



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

BSE Working Paper 1463 | September 2024

Libertad González, Luis Guirola, Laura Hospido

bse.eu/research

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

Libertad González*

(Universitat Pompeu Fabra and Barcelona School of Economics)

Luis Guirola

(Banco de España)

Laura Hospido

(Banco de España, CEMFI and IZA)

September 2024

Abstract: We provide evidence of fathers' time-use during paternity leave by studying the timing of paternity leave spells around a large sports event with strong male following: the 2022 Soccer World Cup. We use administrative data from Spain, a country with generous paternity leave policies and a strong following of soccer competitions. Our data cover the universe of paternity (and maternity) leave spells, and we exploit the exact dates of the 2022 World Cup in a difference-in-differences framework. 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 (1.3%), relative to the surrounding dates, and using the year before and after as controls (for seasonality). We also show in triple-differences specifications that this excess is not present in maternity leave spells, 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 use paternity leave for purposes unrelated to childcare.

JEL codes: J13, J16, J22

Keywords: Gender inequality, paternity leave, childcare

* González acknowledges financial support from the Spanish Agencia Estatal de Investigación (AEI), through the Severo Ochoa Program for Centers of Excellence in R&D (Barcelona School of Economics CEX2019-000915-S).

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 increase female employment slightly, 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). 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 and unpaid work behaviors remain unaffected, as do 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. We first show that 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). We then 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.

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

Paternity leave in Spain can be taken in several spells during the first 12 months of life of the child. 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

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 following form:

$$(1) \quad N_{tdy} = \lambda_t + \mu_d + \delta_y + \beta \text{WorldCup}_{tdy} + u_{tdy}$$

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 18 and December

20, 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 (λ), day of the week dummies (μ), and day of the year (δ) fixed effects. Our main explanatory variable, *WorldCup*, takes value one for dates from November 18 to December 20 of 2022, and is thus the interaction of the event dates with 2022.

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:

$$(2) N_{jtdy} = \lambda_t + \mu_d + \delta_y + T_j + \delta_y T_j + \lambda_t T_j + \mu_d T_j + \beta_1 \text{WorldCup}_{tdy} + \beta_2 T_j \cdot \text{WorldCup}_{tdy} + u_{jtdy}$$

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, year, and day of the week 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

Our main data source is the universe of maternity and paternity leave spells registered with the Spanish Social Security in 2021, 2022, and 2023. These administrative data were provided under a confidentiality agreement by the Spanish Social Security administration. Figure 1 illustrates the daily number of men and women on maternity and paternity 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. 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 et al. 2024), 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

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).

suggest that the take-up rate is about 62% 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 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:

$$(3) \quad N_{ty} = \lambda_t + \delta_y + \beta_1 Men_{ty} + \beta_2 Summer_{ty} + \beta_3 Men \cdot Summer_{ty} + u_{tdy},$$

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

We find that there are significantly more men on leave during the summer, relatively to the rest of the year, and compared to women. In fact, we observe no summer effect for women at all, where 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. In Figure 4, we also show that men are much more likely to take their leave in multiple spells (25 of fathers versus 3% of mothers). They are also more likely to use at least some of their leave part time (9% 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

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).

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.

⁵ Spanish Center of Sociological Studies (CIS), June 2014 Barometer (study 3029).

4. Main results

The results of our difference-in-differences specification (equation 1) are shown in Figure 6. 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 6) 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 6 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 A1.

Figure 7 presents the results of our main triple-differences specification (equation 2), using women as the control group. 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. 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 A2).

Turning to the triple-differences specification comparing salaried men to self-employed men (equation 2), Figure 8 displays the results, with the same robustness checks as Figure 7. The baseline specification reveals around 958 excess salaried men on leave per day during the World Cup. Alternative estimates range from 958 to 1,307, all statistically significant. Figure A3 confirms the robustness of these results when including 2023 as an additional control year.

All in all, we find evidence that there was a spike 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 women, or for self-employed men, who arguably have a more flexible schedule. 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 of symmetric maternity and paternity leave, women remain the main caregiver after the birth of a child.

5. Conclusions

We study how men and women time paternity and maternity leave, using administrative data for Spain. Paternity leave has been introduced and extended in many countries in recent decades, and is seen as a policy with the potential to reduce gender inequalities in the labor market and in the home. However, existing evidence suggests that paternity leave extensions have little, if any, impact on labor market outcomes of men or women after childbirth. We explore the possibility that paternity leave policies have not been able to break traditional gender norms that dictate that women are the main caregiver.

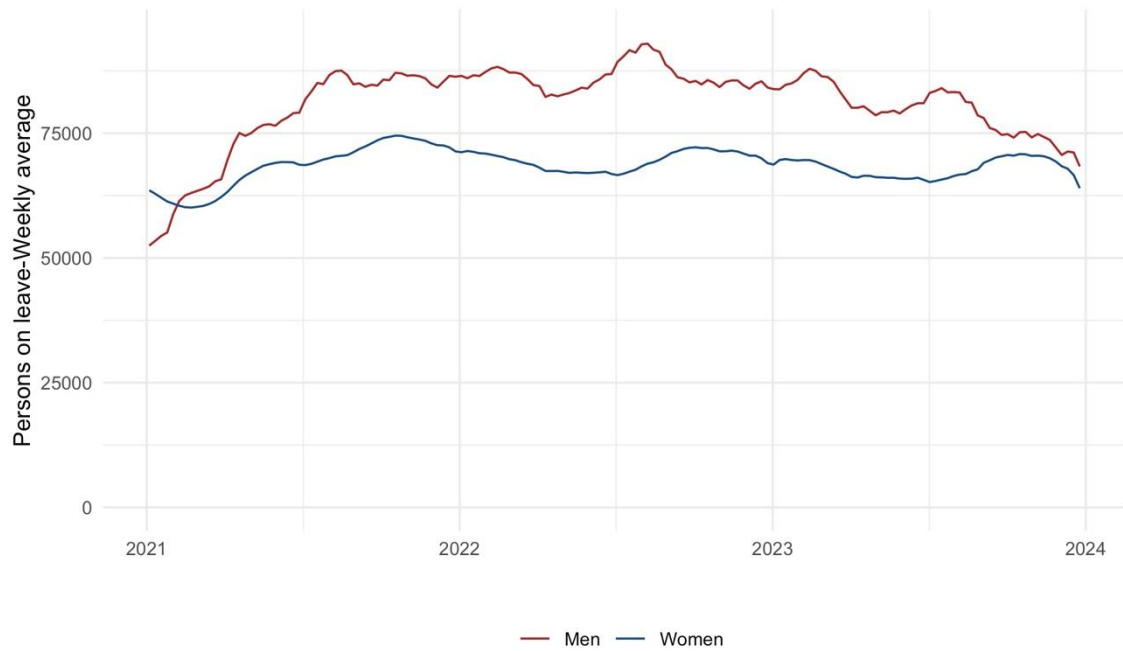
To this end, we first show that take-up of paternity leave is high in Spain, but while women take the full duration of maternity leave full-time and immediately after childbirth, men split their leave entitlement into several periods that are spread out during the first year of the child's life, with some of those periods being part-time, and with a significant spike in the summer months. Then we try to show more direct evidence that fathers may use paternity leave for leisure (rather than childcare) purposes. We find that a disproportionate number of men were on paternity leave during the exact dates of the 2022 soccer World Cup, relative to the surrounding dates, and using 2021 as the control year. We don't see this spike among women, or among men who are self-employed (and thus have a more flexible schedule). We conclude that paternity leave may not in fact lead to gender equality in the distribution of childcare, even in the first months of a child's life. This suggests that additional policies are needed in order to relax traditional gender norms regarding within-household specialization.

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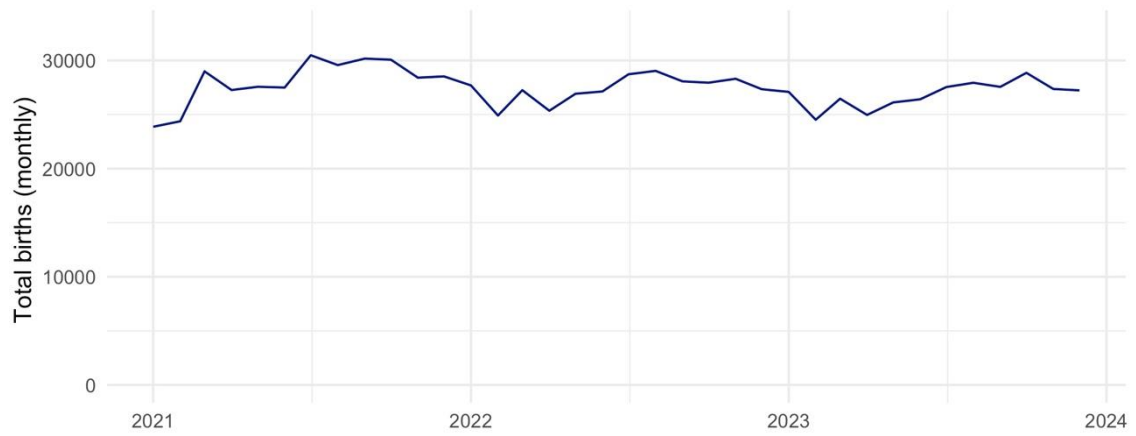
Figures

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



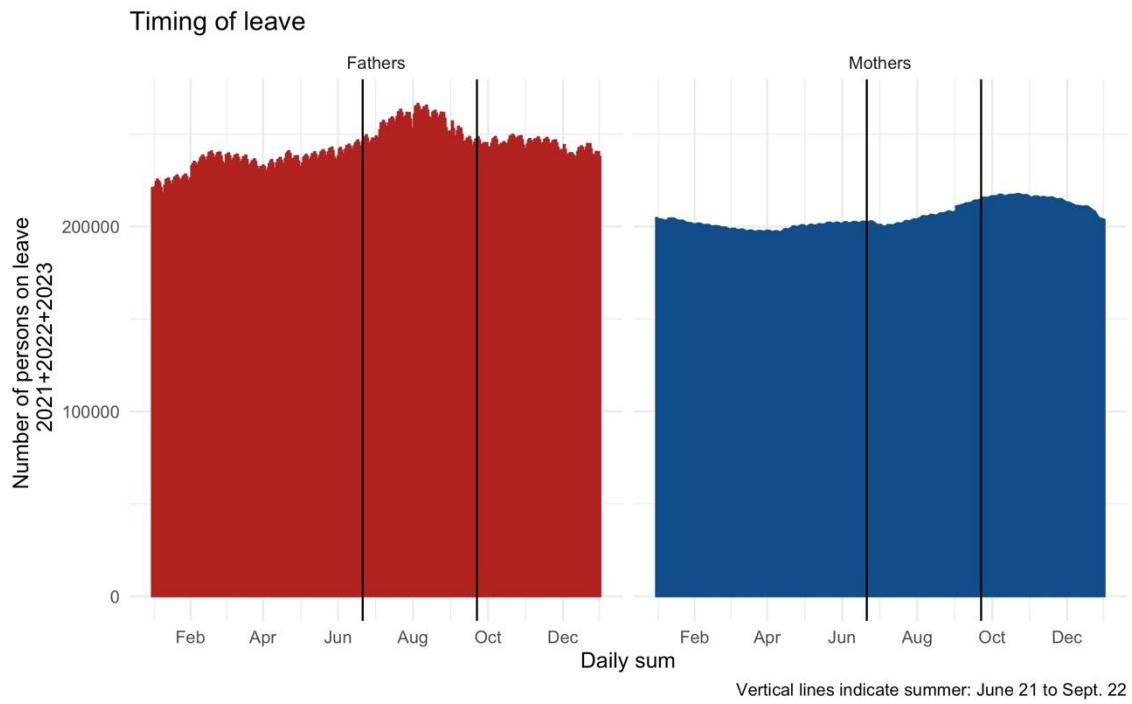
Note: The figure shows the daily number of men and women on paternity/maternity leave, averaged by week (vertical axis) from 2021 to 2023 (horizontal axis), estimated from Social Security data.

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



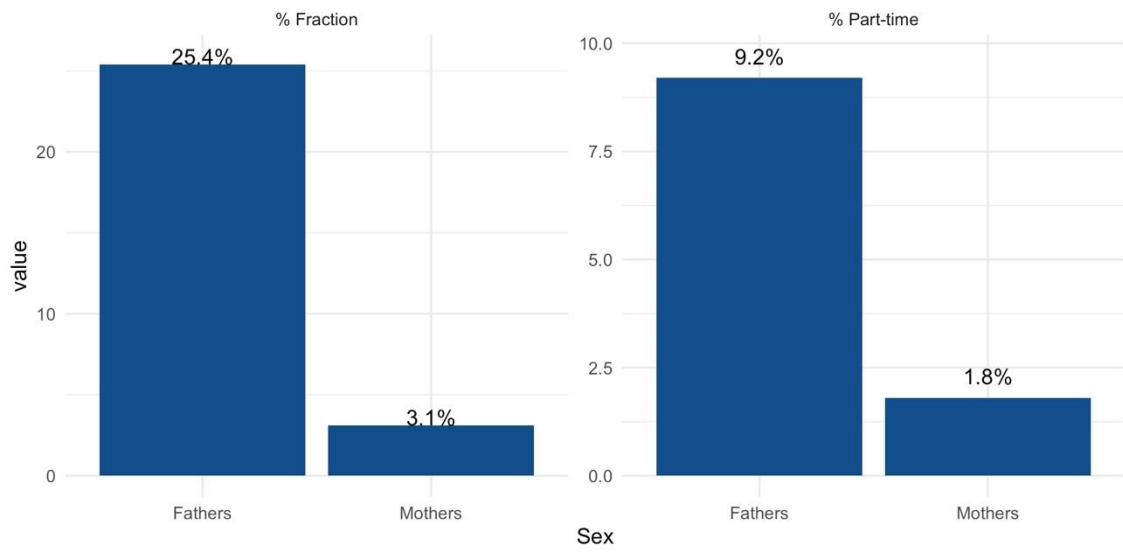
Note: The figure shows the total number of monthly births from 2021 to 2023. Source: Spanish Statistical Institute.

Figure 3. Daily number of men and women on paternity/maternity leave (2021-23)



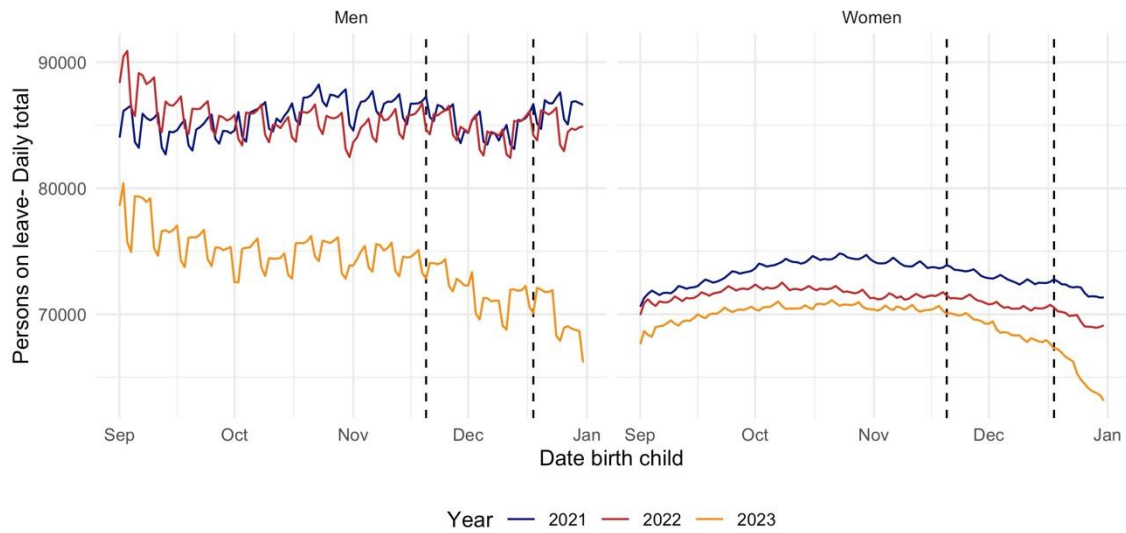
Source: Social Security.

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



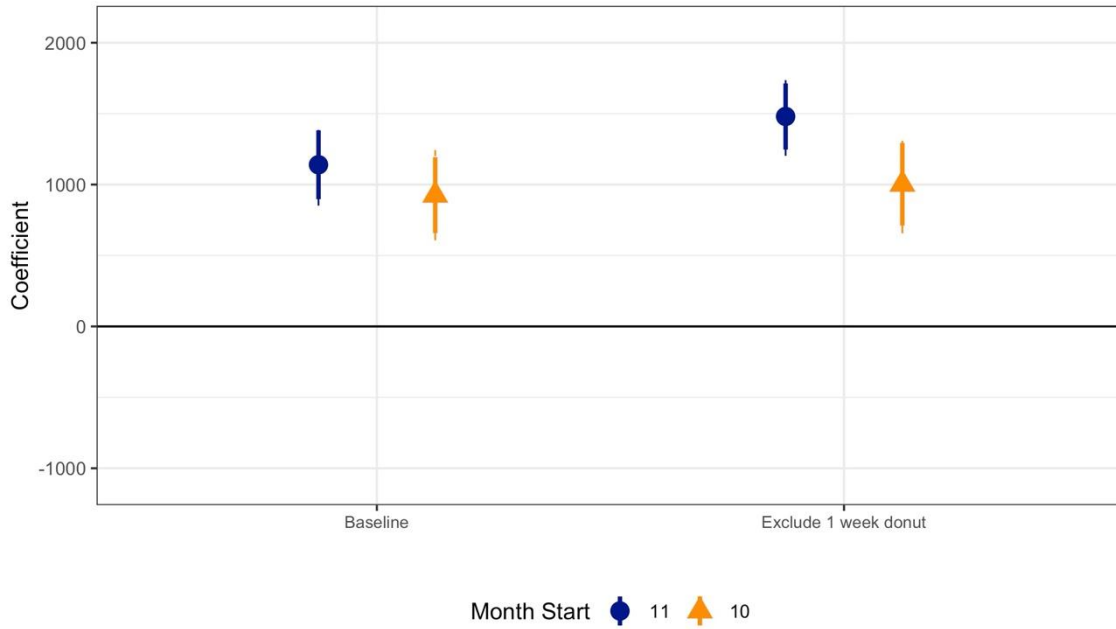
Source: Social Security data (2021-2023).

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



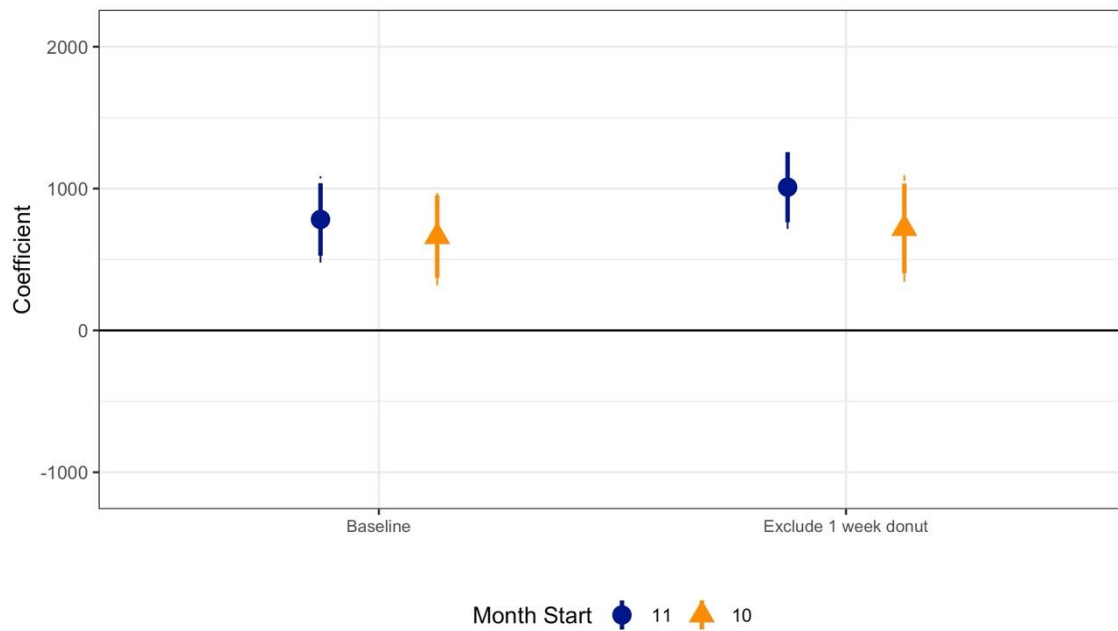
Note: The figure shows the total number of men and women on leave, on each day of September to December of 2021, 2022, and 2023. The vertical lines indicate November 20 and December 18, the dates of the World Cup (in 2022).

Figure 6. 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)



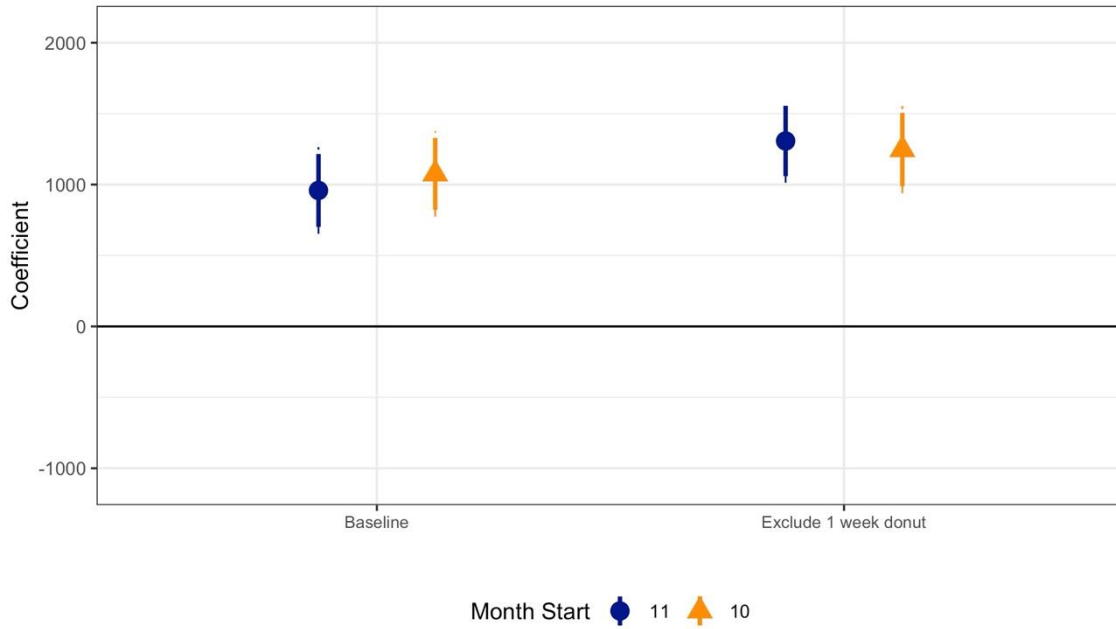
Note: Dots show the treatment effect estimated from the regression coefficient of the World Cup dates (20 Nov-18 Dec 2022) dummy (equation 1). The sample includes the stock of fathers on leave on each day of (October), November and December of 2021 and 2022. The regression includes fixed effects for year, day of the year, and day of the week. Solid and dashed vertical lines depict confidence intervals at 90% and 95%, respectively. The donut specification (on the right) excludes the seven days immediately before and after November 20 and December 18.

Figure 7. 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)



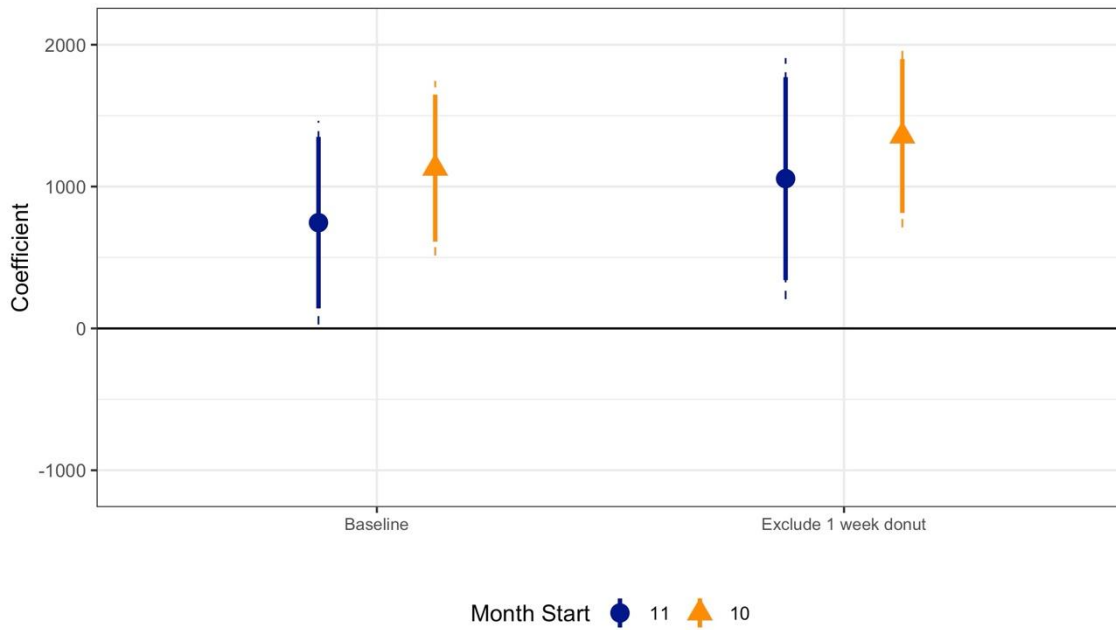
Note: Dots show the treatment effect estimated from the regression coefficient of the World Cup dates (20 Nov-18 Dec 2022) dummy interacted with the Men dummy (T in equation 2). The sample includes the stock of parents of each sex on leave for each day of (October), November and December of 2021 and 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 90% and 95%, respectively. The donut specification (on the right) excludes the seven days immediately before and after November 20 and December 18.

Figure 8. 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)



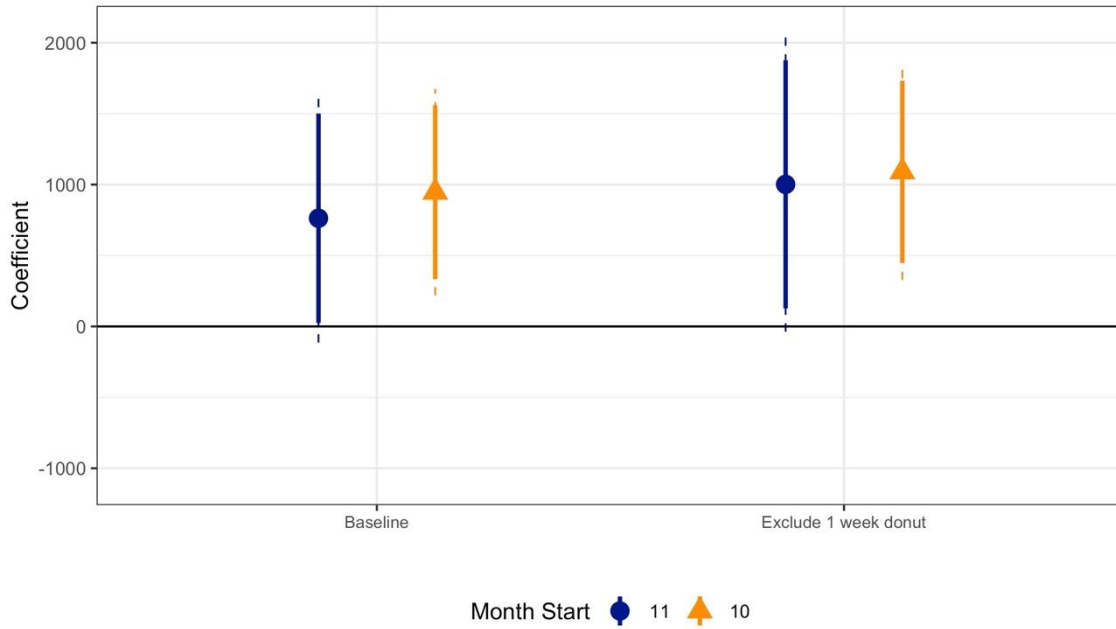
Note: Dots show the treatment effect estimated from the regression coefficient of the World Cup dates (20 Nov-18 Dec 2022) dummy interacted with a dummy for the Salaried Men (T in equation 2). The sample includes the stock of fathers of each employment status (salaried and self-employed) on leave for 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 90% and 95%, respectively.

Figure A1. 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)



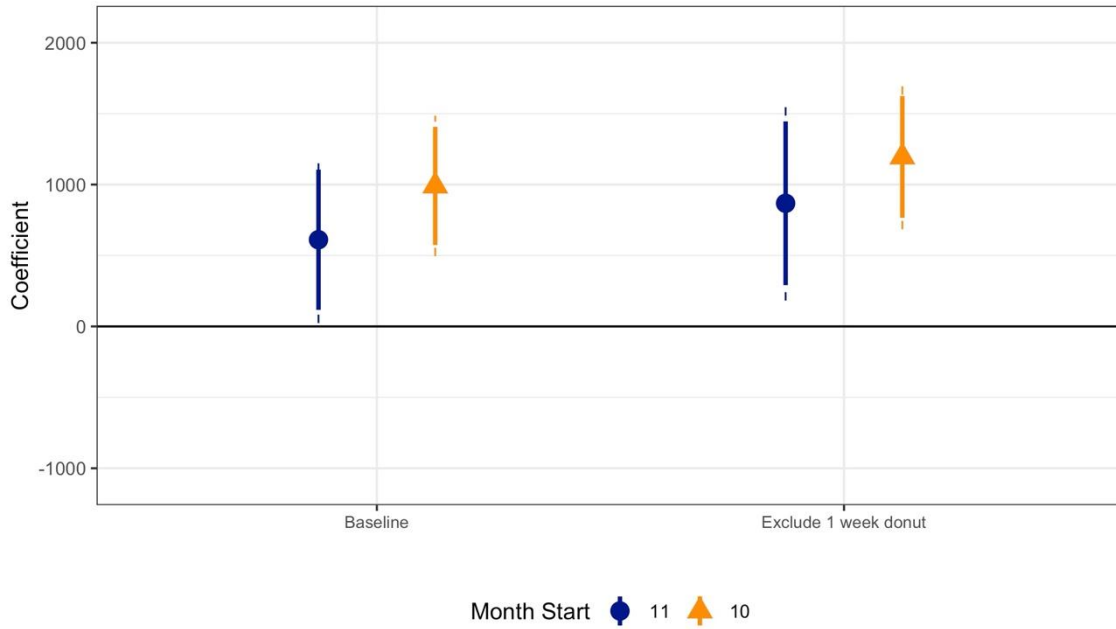
Note: Dots show the treatment effect estimated from the regression coefficient of the World Cup dates (20 Nov-18 Dec 2022) dummy (equation 1). The sample includes the stock of fathers on leave on each day of (October), November and December of 2021, 2022 and 2023. The regression includes fixed effects for year, day of the year, and day of the week. Solid and dashed vertical lines depict confidence intervals at 90% and 95%, respectively. The donut specification (on the right) excludes the seven days immediately before and after November 20 and December 18.

Figure A2. 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 2). 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 90% and 95%, respectively. The donut specification (on the right) excludes the seven days immediately before and after November 20 and December 18.

Figure A3. Figure 6. 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 2). 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 90% and 95%, respectively.

Appendix Table A1. Paternity leave during the summer

Dep. var.:	Parents on leave	
	Number	Log number
Constant	66,170.6*** (276.1)	11.10*** (0.0040)
Father	10,945.9*** (302.1)	0.1428*** (0.0042)
Summer	109.8 (234.4)	0.0026 (0.0033)
Year2022	5,568.7*** (323.6)	0.0764*** (0.0046)
Year2023	1,405.7*** (336.1)	0.0235*** (0.0047)
Father x Summer	5,456.6*** (417.8)	0.0706*** (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%)