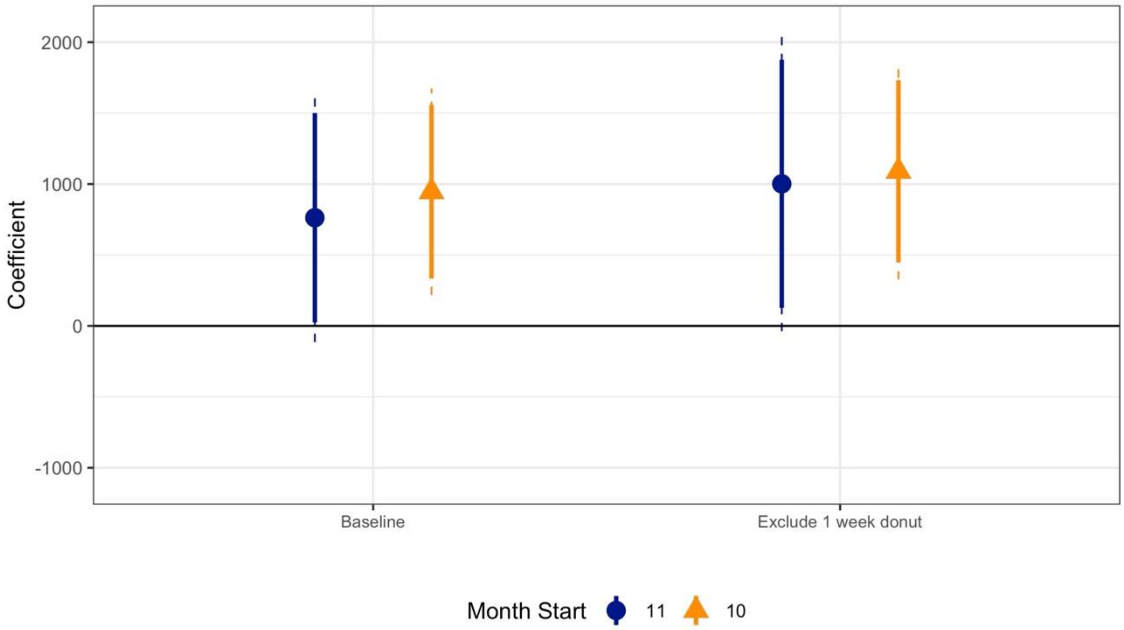


Figure A2. The increase in the number of men on paternity leave during the World Cup (daily number of men, DiD with 2021 and 2023 as the control years)



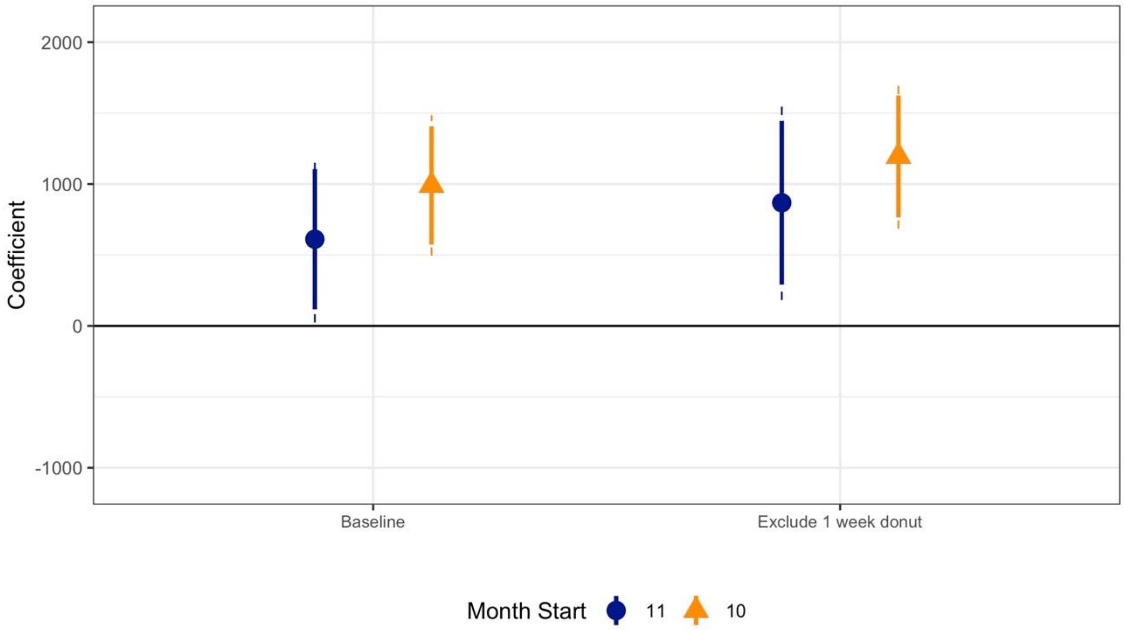
Note: Dots show the treatment effect estimated from the regression coefficient of the World Cup dates (20 Nov-18 Dec 2022) dummy (equation 6). The sample includes the stock of fathers on leave on each day of (October), November and December of 2021, 2022 and 2023. The regression includes fixed effects for year, day of the year, and day of the week. Solid and dashed vertical lines depict confidence intervals at 95% and 90%, respectively. The donut specification (on the right) excludes the seven days immediately before and after November 20 and December 18.

Figure A3. The increase in the number of men on paternity leave during the World Cup (daily number of men, triple differences with women as the control group, and 2021 and 2023 as the control year)



Note: Dots show the treatment effect estimated from the regression coefficient of the World Cup dates (20 Nov-18 Dec 2022) dummy interacted with the Men dummy (T in equation 7). The sample includes the stock of parents of each sex on leave for each day of (October), November and December of 2021, 2022 and 2023. The regression includes sex-specific fixed effects for year, day of the year and weekday. Solid and dashed vertical lines depict confidence intervals at 95% and 90%, respectively. The donut specification (on the right) excludes the seven days immediately before and after November 20 and December 18.

Figure A4. The increase in the number of men on paternity leave during the World Cup (daily number of men, triple differences with self-employed men as the control group, and 2021 and 2023 as the control year)



Note: Dots show the treatment effect estimated from the regression coefficient of the World Cup dates (20 Nov-18 Dec 2022) dummy interacted with a dummy for the Salaried Men (*T* in equation 7). The sample includes the stock of fathers of each employment status (salaried and self-employed) on leave for each day on each day of (October), November and December of 2021, 2022 and 2023. The regression includes salaried (vs.self-employed) specific fixed-effects for year, day of the year and weekday. Solid and dashed vertical lines depict confidence intervals at 95% and 90%, respectively.

Appendix Table A1. Paternity leave during the summer

	Parents on leave	
Dep. var.:	Number	Log number
Constant	66,170.6***	11.10***
	(276.1)	(0.0040)
Father	10,945.9***	0.1428***
	(302.1)	(0.0042)
Summer	109.8	0.0026
	(234.4)	(0.0033)
Year2022	5,568.7***	0.0764***
	(323.6)	(0.0046)
Year2023	1,405.7***	0.0235***
	(336.1)	(0.0047)
Father x Summer	**5,456.6*** **	**0.0706*** **
	(417.8)	**(0.0057)**
N	2,190	2,190
R^2	0.605	0.575
Adj. R^2	0.604	0.574

Note: Each column reports the results of a different regression. Robust standard errors are shown in parentheses. The dependent variable is the number (or log number) of men/women on leave on a given date. We include dates from January 1 of 2021 to December 31 of 2023. (* 90%, ** 95%, ***99%)

Appendix Table A2. The increase in the number of men on paternity leave during the World Cup (daily number of men, DiD with 2021 as the control year)

	Nov-Dec		**Oct-Dec.**		**Nov-Dec (donut)**		**Oct-Dec (donut)**	
	Levels	**Logs**	**Levels**	**Logs**	**Levels**	**Logs**	**Levels**	**Logs**
Constant	84,777***	11.348***	84,662***	11.346***	85,181***	11.352***	84,829***	11.348***
	(347)	(0.0041)	(404)	(0.0047)	(307)	(0.0036)	(432)	(0.0051)
World Cup	**1,140*****	**0.0133*****	**924*****	**0.0108*****	**1,480*****	**0.0173*****	**1,002*****	**0.0117*****
	(147)	**(0.0017)**	**(162)**	**(0.0019)**	**(141)**	**(0.0017)**	**(176)**	**(0.0021)**
Year 2022	-1,464***	-0.0171***	-1,250***	-0.0146***	-1,795***	-0.021***	-1,322***	-0.0154***
	(98)	(0.0012)	(88)	(0.001)	(107)	(0.0013)	(104)	(0.0012)
N	122	122	184	184	108	108	170	170

Note: Each column reports the results of a different regression (equation 6). Robust standard errors are shown in parentheses. The sample includes the stock of fathers on leave on each day of (October), November and December of 2021 and 2022 (the donut specification excludes the seven days immediately before and after November 20 and December 18). The dependent variable is the number (or log number) of men on leave on a given date. The regression includes fixed effects for year, day of the year, and day of the week. (* 90%, ** 95%, ***99%)

Appendix Table A3. The increase in the number of men on paternity leave during the World Cup (daily number of men, triple differences with women as the control group and 2021 as the control year)

	Nov-Dec		**Oct-Dec**		**Nov-Dec (donut)**		**Oct-Dec (donut)**	
	Levels	**Logs**	**Levels**	**Logs**	**Levels**	**Logs**	**Levels**	**Logs**
Constant	71,410***	11.1759***	71,362***	11.1752***	71,546***	11.1779***	71,415***	11.1759***
	(259)	(0.0031)	(310)	(0.0037)	(230)	(0.0027)	(332)	(0.004)
Father	13,366***	0.1718***	13,300***	0.1713***	13,635***	0.1746***	13,415***	0.1725***
	(366)	(0.0044)	(438)	(0.0053)	(325.)	(0.0039)	(470)	(0.0057)
Father x 2022	1,014***	0.0174***	1,134***	0.0183***	792***	0.015***	1,080***	0.0176***
	(103)	(0.0012)	(95)	(0.0011)	(113)	(0.0014)	(113)	(0.0014)
World Cup	357***	0.005***	264**	0.0034**	471***	0.0065***	283.5**	0.0036**
	(110)	(0.0013)	(124)	(0.0015)	(106)	(0.0013)	(136)	(0.0016)
World Cup x Father	**782*** **	**0.0083*** **	**661*** **	**0.0073*** **	**1,010*** **	**0.0107*** **	**719*** **	**0.008*** **
	(155)	**(0.0018)**	**(176)**	**(0.0021)**	**(150)**	**(0.0018)**	**(192)**	**(0.0023)**
Year 2022	-2,477***	-0.0345***	-2,385***	-0.0329***	-2,587***	-0.036***	-2,403***	-0.0331***
	(73)	(9e-04)	(67)	(8e-04)	(80)	(0.001)	(80)	(0.001)
N	244	244	368	368	216	216	340	340

Note: Each column reports the results of a different regression (equation 7). Robust standard errors are shown in parentheses. The sample includes the stock of parents of each sex on leave for each day of (October), November and December of 2021 and 2022 (the donut specification excludes the seven days immediately before and after November 20 and December 18). The dependent variable is the number (or log number) of parents on leave for each sex on a given date. The regression includes sex-specific fixed effects for year, day of the year, and weekday. (* 90%, ** 95%, ***99%)

Appendix Table A4. The increase in the number of men on paternity leave during the World Cup (daily number of men, triple differences with self-employed men as the control group and 2021 as the control year)

	Nov-Dec		**Oct-Dec**		**Nov-Dec (donut)**		**Oct-Dec (donut)**	
	Levels	**Logs**	**Levels**	**Logs**	**Levels**	**Logs**	**Levels**	**Logs**
Constant	14,143***	9.5568***	14,082***	9.5523***	14,164***	9.5582***	14,072***	9.5516***
	-260	-0,0068	-270,748	-0,0071	-231	-0,0064	-271	-0,0068
World Cup	87	0.0061**	-57	-0,0041	85	0.006**	-98	-0.0069**
	-110	-0,0029	-108,7027	-0,0028	-106	-0,0029	-111	-0,0028
World Cup x Salaried	***959****	***0.0094***	***1,075****	***0.019****	***1,307****	***0.0145****	***1,246****	***0.0237****
	-156	***-0,0041***	***-153***	***-0,004***	***-150***	***-0,0041***	***-157***	***-0,0039***
Salaried	52,343***	1.5481***	52,374***	1.5522***	52,701***	1.5522***	52,566***	1.5556***
	-367	-0,0096	-382,8955	-0,01	-326	-0,009	-384	-0,0096
Salaried x 2022	-6,4	0.0354***	-125	0.0257***	-348***	0.0304***	-292***	0.0211***
	-104	-0,0027	-83	-0,0022	-114	-0,0031	-92	-0,0023
Year 2022	-608***	-0.0445***	-463***	-0.0343***	-605***	-0.0444***	-422***	-0.0315***
	-73	-0,0019	-59	-0,0015	-81	-0,0022	-65	-0,0016
N	244	244	368	368	216	216	340	340

Note: Each column reports the results of a different regression (equation 7). Robust standard errors are shown in parentheses. The sample includes the stock of fathers of each employment status (salaried and self-employed) on leave on each day of (October), November and December of 2021 and 2022 (the donut specification excludes the seven days immediately before and after November 20 and December 18). The dependent variable is the number (or log number) of men on leave on a given date. The regression includes salaried (vs self-employed) specific fixed-effects for year, day of the year, and weekday. (* 90%, ** 95%, ***99%)