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The impact of paternity leave on mothers' employment in Europe

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Abstract

In this paper, I use a pseudo-panel approach with data from the European Union Labour Force Survey to study the impact of paternity leave policies on mothers' employment in ten countries. Using a dynamic Difference-in-Difference strategy, I show that paternity leave increased mothers' employment rate by up to 17% in the long run, and average hours worked by 2 to 4%. There is substantial heterogeneity across countries in the effect of paternity leave policies. The impact on employment rates is positive and significant in eight of the ten countries of the sample, while the impact on hours worked can be either positive or negative. I find no evidence that the reforms had any impact on Greece or Portugal.

Keywords paternity leave, labour supply, gender equality

JEL classification J16, J18, J48

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1 Introduction

Paternity leave policies have become a key component of reforms aimed at fostering more gender-balanced societies in Europe. One of the latest policy development is the "Work-life Balance Directive" of the European Commission that entered into force in 2019. It sets the right for European fathers to a minimum of ten working days of compensated paternity leave, and two non-transferable months of parental leave out of four. The directive aims at "better supporting a work-life balance for parents and carers, encouraging a more equal sharing of parental leave between men and women, and addressing women's under-representation in the labour market"[1]. The objective is to alleviate the strong work-life imbalances across gender: in North America and Europe, the labour force participation rate of women decreases from 85% when they live alone to 68% when they live with their partner and a child younger than six. For men, it increases from 87% to 96%[2].

These gender inequalities become particularly important during the transition to parenthood. In the labour market, the time spent out of the labour force affects negatively women's wages after childbirth (Anderson et al., 2002). Mothers can also be discriminated in the workplace because judged less competent or committed than non-mothers (Correll et al., 2007). Men instead benefit from a fatherhood premium: they work on average more hours and have higher hourly wages than non-fathers (Lundberg and Rose, 2002). Within the household, inequalities in the division of housework grow after the birth of the first child, with women doing most of the housework and childcare-related activities (Yavorsky et al., 2015). Reforms like paternity leave policies that aim at increasing the attachment of mothers to the labour market are thus essential to foster gender equality, but their effectiveness remains to be established (Olivetti and Petrongolo, 2017).

In this paper, I aim to determine if the introduction of paternity leave had an impact on mothers' employment rate and hours worked in ten European countries, over the period 1998-2016. I explore two mechanisms through which the introduction of paternity leave in a country may raise mothers' employment. First, the employers might discriminate against mothers because they see them as less committed to work and more likely to be absent because of childcare-related responsibilities (Hipp, 2020; González et al., 2019). If, as a result of paternity leave policies, women are no longer

[1]'EU Work-life Balance Directive enters into force', European Commission Employment, Social Affairs and Inclusion News of 22/08/2020, https://ec.europa.eu/social/main.jsp?catId=89&furtherNews=yes&langId=en&newsId=9438

[2]Statistics computed by the ILO-UN Women study for individuals between 25 and 54 years old, https://data.unwomen.org/sites/default/files/inline-files/Spotlight-goal8-spread.pdf

viewed as the only responsible for childcare, employers might be less reluctant to hire or promote mothers. I will refer to this mechanism as a "general effect", since it should affect all mothers – including those who did not have children after the policy. The second mechanism will be referred to as a "direct effect" of paternity leave, and concerns only mothers who had children after the policy change. It relies on Becker's theory of household specialization (Becker, 1985). If fathers take paternity leave, this may increase their involvement in household activities, and thus decrease the need for mothers' time at home. Women would thus invest more in market-oriented human capital and increase their participation in the labour market.

I empirically examine these mechanisms by combining data from the OECD Family Database and the EU Labour Force Survey (EU-LFS). The OECD Family Database provides information on the length, the compensation and the eligibility conditions for each type of childbirth-related leave. The EU-LFS contains data on labour force participation, job characteristics and demographic background of adult men and women. The EU-LFS being a cross-sectional survey, I use a pseudo-panel approach that follows cells over time (individuals of same sex, country of residence, age, and age of their youngest child). To identify the cells exposed to the paternity leave policies, I use retrospectively the age of the youngest child – e.g., parents who reported having the youngest child aged two in 2006 should be exposed to a reform that entered into force in 2002. Using a Difference-in-Difference method, I thus estimate the dynamic effects of paternity leave policies on mothers with children of different ages relative to non-mothers. To get a sense of the evolution of gender inequalities, I also study the effect of paternity leave on mothers' employment relative to mens'.

I find a positive relationship between exposure to paternity leave and mothers' employment rate and hours worked. The effect is concentrated on women whose partner could take paternity leave and becomes stronger over time. Employment rates of exposed mothers increase on average between 2 and 17% after the introduction of paternity leave. Hours worked increase on average between 30 and 81 minutes per week, which represents an increase of 2 to 4%. I also find a greater impact on women than on men, suggesting that paternity leave policies have contributed to a weakening of gender inequalities in employment. When conducting the analysis by country, I find that paternity leave is associated with greater mothers' employment rates in all countries but Greece and Portugal. In Germany, Spain and France, this was accompanied by a decrease in the average weekly hours worked. In Italy, Netherlands and the UK, employment increased at both the intensive (hours worked) and extensive (employment rates) margins.

By analysing the effects of paternity leave on women's employment, I contribute to

an important strand of the literature in gender economics on the impact of childbirth-related policies. Many studies have focused on maternity leave and its impact on women's labour outcomes. Mothers tend to respond to maternity or parental leave policies by delaying their return to work when the duration of the leave increases (Ziefle and Gangl, 2014). Lalive and Zweimüller (2009) found that the extension of the parental leave in Austria increased fertility and decreased employment and earnings of women, at least in the short run. Similarly in Germany, Schönberg and Ludsteck (2014) found that the different extensions of maternity leave reduced mothers' employment rate in the short run, with only small impacts 3-6 years after childbirth. In California, the paid family leave program has increased hours worked 1-3 years after childbirth for women who were employed before having children (Rossin-Slater et al., 2013). In this paper, I focus on the labour market effects of paternal leave policies, which have received less attention in the literature in spite of their rising importance.

A handful of recent papers have analysed the implications of paternity leave policies. Fathers' leave taking increases when father-specific leave is introduced (Ekberg et al., 2013; Rege and Solli, 2013). Paternal leave can increase fathers' involvement in housework or childcare-related activities (Huerta et al., 2013; Bünning, 2015), and improve children's performances at school (Cools et al., 2015). Regarding the effect on women, Cools et al. (2015) found that in Norway, leave-taking of the father decreases the mother's earnings due to complementarities in the time spent at home and thus a decrease in women's labour supply. In Sweden, Johansson (2010) found that each additional month of leave taken by the father has positive effects on his spouse's earnings, while the reverse is not true. In Spain, paternity leave may have increased mothers' re-entry on the labour market in the short run (Farré and González, 2017). The results are thus controversial, and most studies focus on one particular country, often a Nordic country. In this paper, I use a sample of ten European countries, which allows me to provide a comprehensive assessment of paternity leave policies and look for heterogeneous effects across countries.

The rest of the paper is organised as follows. The next section presents an overview of the different parental leave systems in the ten countries that introduced paternity leave. Section 3 gives information on the data and variables used in the analysis, as well as some descriptive statistics. Section 4 presents the empirical strategy used to study the absolute and relative effects of paternity leave on women's employment. Sections 5 and 6 discuss the results and the robustness checks. Section 7 concludes.

2 Parental leave systems in Europe

European countries have introduced family-friendly policies to allow parents to spend time with their children while facilitating their re-entry on the labour market after childbirth. Three types of leave can be distinguished. Maternity leave is reserved to the mother and can be taken prior or after childbirth. Paternity leave is reserved for the father (or the second parent) and is generally paid and job-protected as well, but often much shorter than maternity leave. Finally, parental leave is typically long but less compensated, and is in general transferable from one parent to another, in which case it is mostly taken by the mother.

Figure 1 shows that all countries of the sample already offered a paid, job-protected maternity leave in 1998, at the beginning of the period. We can see that Greece and the UK have increased substantially the length of paid maternity leave during the period (from 16 and 18 weeks respectively in 1998 to 43 and 39 in 2016). They are the two most generous countries in the sample in terms of maternity leave, although they do not offer any paid parental leave. On the contrary, Germany is the country with the shortest maternity leave but a long parental leave. Throughout the period, the total length of leave available to mothers ranges from 16 weeks in Spain to 108 weeks in Hungary.

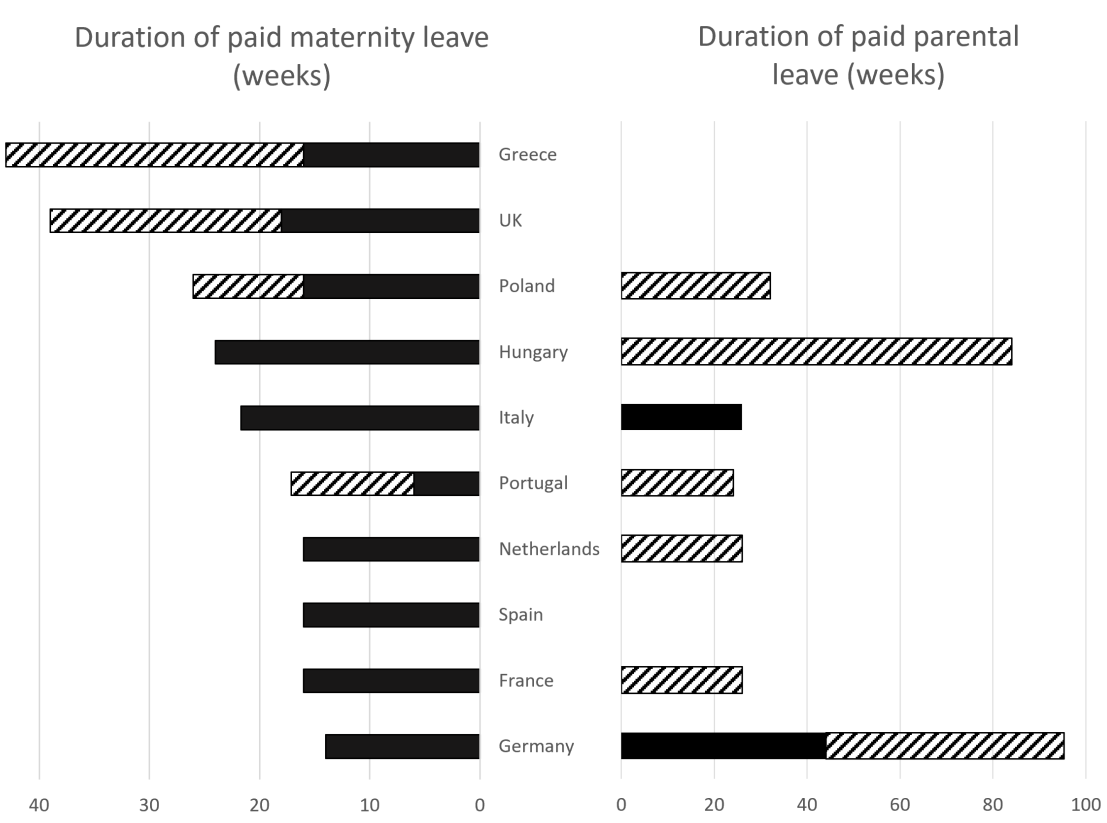

Figure 1: Length of paid maternity and parental leave

Note : When bars are black, the length of leave did not vary on the period 1998-2016, dashed bars represent variations.
Maternity leave :
Greece : 16 to 17 weeks in 2000, to 43 in 2008.
UK : 18 to 26 in 2003, to 39 in 2007.
Poland : several variations between 16 and 26 weeks.
Portugal : 14 in 1998, 15.7 in 1999, 17.1 in 2000, 6.4 in 2009 and 6 in 2015.
Parental leave :
Introduction of paid parental leave in 1999 in Hungary, 2013 in Poland, 2009 in Netherlands (removed in 2015) and Portugal, 2004 in France.
Germany : 95.3 to 44 weeks in 2001.
France : length for one child.

This paper focuses on paid paternity leave and paid father-specific parental leave. Indeed, in order to increase fathers' parental leave uptake, some countries introduced a "daddy quota", reserving a fraction of the parental leave to fathers without the possibility of transferring it to the mother. Unpaid leave and transferable parental leave are excluded from the analysis because the take-up rate for fathers is much lower than for paternity leave. The OECD data reveal a take-up rate for paternity leave of 55 users per 100 live births in the 11 countries with available data in 2016, whereas for parental leave, countries in which there is a high take-up rate for fathers are those who have father-specific leave (mostly Nordic countries). For half of the countries represented, the rate is below 10 users for 100 births for parental leave[3].

Table A.1 in Appendix A presents the reforms that were introduced and that

[3] https://www.oecd.org/els/family/PF2-2-Use-childbirth-leave.pdf

changed the duration or the compensation of the paternity leave or father-specific parental leave over the period 1998-2016 for each country in the sample. In my analysis, I only focus on the first reform in each country that provided leave reserved to fathers. Over the period studied, reforms of father-specific leave (Table A.1) and other reforms of leave related to childbirth have occurred, which might bias the results. Their effect is at least partly controlled for in the econometric analysis by the use of control variables and fixed effects. However, in some cases the introduction of paternity leave is accompanied by other reforms which could affect mothers' employment and that cannot be disentangled from the effect of paternity leave. In particular, during the same year of the introduction of the paternity leave, there was an increase in the duration of maternity leave in Greece, Poland, Portugal, and the UK, a change in the parental leave payment in Germany, and the introduction of unpaid parental leave in Portugal. We can expect that these reforms would have effects that go in the opposite direction of the proposed effects of paternity leave. Most of them should increase the time spent by the mothers out of the labour market and thus affect negatively the probability to return to work. Also in France, the 35 hours work-week, which was introduced in 2000, became mandatory for all firms in 2002 (the same year as the introduction of paternity leave). However, this decrease in working hours should affect everyone in the same way.

3 Data and variables

3.1 Data

In this paper I use the OECD Family Database and the European Union Labour Force Survey (EU-LFS). The OECD Family Database contains detailed data on the trends in leave entitlement around childbirth in a set of OECD countries. From 1970 to 2018, it provides information on the length, the compensation and the conditions to be eligible to each type of leave (maternity, paternity, or parental leave), as well as the share of parental leave that is reserved to the father. I use these data to determine at which point in time a country adopts paternity leave. Specifically, the introduction of the paternity leave is defined as the first year during which fathers in a country were entitled to either a paid paternity leave or a paid father-specific parental leave. In the empirical analysis, the variable "years since paternity leave" measures the number of years since the introduction of the paternity leave. It is set to 1 for the year of the introduction of the leave if it is introduced at the beginning of the year. If it is introduced at the end of the year, the following year will be defined as the first year

of paternity leave.

The EU-LFS is the biggest household survey in Europe: it is conducted in all the countries of the European Union, as well as the UK, three members of the European Free Trade Association and four candidate countries. The first EU-LFS was conducted in 1983, and the availability of each country data depends on the year of adhesion to the European Union. Each country conducts its own survey, and questionnaires are comparable across time and countries[4]. In some countries, there is a rotation scheme so an individual can be surveyed several times. However, in the EU-LFS the household numbers are randomized, making it impossible to track individuals across waves. Since 1998, the survey provides both annual and quarterly data for individuals aged at least 15 years old living in private households. Individuals doing military service or living in collective households are excluded. In this paper, I use the annual data sets. They contain information on the demographic background of the individual, the labour status, the characteristics of the main job and the hours worked for individuals in employment, but also previous work experience and the methods used to find a job for individuals who are not in employment.

The EU-LFS has some limitations. In particular it is not possible to determine the effect of the paternity leave for individuals who indeed benefited from it. The database contains a variable indicating if an individual worked less hours or did not work at all during the reference week because of childbirth-related leave. However, the response rate is very low: it captures only individuals who were in leave during a specific week, and since paternity leave is typically short, the chances that the person was on leave during this specific week are quite low.

3.2 Sample

I focus on the period 1998-2016, which are years in which the variables used in the analysis are available. My sample is composed by ten European countries (France, Germany, Greece, Hungary, Italy, Netherlands, Poland, Portugal, Spain, and the UK) that introduced paternity leave during the sample period and for which data is available in both databases, as well as two countries which did not have paternity leave in 2016 (Czech Republic and Slovakia). Two countries appear only later in the sample : Netherlands (available data from 2000) and Poland (available data from 2001). For all countries, I observe employment at least 2 years before the introduction of paternity

[4]The information on the sampling plan and data collection in each country is available at https://ec.europa.eu/eurostat/documents/3888793/7751652/KS-TC-16-021-EN-N.pdf/8475c2e2-c037-4ba2-9029-93db1ade41fe.

leave and at least 3 years after.

Another limitation in the data pertains the identification of parents and children, which is essential in my empirical strategy. From 1998, the variable giving the age of the youngest child in the household is available for all countries in my sample. The variable for the presence of the respondent's child in the household is however only available for some periods. Thus, I begin by analysing the effect of the reform on women living with children and who are between 20 and 49 years old. I believe that by making such restriction, the bias induced by the presence of children who are not related to the women interviewed would be quite small. However, I also conduct robustness checks by taking only the women who live with their own children for the years in which the corresponding variable is available. The variable for the presence of children older than 15 in the household is also only available for some periods. Therefore, within the group of individuals considered as childless in the empirical analysis, there are individuals who have their youngest child aged 15 or more. This should not however affect much the estimations because the presence of children older than 15 in the household should not alter much parents' employment as a response to childbirth-related reforms.

The analysis focuses on two dependant variables: the employment rate and the number of weekly hours worked. The employment rate is defined as the share of individuals working usually at least 15 hours per week over the working-age population and the hours worked are equal to the average number of hours usually worked per week. Also, I will study the effect of paternity leave on women's outcomes relative to men's. To do so, I will analyse if the effect of paternity leave on employment rate and hours worked for women is significantly different than the effect for men.

3.3 Descriptive statistics

Figure 2 presents the evolution of the average employment rates and hours worked by gender and parenthood status during the period 1998 - 2016, as well as the evolution of the corresponding ratios. These ratios are defined as the average employment rate and hours worked of women, divided by the average employment rate and hours worked of men. Note that the introduction of Netherlands in the sample in 2000 and of Poland in 2001 explains some of the changes observed at the beginning of the period, such as the decrease in women's hours worked. These figures show that mothers work less than non-mothers, both at the extensive (2.a) and intensive (2.c) margins, but the difference tends to decrease over the period. We observe the opposite when comparing

fathers to non-fathers (2.b and 2.d). Inequalities in employment between men and women, represented by the ratios, are consequently higher among parents than among non-parents (2.e and 2.f).
These figures also show an increase in employment rates of women on the period, despite the fall that follows the 2008 crisis. On the contrary, the employment rate of men tend to decrease, which explains why the ratio increased steadily over the period 1998 - 2016. Both men and women reduced their working hours, and the ratio of hours worked varies only little.

Summary statistics by gender and age of the youngest child are presented in Table A.2 in Appendix A. We can see that parents are more likely to have already had a work experience and to be married than childless individuals. As expected, the employment rate and the number of weekly hours of work decrease in the presence of young children for women, whereas for men there is an increase. Inequalities in terms of employment between men and women are stronger for parents than for non-parents. The table also shows that women are much more likely to take leave for childbirth than men.

Table A.3 in Appendix A gives labour market outcomes by gender and parental status before and after the introduction of paternity leave. It shows that women, and especially mothers, tend to work more after the introduction of paternity leave. Men's employment rate and hours worked are somewhat reduced after the reform, and the share of men on parental leave increases. This suggests, consistently with the presence of a "direct effect" of paternity leave, that after the reform, men are more likely to take leave and to work less hours, allowing women to spend more time on the labour market.

Figure A.7 in Appendix A presents the share of men with a child aged 0-1 who declared having worked less or not having worked at all during the reference week because they were on parental leave. The level of leave-taking is largely understated because this question only captures individuals who were in leave during a particular week. This figure shows nevertheless that leave-taking ranged between 0.1 and 0.3% before the reform, and increased significantly afterwards, up to 1.4%.

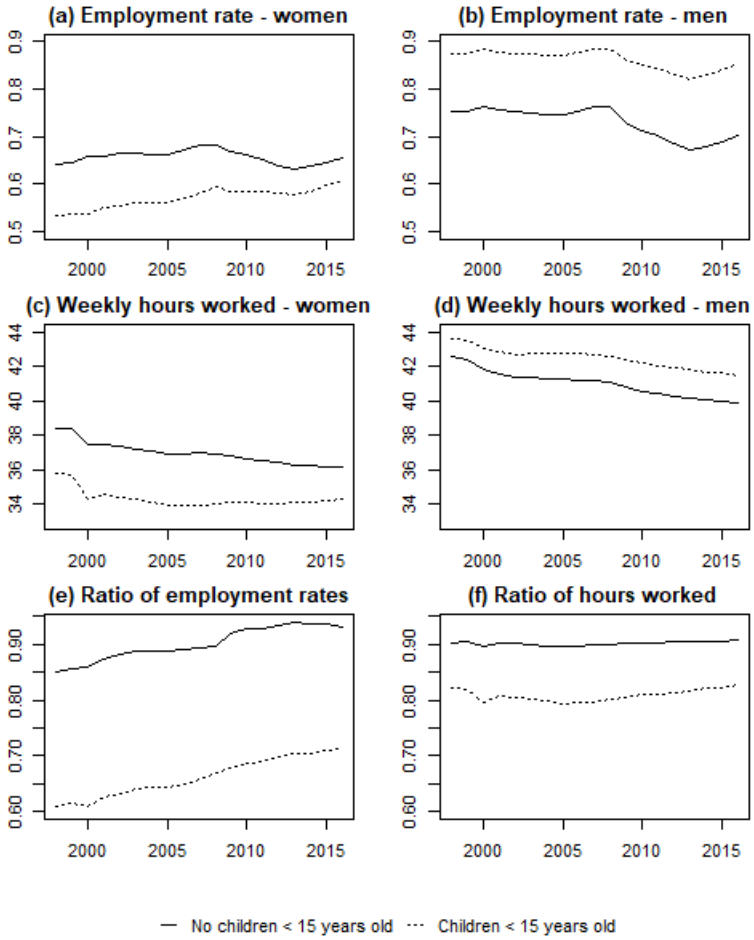

Figure 2: Evolution of employment rates and hours worked by gender and parenthood status, 1998 - 2016

4 Empirical strategy

The EU-LFS being a cross-sectional survey, an individual-level panel study is not feasible. Instead, as shown by Deaton (1985), if the sample is large enough, it is possible to create a pseudo-panel where we can follow the same cells (i.e., groups of individuals sharing the same characteristics) over time. I decide to construct cells by country, sex, age, and age of the youngest child. The individuals are divided in three age groups (between 20 and 29, between 30 and 39, and between 40 and 49) and six groups according to the age of the youngest child (0-1, 2-3, 4-5, 6-7, 8 or older, and childless) to ensure a large enough number of individuals for each cell. I group the number of years since paternity in the same way as the age of the youngest child. The cell average (average of each variable for individuals sharing the same socio-demographic characteristics) is treated as a single observation. As shown by Verbeek

and Nijman (1992), the number of observations by cell must be large enough (100 observations by cell is considered a good minimum). Otherwise, the bias introduced by considering the pseudo-panel as genuine panel data would be high. Most of the cells in my sample respect this criterion, since only 5% of the cells contain less than 100 observations. However, I also conduct the analysis by excluding those cells, and describe the results in the robustness checks.

4.1 Effect of paternity leave on women's employment

I use a model similar to Wolfers (2006) to determine the dynamic effects of the introduction of paternity leave. The baseline specification is the following.

$$Y_{gt} = \alpha + \gamma_{kj} \left(\sum_{k \geq 0} \mathbb{1}\{\text{Years paternity}_{ct} = k\} \times \sum_{j \geq 0} \mathbb{1}\{\text{Child}_g = j\} \right) + X_{gt} + \lambda_{ct} + \lambda_g + \epsilon_{gt} \tag{1}$$

Y_{gt} is the outcome of interest for the cell g at time t. The cell g refers to individuals who share the same socio-demographic characteristics (same country, same age of the youngest child, same gender and same age range). The indicator function $\mathbb{1}\{\text{Years paternity}_{ct} = k\}$ is equal to one if the paternity leave has been in effect for k years in country c at time t, with k=0-1, 2-3, 4-5, 6-7, 8 and more. The indicator function $\mathbb{1}\{\text{Child}_g = j\}$ is equal to one if the cell g is composed by individuals who have their youngest child aged j, with j=0-1, 2-3, 4-5, 6-7, 8 or older (the same age categories of the "Years paternity" variables). X_{gt} is a vector of control variables and λ_{ct} and λ_g are country-year and cell fixed effects. I introduce cell fixed effects to control for time-invariant characteristics specific to each cell. The "post-pre" difference isolated by the "Years paternity" indicator variables is thus taken within the cell, and compared across cells with different age of youngest child. These fixed effects absorb the level effect of the Child indicators. I also introduce country-year fixed effects in order to control for shocks that may happen during a specific year (typically other family policy reforms or the 2008 crisis) and affect countries differently. These fixed effects absorb at least a part of the general effect, the one common to all women (mothers and non-mothers) – i.e. they absorb the effect of the "Years paternity" indicators.

My interest is in the coefficients γ_{kj}, which give the dynamic effect of paternity leave on women with children of different age groups. The age of the youngest child

identifies exposure. Because paternity leave has to be taken within a certain period after birth, the age of the youngest child permits to identify the year of birth of the child and match it with the entry into force of paternity leave policies. For example, consider a country where a paternity leave policy was introduced in the last year, at $t-1$ (i.e., the indicator Years paternity = 0-1 equals one). Women who had their latest birth in the last year (i.e., the dummy variable Child = 0-1 equals one) were exposed to the policy, whereas women who had their youngest child two to three years before (Child = 2-3 equals one) were not exposed.

The excluded category in the set of *Years paternity* $= k \times$ *Child* $= j$ interaction terms is composed of women without children. Therefore, the coefficients γ_{kj} measure the dynamic effect of the paternity leave on women with the youngest child of a certain age relative to the effect on women without children. The post-pre difference for women within the same cell is compared with the post-pre difference for women with no child (the excluded category).

This empirical strategy allows me to analyse two potential effects of paternity leave on mothers' employment. The first is a general effect: the reform could decrease discrimination towards mothers on the labour market because women are not seen as the only responsible for childcare anymore. This effect should show up in the estimates with a positive coefficient for all women, even those who gave birth before the reform. The second one is a direct effect: if the partner takes a paternity leave, this can lead to a more equal sharing of housework and childcare, which can allow the mother to spent more time on the labour market. This channel would consist in a positive coefficient only for exposed mothers. We can thus expect the effect of the paternity leave (the "Years paternity" indicators) to be positive and significant regardless of the age of the youngest child because all mothers benefit from the general effect. We expect however that women directly exposed to the reform benefit more – we expect coefficients associated to *Years paternity = 0-1* $\times$ *Child = 0-1* to be higher than those associated to *Years paternity = 0-1* $\times$ *Child = 2-3*.

Also, we can expect that the effect of paternity leave increases with years since its introduction because leave-taking increases with time (Table A.7 in Appendix A) and discrimination towards mothers may take time to decrease – e.g. we expect the coefficient associated to *Years paternity = 6-7* $\times$ *Child = 0-1* to be higher than the one associated to *Years paternity = 0-1* $\times$ *Child = 0-1*.

The variable *Child* $= j$ in my empirical setting relies on the existence and age profile of children in the household. Other characteristics that are important for labour market outcomes might well differ across mothers with and without children and across

mothers with children of different ages. For instance, more educated women who are more attached to the labour market might be more likely to have children after the reform. To control for this type of confounders and attenuate omitted variable bias, I include in the regression a vector of control variables X_{gt}: the average number of children under 15 living in the household in the cell, the level of education (share of individuals in the cell who achieved third level or upper secondary, with lower secondary as the reference), the marital status (share of married individuals, share of divorced individuals in the cell, with single as the reference), the share of individuals having had a previous work experience and the share of individuals who were born in the country of residence in the cell.

The Difference-in-Difference method requires the common trend assumption to hold. Indeed, if the outcomes of the treated and the control groups evolve in the same way before the treatment and there is no differential trend after the policy shock, one should expect that they would also evolve similarly afterwards in the absence of treatment. This allows to interpret the deviation from the parallel trend as an effect of the treatment. When comparing mothers to non-mothers, this assumption may be violated. As it is common in the literature, I conduct an event study in section 5, to test for pre-trends which could reflect a violation of the common trend assumption.

The observations are likely to be correlated within country, so the standard errors should be clustered at the country level. However, twelve is quite a low number of clusters which can lead to an over-rejection of the null hypothesis and too narrow confidence intervals (Cameron and Miller, 2015). In general, 50 clusters are considered to be enough. For this reason, I decide instead to cluster at the country - age of the youngest child level. Since the exposure to the paternity leave depends also on the date of childbirth, it is likely that the correlation will be important within a group of mothers within each country. This leaves me with 72 clusters, which is large enough. The model is estimated by Weighted Least Squares, using sample weights provided by the EU-LFS. I divide the sum of the weights of all individuals in each cell by the sum of the weights for all individuals in the corresponding country. I keep this computed weight constant over the period in order to neutralize the influence of socio-demographic changes over time.

4.2 Effect of paternity leave on women's employment relative to men's

After assessing the effect of paternity leave on women's absolute employment, I look at the evolution of gender inequalities in employment. I analyse if the effect of paternity leave on women's employment is statistically different from the effect on men's employment. The baseline specification is described in Equation 2.

$$\begin{aligned} Y_{gt} =& \alpha + \gamma_{kj} \left(\sum_{k \geq 1} \mathbb{1}\{\text{Years paternity}_{ct} = k\} \times \sum_{j \geq 0} \mathbb{1}\{\text{Child}_g = j\} \right) \\ &+ \psi_{kj} \left(\sum_{k \geq 1} \mathbb{1}\{\text{Years paternity}_{ct} = k\} \times \sum_{j \geq 0} \mathbb{1}\{\text{Child}_g = j\} \times \text{ Woman}_g \right) \\ &+ X_{gt} + \lambda_{ct} \times \text{ Woman}_g + \lambda_g + \epsilon_{gt} \end{aligned} \tag{2}$$

The coefficients associated to the triple interaction $\sum_{k \geq 1} \mathbb{1}\{\text{Years paternity}_{ct} = k\} \times \sum_{j \geq 0} \mathbb{1}\{\text{Child}_g = j\} \times \text{ Woman}_g$ capture the heterogeneous effects of the paternity leave by gender. If the coefficients are positive and significant, this would mean that mothers' employment relative to non-mothers increased more after the reform than fathers' employment relative to non-fathers.

I expect the reform to have a negligible effect on fathers. Paternity leave could either not affect fathers' labour force participation (Cools et al., 2015), or reduce it somehow (Bünning, 2015). For this reason, if paternity leave had a positive effect on mothers' employment, gender inequalities should be reduced. For the same reasons as stated in the precedent subsection, I expect the reduction in gender inequalities among individuals exposed to the reform to be higher than among individuals not exposed – the coefficient associated to Years paternity = 0-1 x Child = 0-1 x Woman is expected to be higher than the coefficient associated to Years paternity = 0-1 x Child $\geq$ 2-3 x Woman.

The cell fixed effects absorb the effects of the Child and the Woman indicators, as well as the interaction term (recall that the cell is defined by age, age of the youngest child, sex and country). I introduce in the equation country-year-sex fixed effects, to control for shocks that affect countries and genders differently. These fixed effects capture the effect of the Years paternity indicator, but also the interaction terms Years paternity x Woman.

5 Results

5.1 Women's employment rate and hours of work

Tables B.1 and B.2 in Appendix B present estimation results of Equation 1. The first column does not include any control. The second column controls for cell and country-year fixed effects. The third column is the baseline specification, in which I add controls for socio-demographic characteristics of the individuals and keep country-year and cell fixed effects. The fourth column presents the baseline specification estimated by unweighted OLS.

Figures 3 and 4 portray the effect of paternity leave on employment rates and hours worked of women with the baseline specifications. Figure 3 shows a positive and significant effect of paternity leave on mothers' employment rate, which seems to be concentrated on exposed mothers. For example, the middle graph in the first row shows that for mothers whose youngest child is aged 2 or 3 (*Child = 2-3*) the effect becomes significant only from 2 years after the reform (*Years paternity = 2-3*). The introduction of paternity leave had a sizeable effect on this group of women: their employment rate relative to non-mothers increased by 2 percentage points after 2-3 years, and up to 7.8 percentage points starting from 8 years after the reform. This effect seems to persist over time: the employment rate of exposed women with a youngest child aged 8 or more grows by 3.1 percentage points 8 years after the reform. On average, the increase in terms of employment rate ranges from 1 to 8 percentage points, which represents an increase from the pre-reform employment rate of 1.7 to 17.4% (Table A.3 in Appendix A). We can observe that in some cases (e.g. *Years paternity = 0-1* $\times$ *Child = 6-7*), non-exposed mothers benefited also from the reform, consistently with the existence of a general effect. I also find that the value of the coefficients tend to increase with the number of years since the introduction of paternity leave. This result is consistent with the presumption that the effects on women's employment take some time to materialize.

Figure 4 presents the same estimations for the average weekly hours worked. Paternity leave is associated with significantly greater hours worked starting from 6 years after the reform for women with children aged 7 or less. On average, the time spent on the labour market for mothers relative to non-mothers increased by 30 to 50 minutes per week 6-7 years after the paternity leave reform. Once again, the effect increases with years since paternity leave: starting from 8 years after the reform, mothers spent between 58 and 81 more minutes at work per week. This represents an increase of

between 1.6 and 4.3% from the pre-reform hours worked.

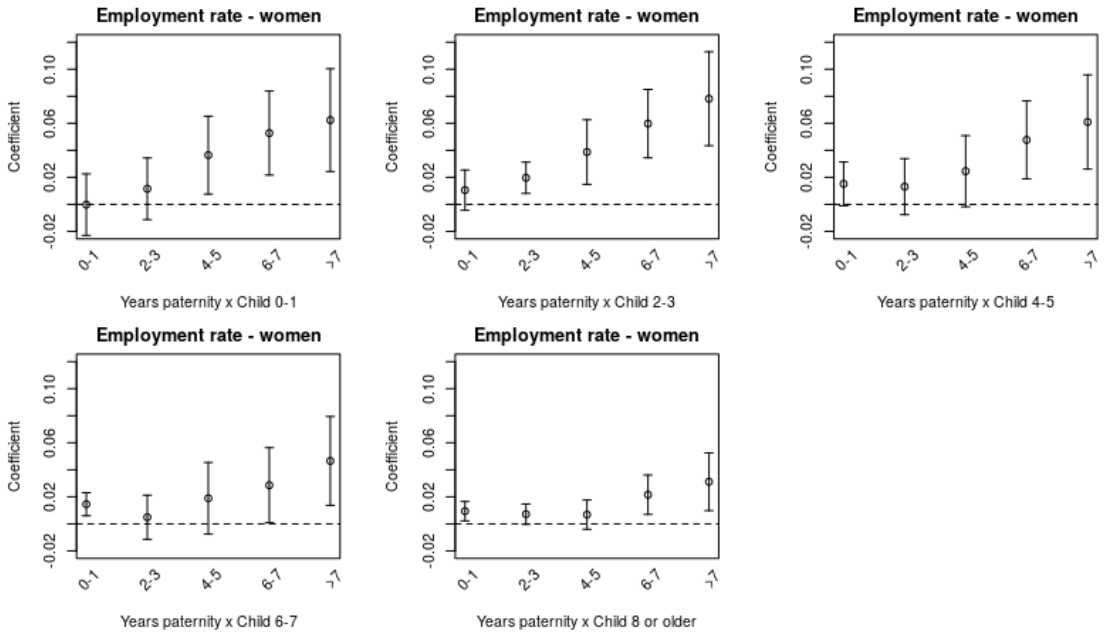

Figure 3: Impact of paternity leave on women employment rate - baseline specification

Note : 95% confidence intervals
The dependant variable is the share of women in each cell who work more than 15 hours on average per week usually in their main job. Men are excluded from the sample. The control variables are cell means, and contain the average number of children in the cell, the proportion of individuals in the cell who achieved the third level of education or upper secondary (lower secondary is the omitted category), who are divorced/widowed/separated or married (single is the omitted category), who have a previous work experience and who are born in the country of residence. The regressions include country-year and cell fixed effects. The standard errors are clustered at the country-age of the youngest child level and the estimations are made using WLS.

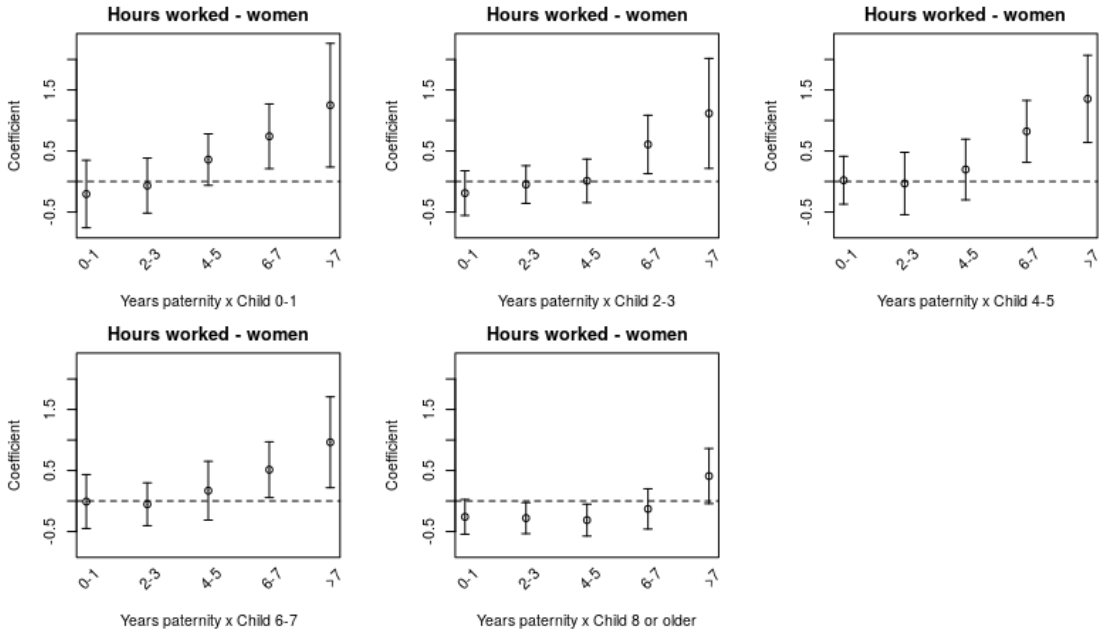

Figure 4: Impact of paternity leave on women hours worked - baseline specification

Note : 95% confidence intervals
The dependant variable is the average weekly hours worked usually in the main job in each cell. Men are excluded from the sample. The control variables are cell means, and contain the average number of children in the cell, the proportion of individuals in the cell who achieved the third level of education or upper secondary (lower secondary is the omitted category), who are divorced/widowed/separated or married (single is the omitted category), who have a previous work experience and who are born in the country of residence. The regressions include country-year and cell fixed effects. The standard errors are clustered at the country-age of the youngest child level and the estimations are made using WLS.

I present in Appendix C event study plots in order to analyse the presence of pre-trends. I use the baseline specification as defined previously and add dummy variables for years before the introduction of paternity leave. Following Borusyak and Jaravel (2017), I exclude the year prior to the reform and the first period available. Figures C.8 and C.9 in Appendix C present the event study estimates for employment rate and hours worked for each group of mothers depending on the age of their youngest child. In most of the cases, these results do not show the existence of a pre-existing trend in employment or hours worked. The F-test of joint significance of the pre-treatment coefficients, which controls for non linear pre-trends, detects pre-trends for two groups of mothers out of five, at the 5% significance level for hours worked and only at the 10% significance level for employment rate.

I next estimate the effect of paternity leave for each country separately. The results are in Appendix D for the baseline specification, with year and cell fixed effects, and controls for cells' characteristics. All regressions employ sample weights.

As for employment rates (see Table D.1 in Appendix D), we can identify different cases. For Germany, Spain, Netherlands and Italy I find a positive and significant relationship between paternity leave and the employment rate of mothers (both ex-

posed and non-exposed) compared to non-mothers. On average, mothers' employment rate increases by 4-6 percentage points in Italy, and up to 22 percentage points in Netherlands. However, the presence of increasing pre-trends in Italy weakens a causal interpretation of the results[5]. In France and the UK, we can observe some positive effect of paternity leave on (exposed) mothers. In Poland and Hungary, only mothers of young children benefited somewhat from paternity leave. Finally, in Greece and Portugal paternity leave does not seem to have impacted employment rates.

The relationship between paternity leave and the number of weekly hours worked (Table D.2 in Appendix D) is more ambiguous. In Netherlands, Italy or the UK we observe a positive relationship between paternity leave and hours worked. However, there is again evidence for pre-trends in Italy. In Spain, mothers' hours worked were negatively affected by paternity leave. In Germany, Hungary, France and Poland there is no clear pattern. Lastly, there are essentially no effects in Greece or Portugal. In countries like Spain where mothers' employment rates increased, a decrease in mothers' hours of work relative to non-mothers can be due to the (re-)entry of mothers on the labour market with part-time contracts.

5.2 Women's relative employment rate and relative hours of work

Figure 5 presents the effect of paternity leave on women's employment rate relative to men's with the baseline specification. It shows that paternity leave had a larger effect for women than for men, at least for individuals with a child aged 5 or younger[6]. For instance, 4-5 years after the introduction of paternity leave, the effect of the reform on mothers' employment rate was 4.2 percentage points higher than the effect on fathers' employment rate 0-1 years after the reform. This suggests a decrease in inequalities between men and women (or more particularly between mothers and fathers) in terms of employment rates. We observe a greater reduction of inequalities among individuals exposed to the reform. Indeed, the positive effects of paternity leave on mothers is almost only significant for mothers whose youngest child was born after the reform.

In Figure 6, we can see that the paternity leave was associated with a greater increase in women's hours worked than in men's hours worked for parents of children

[5]Event study plots available from the author upon request. The analysis has not been possible for Greece, Portugal and Netherlands due to the lack of data on years prior to the introduction of paternity leave.

[6]Table F.2 in Appendix F shows that the paternity leave only had an effect on fathers' employment starting from 8 years after the reform

aged 0 to 5 and starting from 4 years after the reform. Paternity leave increased mothers' weekly hours worked relative to fathers' by 40 to 82 minutes. Once again, only exposed mothers are positively affected (relative to fathers). The results for parents of children aged 8 or more suggest instead an increase in inequalities on working hours between mothers and fathers[7].

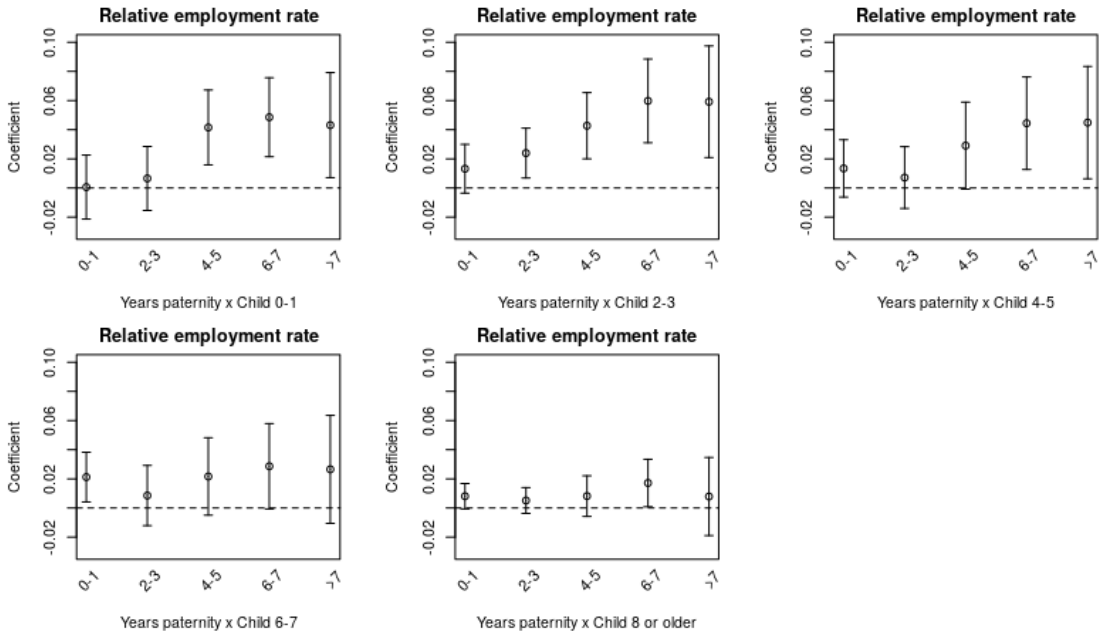

Figure 5: Impact of paternity leave on the relative employment rate - baseline specification

Note : 95% confidence intervals
The dependant variable is the share of individuals in each cell who work more than 15 hours on average per week usually in their main job. Both men and women are included in the sample. The control variables are cell means, and contain the average number of children in the cell, the proportion of individuals in the cell who achieved the third level of education or upper secondary (lower secondary is the omitted category), who are divorced/widowed/separated or married (single is the omitted category), who have a previous work experience and who are born in the country of residence. The regressions include country-year and cell fixed effects. The standard errors are clustered at the country-age of the youngest child level and the estimations are made using WLS.

[7]Table F.3 in Appendix F shows a positive relationship between paternity leave and hours worked for fathers of children aged 8 or more.

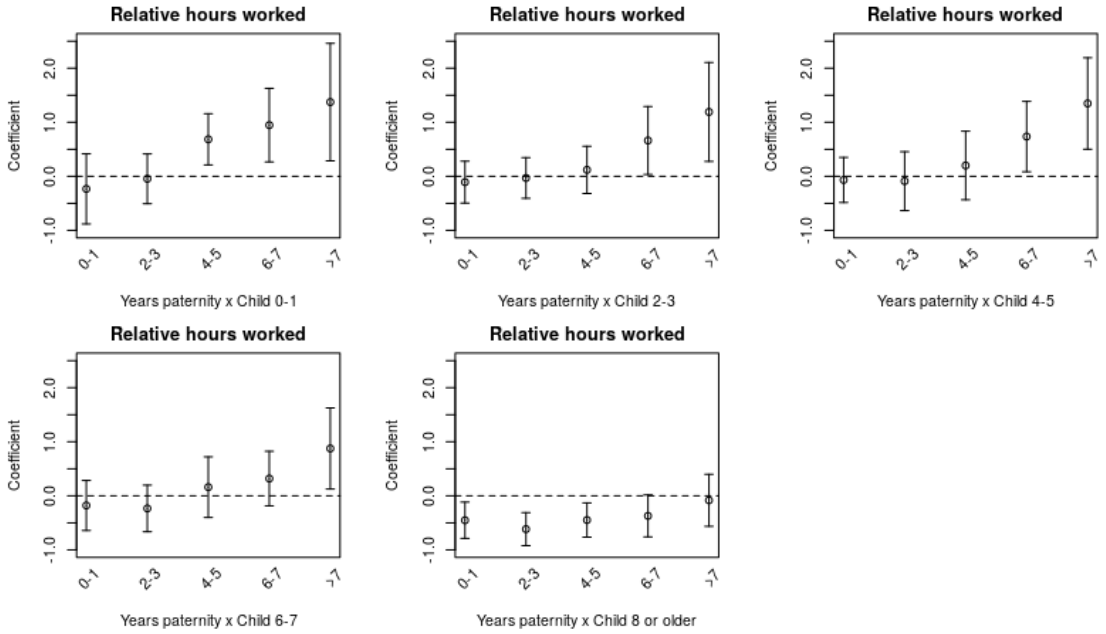

Figure 6: Impact of paternity leave on the relative hours worked - baseline specification

Note : 95% confidence intervals
The dependant variable is the average weekly hours worked usually in the main job in each cell. Both men and women are included in the sample. The control variables are cell means, and contain the average number of children in the cell, the proportion of individuals in the cell who achieved the third level of education or upper secondary (lower secondary is the omitted category), who are married, who are divorced/widowed/separated or married (single is the omitted category), who have a previous work experience and who are born in the country of residence. The regressions include country-year and cell fixed effects. The standard errors are clustered at the country-age of the youngest child level and the estimations are made using WLS.

Table E.1 in Appendix E shows the results by country. It appears that paternity leave was associated with a greater increase in mothers' employment rate than in fathers' for all mothers in Germany, France and Netherlands, and mostly for mothers of younger children in Spain, Poland and the UK. In other countries, we observe mostly no differential effects, except in Greece where some of the coefficients are negative and significant.

The evidence for differential effects on hours worked by father and mothers by country is unclear. Table E.2 in Appendix E shows that hours worked increased more for mothers than for fathers in Hungary, Netherlands, Poland or the UK. In Spain, France, Greece, and Portugal we observe the opposite. For other countries, I find no evidence of a change in inequalities after paternity leave.

6 Robustness checks

As mentioned earlier, the bias induced by the creation of a synthetic panel may be large if the number of observations per cell is low. Thus, I restrict the sample to cells

that contain at least 100 observations to see if the relationship between paternity leave and women's employment and hours worked is consistent with the results described previously. Column (2) of Tables G.1 and G.2 in Appendix G present respectively the results for employment and hours of the baseline specification in the restricted sample. The results are very similar to those with the complete sample for both employment rate and hours worked.

Also, individuals in my sample may live with children who are not their own. Typically, women between 20 and 29 years old can live with their parents and with their younger siblings. This could lead to an underestimation of the effect of the paternity leave. I thus conduct another robustness check by focusing only on women who live with their own children. For this analysis (as well as for the following robustness check), my sample is also restricted because the data is not available for the whole period. The variable necessary for this analysis is available in 1998 for only two countries, and it is only from 2004 that it is available for all the countries. This excludes France from the analysis since the paternity leave was introduced in 2002 and the variable becomes available only in 2003. Also, since in this case the number of observations by cell is reduced and there is an increase in the number of cells with less than 100 observations (typically for women 20 to 29 years old with children which are 6 years old or more), I conduct the analysis by keeping only cells with more than 100 observations. The positive effects on women's employment rate (Column (3) of Table G.1 in Appendix G) increase for women with very young children and women with children aged 8 and older. This difference can be explained by the fact that there are women who live with a child which is not their own (typically among mothers aged 20 to 29 with a child aged 8 or more and mothers aged 40 and 49 with children aged 0 or 1). Using the whole sample might have underestimated the effects of paternity leave for these women. The remaining of the results are very close to those described previously. A similar conclusion can be drawn by looking at hours worked in Column (3) of Table G.2.

My analysis has focused on the age of the youngest child in the household in order to distinguish between mothers whose partner could benefit from the paternity leave and those who gave birth for the last time before the paternity leave was introduced. However, these women could have benefited from the paternity leave during the previous birth already. One could expect the direct effect of the reform to be more important for the first time that the father takes the leave than for following births. Indeed, if fathers who take leave become more involved with childcare and housework, they should do so since the first time they take such leave. Taking a leave again might have a lower effect. Also, the effect of the paternity leave on women's employment is

expected to be higher for the first birth than if it is introduced for following births. That is because the transition to parenthood seems to be a defining moment for the gender balance within the household. If the father takes a leave for the first child, the increase in inequalities within the household and on the labour market might be lower because of an increase in the father's involvement in the household. These habits might then become well established. The fathers may also be more likely to take a leave for the first child (as found by Geisler and Kreyenfeld (2011) for Germany).

For these reasons, I also conduct the analysis on mothers who have their first child. As in the previous case, I restrict the analysis on mothers who live with their own child and to cells who contain at least 100 observations. The results, presented in Column (4) of Table G.1, are somewhat similar to those of Column (3), except for mothers of children aged 4 to 7 for whom the effect of paternity leave is no longer significant. For hours worked, Column (4) in Table G.2 shows that the effect increases for women who just gave birth to their first child (compared to the sample with only own children), but the coefficients associated to other mothers loose in magnitude and significance.

To sum up, the positive relationship between paternity leave and mothers' employment seems robust to the different samples used. The main analysis could have underestimated the effect of the reform for some groups of mothers by including women who live with children who are not their own. Lastly, the results for mothers of children aged 4-5 or 6-7 seems less robust, since the effect is no longer significant when we only focus on first-borns.

7 Concluding remarks

One of the main objectives of the European countries that introduced a paternity leave in the past decades was to decrease gender inequalities by addressing women's under-representation on the labour market. However, the effect of these policies on women's labour market outcomes in different countries hasn't been established yet. This paper tries to fill this gap in the literature and assesses the effect of the paternity leave on mothers' absolute and relative employment in 10 European countries.

I find a positive relationship between paternity leave and mothers' employment rate and hours worked compared to non-mothers. In both cases, the effect is concentrated on women whose youngest child was born after the introduction of paternity leave. This result is consistent with the hypothesis that paternity leave allows women to invest more time on the labour market by increasing men's participation in housework, i.e.

the "direct effect" of paternity leave. I find weak evidence of a more general effect that decreases discrimination towards all mothers and thus facilitates their participation on the labour market. I also find a greater impact of paternity leave on mothers' employment than on fathers', which suggests a decrease in gender inequalities. This positive impact concerns women with children aged 5 and less for employment rates, only women with children aged 0-1 for hours worked.

Germany, Spain and France have seen an increase in mothers' employment rates after the introduction of paternity leave, accompanied by a decrease in average weekly hours worked. This can be explained by mothers' re-entry in the labour market with part time jobs[8]. In Italy, Netherlands and the UK, mothers' employment increased at both margins after paternity leave reforms. However a causal interpretation of the results for Italy is more difficult due to the increasing trends in employment prior to the introduction of paternity leave. Lastly, I found no evidence that paternity leave was related to mothers' employment in Greece or in Portugal. Note that at the same time as the introduction of paternity leave, Portugal increased maternity leave duration and introduced three months of unpaid parental leave, which can explain that we did not find the expected results. Greece, Poland and the UK also increased maternity leave duration at the same time as they offered paternity leave, which can undermine its effect.

The heterogeneity of the effects across countries can be explained by other differences not covered in the analysis, such as the availability of childcare services, which is an important determinant in the decision (and the possibility) for a mother to re-enter the labour market after childbirth, or the leave gap between mothers and fathers. The other childbirth-related policies passed at the same time as paternity leave might as well have biased the results, although their expected effect on women employment is rather negative, undermining the effect of paternity leave. Future research might try to disentangle the effects of different family policies that are adopted simultaneously, and study the complementarity of paternity leave and other family policies in reducing gender inequalities in the labour market.

[8]Germany, Spain and France are the three countries where paternity leave increased the share of mothers working part time (in France, only mothers with children aged 6 or more have decreased their part time rate). Results available from the author upon request.

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Appendix A : Descriptive statistics

Table A.1: Changes in leave conditions on the period 1998-2016

Country	Date	Type	Length	Compensation	Mandatory
France	2002	Paternity	2 weeks	100%	No
	2014	Parental	26 weeks	Flat rate	No
	2015	Parental	52 weeks (2^{nd} child)	Flat rate	No
Germany	2007	Parental	2 months	67%	No
Greece	2000	Paternity	2 days	100%	No
Hungary	2002	Paternity	1 week	100%	No
Italy	2013	Paternity	1 day	100%	Yes
	2016	Paternity	2 days	100%	Yes
Netherlands	2002	Paternity	2 days	100%	No
	2009	Parental	26 weeks	590 € tax reduction	No
	2014	Parental	26 weeks	No more payment	No
Poland	2010	Paternity	1 week	100%	No
	2012	Paternity	2 weeks	100%	No
Portugal	2000	Paternity	4 weeks	100%	1/4 week
	2009	Paternity	4 weeks	100%	2/4 weeks
	2009	Parental	120 days	1 month 100%, 3 months 25%	No
	2016	Paternity	5 weeks	100%	3/5 weeks
Spain	2007	Paternity	2 weeks	100 %	No
UK	2003	Paternity	2 weeks	Flat rate	No
	2011	Paternity	2 weeks	Lowest of flat rate and 90% of earnings	No

Table A.2: Summary statistics

	Women						Men					
Youngest	**None**	**0-1**	**2-3**	**4-5**	**6-7**	**> 7**	**None**	**0-1**	**2-3**	**4-5**	**6-7**	**> 7**
Age	34.568	30.491	31.782	33.512	35.172	38.047	33.123	32.821	34.191	35.807	37.272	39.043
Number of children under 15	0.000	1.776	1.766	1.770	1.725	1.348	0.000	1.773	1.776	1.793	1.755	1.361
Existence of previous work experience	0.585	0.764	0.747	0.727	0.740	0.746	0.633	0.851	0.865	0.877	0.888	0.870
Education : third level	0.252	0.265	0.232	0.208	0.196	0.177	0.198	0.239	0.214	0.193	0.187	0.167
Education : upper secondary	0.522	0.469	0.492	0.492	0.513	0.531	0.551	0.477	0.496	0.499	0.519	0.545
Education : lower secondary	0.226	0.266	0.276	0.301	0.291	0.292	0.251	0.284	0.289	0.308	0.294	0.288
Married	0.387	0.725	0.747	0.746	0.740	0.721	0.260	0.767	0.805	0.825	0.827	0.786
Single	0.530	0.237	0.203	0.180	0.164	0.157	0.683	0.215	0.178	0.155	0.148	0.180
Divorced/widowed/separated	0.083	0.038	0.050	0.074	0.096	0.122	0.057	0.018	0.017	0.021	0.025	0.034
Born in the country of residence	0.933	0.884	0.893	0.897	0.906	0.921	0.937	0.892	0.901	0.909	0.917	0.932
Nationality of the country of residence	0.959	0.918	0.928	0.933	0.944	0.956	0.959	0.926	0.935	0.942	0.949	0.961
Worked less because of parental leave	0.000	0.007	0.002	0.001	0.000	0.000	0.000	0.003	0.001	0.000	0.000	0.000
Did not work because of parental leave	0.002	0.101	0.010	0.003	0.002	0.001	0.000	0.004	0.000	0.000	0.000	0.000
Employment rate	0.657	0.426	0.473	0.581	0.620	0.658	0.730	0.872	0.873	0.874	0.870	0.847
Weekly hours worked usually	36.944	33.847	33.297	33.810	34.155	35.089	40.992	42.157	42.417	42.590	42.663	42.473
Part time rate	0.181	0.311	0.340	0.320	0.305	0.267	0.067	0.042	0.038	0.035	0.036	0.038
Ratio hours (women/men)	0.900	0.804	0.787	0.797	0.803	0.826	0.900	0.804	0.787	0.797	0.803	0.826
Ratio employment rates (women/men)	0.897	0.498	0.557	0.685	0.734	0.775	0.897	0.498	0.557	0.685	0.734	0.775
N cells	669	669	669	669	669	669	669	669	669	669	669	669
N observations	4597423	785900	718831	599103	541356	1741765	5017381	712054	632877	508860	446403	1368307

Table A.3: Labour market outcomes before and after the introduction of paternity leave

Youngest	None		0-1		2-3		4-5		6-7		>7	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Women												
Employment rate	0.620	0.652	0.430	0.495	0.461	0.534	0.519	0.596	0.548	0.620	0.579	0.648
Weekly hours worked usually	35.912	35.453	30.912	31.008	31.509	31.567	31.959	32.313	32.335	32.454	33.383	33.213
Part time rate	0.186	0.219	0.324	0.367	0.357	0.389	0.353	0.359	0.341	0.353	0.302	0.323
Worked less because of parental leave	0.000	0.000	0.006	0.010	0.001	0.002	0.000	0.001	0.000	0.001	0.000	0.000
Did not work because of parental leave	0.002	0.002	0.099	0.099	0.013	0.008	0.004	0.003	0.002	0.002	0.001	0.001
N cells	183	372	183	372	183	372	183	372	183	372	183	372
N observations	1581855	2637753	252914	470014	231066	430818	196317	359145	179547	321080	590962	1010103
Men												
Employment rate	0.732	0.719	0.882	0.870	0.883	0.872	0.882	0.869	0.872	0.865	0.842	0.840
Weekly hours worked usually	40.895	39.714	42.254	40.893	42.549	41.270	42.562	41.463	42.595	41.517	42.234	41.345
Part time rate	0.056	0.086	0.033	0.054	0.031	0.049	0.029	0.045	0.030	0.046	0.032	0.050
Worked less because of parental leave	0.000	0.000	0.001	0.005	0.000	0.002	0.000	0.001	0.000	0.000	0.000	0.000
Did not work because of parental leave	0.000	0.000	0.001	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
N cells	183	372	183	372	183	372	183	372	183	372	183	372
N observations	1696084	2897621	232740	423351	207722	374918	171119	300341	152422	259764	476105	775694
Ratio												
Ratio hours (women/men)	0.884	0.894	0.775	0.793	0.755	0.775	0.759	0.788	0.766	0.789	0.796	0.806
Ratio employment rates (women/men)	0.851	0.905	0.498	0.578	0.533	0.628	0.604	0.709	0.643	0.738	0.690	0.771

Note: This table gives labour market outcomes by gender and parental status only for countries which introduced paternity leave on the period 1998-2016. Czech Republic and Slovakia are thus excluded.

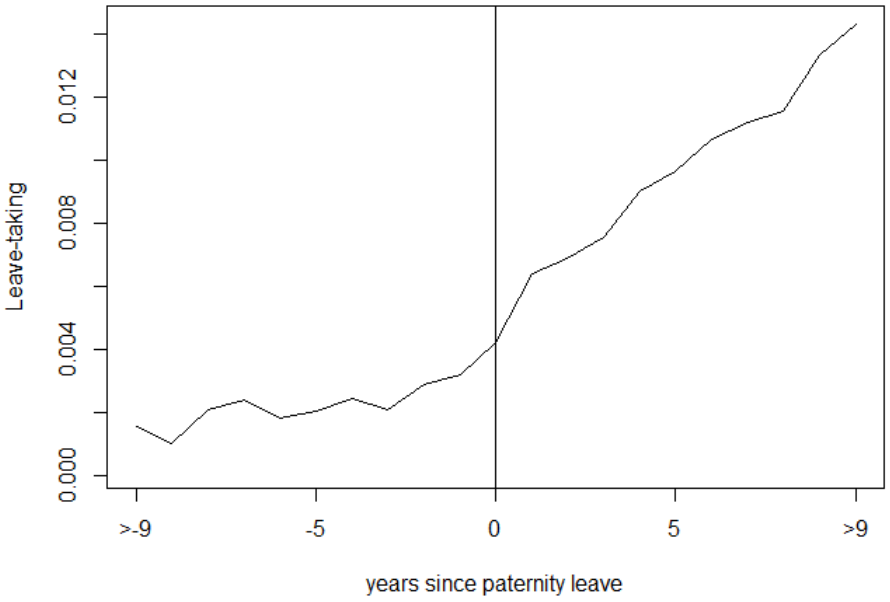

Figure A.7: Share of fathers who took paternal leave since the introduction of paternity leave

Note: The figure shows the proportion of men with a child aged 0-1 who declared having worked less hours than usual or not having worked at all during the reference week because they were on parental leave. The vertical line corresponds to the year of the introduction of paternity leave.

Appendix B : Main results

Table B.1: Impact of paternity leave on women's employment rate

	Dependent variable : Employment rate			
	(1)	(2)	(3)	(4)
Years_pat = 0-1 x Child 0-1	0.139**	0.003	−0.0002	−0.001
	(0.067)	(0.011)	(0.012)	(0.012)
Years_pat = 2-3 x Child 0-1	0.155**	0.018	0.012	0.010
	(0.066)	(0.011)	(0.012)	(0.013)
Years_pat = 4-5 x Child 0-1	0.165**	0.044***	0.036**	0.030*
	(0.072)	(0.015)	(0.015)	(0.018)
Years_pat = 6-7 x Child 0-1	0.177**	0.057***	0.053***	0.042**
	(0.075)	(0.017)	(0.016)	(0.020)
Years_pat = 8 and more x Child 0-1	0.200**	0.066***	0.062***	0.056**
	(0.086)	(0.022)	(0.019)	(0.023)
Years_pat = 0-1 x Child 2-3	0.118**	0.017**	0.010	0.013*
	(0.052)	(0.007)	(0.008)	(0.007)
Years_pat = 2-3 x Child 2-3	0.131**	0.030***	0.020***	0.025***
	(0.051)	(0.006)	(0.006)	(0.006)
Years_pat = 4-5 x Child 2-3	0.133**	0.047***	0.039***	0.038***
	(0.058)	(0.012)	(0.012)	(0.012)
Years_pat = 6-7 x Child 2-3	0.150**	0.066***	0.060***	0.057***
	(0.062)	(0.014)	(0.013)	(0.014)
Years_pat = 8 and more x Child 2-3	0.183***	0.086***	0.078***	0.079***
	(0.070)	(0.019)	(0.018)	(0.017)
Years_pat = 0-1 x Child 4-5	0.022	0.021**	0.015*	0.022**
	(0.042)	(0.009)	(0.008)	(0.009)
Years_pat = 2-3 x Child 4-5	0.025	0.024**	0.013	0.018*
	(0.040)	(0.010)	(0.011)	(0.009)
Years_pat = 4-5 x Child 4-5	0.032	0.039***	0.025*	0.031***
	(0.048)	(0.013)	(0.013)	(0.011)
Years_pat = 6-7 x Child 4-5	0.048	0.059***	0.048***	0.054***
	(0.050)	(0.017)	(0.015)	(0.014)
Years_pat = 8 and more x Child 4-5	0.077	0.074***	0.061***	0.069***
	(0.058)	(0.020)	(0.018)	(0.017)
Years_pat = 0-1 x Child 6-7	−0.010	0.020***	0.015***	0.019***
	(0.049)	(0.004)	(0.004)	(0.005)
Years_pat = 2-3 x Child 6-7	−0.011	0.019**	0.005	0.009
	(0.048)	(0.009)	(0.008)	(0.007)
Years_pat = 4-5 x Child 6-7	−0.003	0.035***	0.019	0.023*
	(0.055)	(0.013)	(0.014)	(0.012)
Years_pat = 6-7 x Child 6-7	0.005	0.047***	0.029**	0.033**
	(0.057)	(0.014)	(0.014)	(0.015)
Years_pat = 8 and more x Child 6-7	0.042	0.072***	0.047***	0.052***
	(0.065)	(0.018)	(0.017)	(0.016)
Years_pat = 0-1 x Child 8 or older	−0.030	0.015***	0.009**	0.007
	(0.055)	(0.005)	(0.004)	(0.006)
Years_pat = 2-3 x Child 8 or older	−0.024	0.022***	0.007*	0.004
	(0.052)	(0.005)	(0.004)	(0.006)
Years_pat = 4-5 x Child 8 or older	−0.025	0.024***	0.007	−0.002
	(0.060)	(0.007)	(0.006)	(0.009)
Years_pat = 6-7 x Child 8 or older	−0.013	0.042***	0.022***	0.005
	(0.061)	(0.009)	(0.007)	(0.014)
Years_pat = 8 and more x Child 8 or older	0.015	0.058***	0.031***	0.013
	(0.068)	(0.014)	(0.011)	(0.015)
Constant	0.665***	0.171***	−0.093	0.015
	(0.035)	(0.011)	(0.088)	(0.068)
Controls	No	No	Yes	Yes
Cell FE	No	Yes	Yes	Yes
Country-year FE	No	Yes	Yes	Yes
Weights	Yes	Yes	Yes	No
Observations	4014	4014	3762	3762
R^2	0.27618	0.95768	0.97265	0.95372

Note: *p<0.1; **p<0.05; ***p<0.01

The dependant variable is the share of women in each cell who work more than 15 hours on average per week usually in their main job. Men are excluded from the sample. The control variables are cell means, and contain the average number of children in the cell, the proportion of individuals in the cell who achieved the third level of education or upper secondary (lower secondary is the omitted category), who are divorced/widowed/separated or married (singles is the omitted category), who have a previous work experience and who are born in the country of residence. The standard errors are clustered at the country-age of the youngest child level.

Table B.2: Impact of paternity leave on women's hours worked

	Dependent variable : Average weekly hours worked			
	(1)	(2)	(3)	(4)
Years_pat = 0-1 x Child 0-1	−1.105	−0.099	−0.205	−0.174
	(1.997)	(0.275)	(0.282)	(0.285)
Years_pat = 2-3 x Child 0-1	−0.883	0.094	−0.067	−0.237
	(1.891)	(0.205)	(0.230)	(0.304)
Years_pat = 4-5 x Child 0-1	−0.589	0.544***	0.359*	0.280
	(1.988)	(0.202)	(0.215)	(0.224)
Years_pat = 6-7 x Child 0-1	−0.271	0.915***	0.741***	0.513*
	(1.949)	(0.282)	(0.270)	(0.304)
Years_pat = 8 and more x Child 0-1	0.245	1.446**	1.250**	0.990**
	(2.349)	(0.568)	(0.517)	(0.458)
Years_pat = 0-1 x Child 2-3	−0.864	−0.090	−0.190	−0.098
	(2.046)	(0.174)	(0.187)	(0.169)
Years_pat = 2-3 x Child 2-3	−0.644	0.112	−0.049	−0.026
	(2.019)	(0.122)	(0.158)	(0.183)
Years_pat = 4-5 x Child 2-3	−0.727	0.148	0.011	−0.166
	(2.092)	(0.155)	(0.182)	(0.278)
Years_pat = 6-7 x Child 2-3	−0.325	0.765***	0.607**	0.331
	(2.050)	(0.278)	(0.244)	(0.270)
Years_pat = 8 and more x Child 2-3	0.421	1.329***	1.116**	0.876**
	(2.540)	(0.509)	(0.460)	(0.426)
Years_pat = 0-1 x Child 4-5	−0.667	0.076	0.021	0.048
	(2.033)	(0.178)	(0.200)	(0.213)
Years_pat = 2-3 x Child 4-5	−0.664	0.072	−0.033	−0.020
	(1.988)	(0.219)	(0.261)	(0.244)
Years_pat = 4-5 x Child 4-5	−0.455	0.349	0.197	0.171
	(2.127)	(0.225)	(0.254)	(0.229)
Years_pat = 6-7 x Child 4-5	−0.085	0.965***	0.822***	0.733***
	(2.107)	(0.257)	(0.259)	(0.264)
Years_pat = 8 and more x Child 4-5	0.860	1.574***	1.354***	1.178***
	(2.621)	(0.418)	(0.364)	(0.366)
Years_pat = 0-1 x Child 6-7	−0.958	0.038	−0.009	0.017
	(2.067)	(0.183)	(0.226)	(0.237)
Years_pat = 2-3 x Child 6-7	−0.874	0.115	−0.053	0.064
	(2.021)	(0.134)	(0.179)	(0.201)
Years_pat = 4-5 x Child 6-7	−0.702	0.343*	0.169	0.101
	(2.138)	(0.191)	(0.245)	(0.248)
Years_pat = 6-7 x Child 6-7	−0.625	0.720***	0.513**	0.547**
	(2.157)	(0.216)	(0.233)	(0.274)
Years_pat = 8 and more x Child 6-7	0.167	1.273***	0.963**	0.657*
	(2.665)	(0.407)	(0.380)	(0.396)
Years_pat = 0-1 x Child 8 or older	−1.108	−0.222	−0.259*	−0.251
	(1.969)	(0.183)	(0.145)	(0.193)
Years_pat = 2-3 x Child 8 or older	−1.014	−0.131	−0.280**	−0.334**
	(1.934)	(0.124)	(0.129)	(0.162)
Years_pat = 4-5 x Child 8 or older	−1.056	−0.149	−0.313**	−0.507**
	(2.076)	(0.174)	(0.134)	(0.207)
Years_pat = 6-7 x Child 8 or older	−1.070	0.082	−0.130	−0.461
	(2.083)	(0.173)	(0.169)	(0.289)
Years_pat = 8 and more x Child 8 or older	−0.146	0.691**	0.409*	−0.071
	(2.594)	(0.300)	(0.230)	(0.430)
Constant	37.920***	39.639***	33.212***	36.031***
	(0.861)	(0.154)	(1.951)	(1.920)
Controls	No	No	Yes	Yes
Cell FE	No	Yes	Yes	Yes
Country-year FE	No	Yes	Yes	Yes
Weights	Yes	Yes	Yes	No
Observations	4014	4014	3762	3762
R^2	0.12622	0.98111	0.98326	0.97376

Note: *p<0.1; **p<0.05; ***p<0.01

The dependant variable is the average weekly hours worked usually in the main job in each cell. Men are excluded from the sample. The control variables are cell means, and contain the average number of children in the cell, the proportion of individuals in the cell who achieved the third level of education or upper secondary (lower secondary is the omitted category), who are divorced/widowed/separated or married (single is the omitted category), who have a previous work experience and who are born in the country of residence. The standard errors are clustered at the country-age of the youngest child level.

Table B.3: Impact of paternity leave on relative employment rate

	Dependent variable : Employment rate			
	(1)	(2)	(3)	(4)
Woman x Years_pat = 0-1 x Child 0-1	0.129**	0.001	0.001	−0.004
	(0.059)	(0.010)	(0.011)	(0.011)
Woman x Years_pat = 2-3 x Child 0-1	0.134**	0.006	0.007	0.003
	(0.060)	(0.011)	(0.011)	(0.011)
Woman x Years_pat = 4-5 x Child 0-1	0.155**	0.034***	0.042***	0.033*
	(0.066)	(0.013)	(0.013)	(0.017)
Woman x Years_pat = 6-7 x Child 0-1	0.162**	0.040***	0.049***	0.036**
	(0.066)	(0.013)	(0.014)	(0.017)
Woman x Years_pat = 8 and more x Child 0-1	0.171**	0.034*	0.043**	0.034
	(0.075)	(0.018)	(0.018)	(0.024)
Woman x Years_pat = 0-1 x Child 2-3	0.104**	0.014*	0.013	0.016*
	(0.050)	(0.008)	(0.009)	(0.009)
Woman x Years_pat = 2-3 x Child 2-3	0.113**	0.024***	0.024***	0.029***
	(0.051)	(0.008)	(0.009)	(0.008)
Woman x Years_pat = 4-5 x Child 2-3	0.122**	0.040***	0.043***	0.043***
	(0.056)	(0.009)	(0.012)	(0.011)
Woman x Years_pat = 6-7 x Child 2-3	0.135**	0.053***	0.060***	0.058***
	(0.058)	(0.013)	(0.015)	(0.014)
Woman x Years_pat = 8 and more x Child 2-3	0.147**	0.052***	0.059***	0.065***
	(0.062)	(0.018)	(0.020)	(0.017)
Woman x Years_pat = 0-1 x Child 4-5	0.017	0.019*	0.013	0.023**
	(0.043)	(0.010)	(0.010)	(0.010)
Woman x Years_pat = 2-3 x Child 4-5	0.011	0.014	0.007	0.012
	(0.044)	(0.010)	(0.011)	(0.010)
Woman x Years_pat = 4-5 x Child 4-5	0.031	0.034***	0.029*	0.041***
	(0.049)	(0.013)	(0.015)	(0.015)
Woman x Years_pat = 6-7 x Child 4-5	0.042	0.048***	0.044***	0.060***
	(0.049)	(0.015)	(0.016)	(0.014)
Woman x Years_pat = 8 and more x Child 4-5	0.054	0.042**	0.045**	0.071***
	(0.053)	(0.018)	(0.020)	(0.017)
Woman x Years_pat = 0-1 x Child 6-7	−0.010	0.023***	0.021**	0.027***
	(0.050)	(0.007)	(0.009)	(0.008)
Woman x Years_pat = 2-3 x Child 6-7	−0.018	0.015	0.009	0.026***
	(0.051)	(0.010)	(0.011)	(0.009)
Woman x Years_pat = 4-5 x Child 6-7	−0.008	0.026**	0.022	0.034***
	(0.054)	(0.012)	(0.014)	(0.012)
Woman x Years_pat = 6-7 x Child 6-7	−0.002	0.037***	0.029*	0.050***
	(0.056)	(0.013)	(0.015)	(0.016)
Woman x Years_pat = 8 and more x Child 6-7	0.012	0.038**	0.027	0.061***
	(0.059)	(0.016)	(0.019)	(0.016)
Woman x Years_pat = 0-1 x Child 8 or older	−0.028	0.010**	0.008*	0.010
	(0.052)	(0.005)	(0.004)	(0.008)
Woman x Years_pat = 2-3 x Child 8 or older	−0.025	0.014***	0.005	0.014
	(0.052)	(0.005)	(0.005)	(0.009)
Woman x Years_pat = 4-5 x Child 8 or older	−0.019	0.017**	0.008	0.010
	(0.057)	(0.007)	(0.007)	(0.010)
Woman x Years_pat = 6-7 x Child 8 or older	−0.014	0.028***	0.017**	0.021
	(0.057)	(0.008)	(0.008)	(0.013)
Woman x Years_pat = 8 and more x Child 8 or older	−0.008	0.024**	0.008	0.022
	(0.059)	(0.012)	(0.014)	(0.016)
Constant	0.744***	0.915***	0.667***	0.683***
	(0.017)	(0.005)	(0.092)	(0.048)
Controls	No	No	Yes	Yes
Cell FE	No	Yes	Yes	Yes
Country-year-sex FE	No	Yes	Yes	Yes
Weights	Yes	Yes	Yes	No
Observations	8028	8028	7524	7524
R^2	0.45068	0.97165	0.97983	0.9728

Note: *p<0.1; **p<0.05; ***p<0.01

The dependant variable is the share of individuals in each cell who work more than 15 hours on average per week usually in their main job. Both men and women are included in the sample. The control variables are cell means, and contain the average number of children in the cell, the proportion of individuals in the cell who achieved the third level of education or upper secondary (lower secondary is the omitted category), who are divorced/widowed/separated or married (single is the omitted category), who have a previous work experience and who are born in the country of residence. The standard errors are clustered at the country-age of the youngest child level.

Table B.4: Impact of paternity leave on relative hours worked

	Dependent variable : Average weekly hours worked			
	(1)	(2)	(3)	(4)
Woman x Years_pat = 0-1 x Child 0-1	−1.440	−0.224	−0.233	−0.274
	(1.707)	(0.341)	(0.331)	(0.348)
Woman x Years_pat = 2-3 x Child 0-1	−1.247	−0.041	−0.047	−0.258
	(1.574)	(0.240)	(0.235)	(0.309)
Woman x Years_pat = 4-5 x Child 0-1	−0.744	0.604**	0.684***	0.521*
	(1.631)	(0.266)	(0.241)	(0.281)
Woman x Years_pat = 6-7 x Child 0-1	−0.555	0.860**	0.947***	0.704**
	(1.588)	(0.361)	(0.347)	(0.356)
Woman x Years_pat = 8 and more x Child 0-1	0.030	1.282**	1.373**	1.121**
	(1.657)	(0.571)	(0.554)	(0.495)
Woman x Years_pat = 0-1 x Child 2-3	−1.210	−0.100	−0.108	0.048
	(1.840)	(0.199)	(0.198)	(0.226)
Woman x Years_pat = 2-3 x Child 2-3	−1.124	−0.021	−0.031	−0.002
	(1.792)	(0.191)	(0.192)	(0.264)
Woman x Years_pat = 4-5 x Child 2-3	−1.143	0.085	0.119	−0.070
	(1.868)	(0.238)	(0.223)	(0.350)
Woman x Years_pat = 6-7 x Child 2-3	−0.852	0.586*	0.662**	0.347
	(1.772)	(0.342)	(0.321)	(0.356)
Woman x Years_pat = 8 and more x Child 2-3	0.014	1.113**	1.190**	1.016**
	(1.931)	(0.480)	(0.467)	(0.435)
Woman x Years_pat = 0-1 x Child 4-5	−1.103	−0.031	−0.067	0.107
	(1.758)	(0.213)	(0.213)	(0.261)
Woman x Years_pat = 2-3 x Child 4-5	−1.124	−0.050	−0.090	−0.053
	(1.684)	(0.269)	(0.278)	(0.292)
Woman x Years_pat = 4-5 x Child 4-5	−0.940	0.224	0.199	0.221
	(1.797)	(0.343)	(0.324)	(0.349)
Woman x Years_pat = 6-7 x Child 4-5	−0.681	0.733**	0.735**	0.702**
	(1.756)	(0.339)	(0.332)	(0.320)
Woman x Years_pat = 8 and more x Child 4-5	0.313	1.307***	1.348***	1.369***
	(1.970)	(0.437)	(0.431)	(0.420)
Woman x Years_pat = 0-1 x Child 6-7	−1.479	−0.181	−0.179	0.011
	(1.781)	(0.224)	(0.236)	(0.298)
Woman x Years_pat = 2-3 x Child 6-7	−1.449	−0.164	−0.234	−0.005
	(1.733)	(0.195)	(0.220)	(0.290)
Woman x Years_pat = 4-5 x Child 6-7	−1.151	0.199	0.160	0.285
	(1.834)	(0.264)	(0.286)	(0.322)
Woman x Years_pat = 6-7 x Child 6-7	−1.233	0.397*	0.319	0.870**
	(1.863)	(0.240)	(0.257)	(0.377)
Woman x Years_pat = 8 and more x Child 6-7	−0.266	0.989***	0.875**	1.111**
	(2.046)	(0.383)	(0.383)	(0.471)
Woman x Years_pat = 0-1 x Child 8 or older	−1.526	−0.433**	−0.453***	−0.261
	(1.625)	(0.209)	(0.171)	(0.219)
Woman x Years_pat = 2-3 x Child 8 or older	−1.617	−0.529***	−0.617***	−0.361*
	(1.591)	(0.169)	(0.156)	(0.203)
Woman x Years_pat = 4-5 x Child 8 or older	−1.464	−0.356	−0.449***	−0.349
	(1.720)	(0.223)	(0.162)	(0.291)
Woman x Years_pat = 6-7 x Child 8 or older	−1.573	−0.245	−0.372*	−0.275
	(1.740)	(0.215)	(0.198)	(0.373)
Woman x Years_pat = 8 and more x Child 8 or older	−0.838	0.087	−0.083	0.042
	(1.924)	(0.274)	(0.246)	(0.466)
Constant	41.773***	45.787***	39.643***	40.677***
	(0.414)	(0.125)	(1.391)	(1.337)
Controls	No	No	Yes	Yes
Cell FE	No	Yes	Yes	Yes
Country-year-sex FE	No	Yes	Yes	Yes
Weights	Yes	Yes	Yes	No
Observations	8028	8028	7524	7524
R^2	0.4552	0.98636	0.98761	0.97945

Note: *p<0.1; **p<0.05; ***p<0.01

The dependant variable is the average weekly hours worked usually in the main job in each cell. Both men and women are included in the sample. The control variables are cell means, and contain the average number of children in the cell, the proportion of individuals in the cell who achieved the third level of education or upper secondary (lower secondary is the omitted category), who are divorced/widowed/separated or married (single is the omitted category), who have a previous work experience and who are born in the country of residence. The standard errors are clustered at the country-age of the youngest child level.

Appendix C : Event study

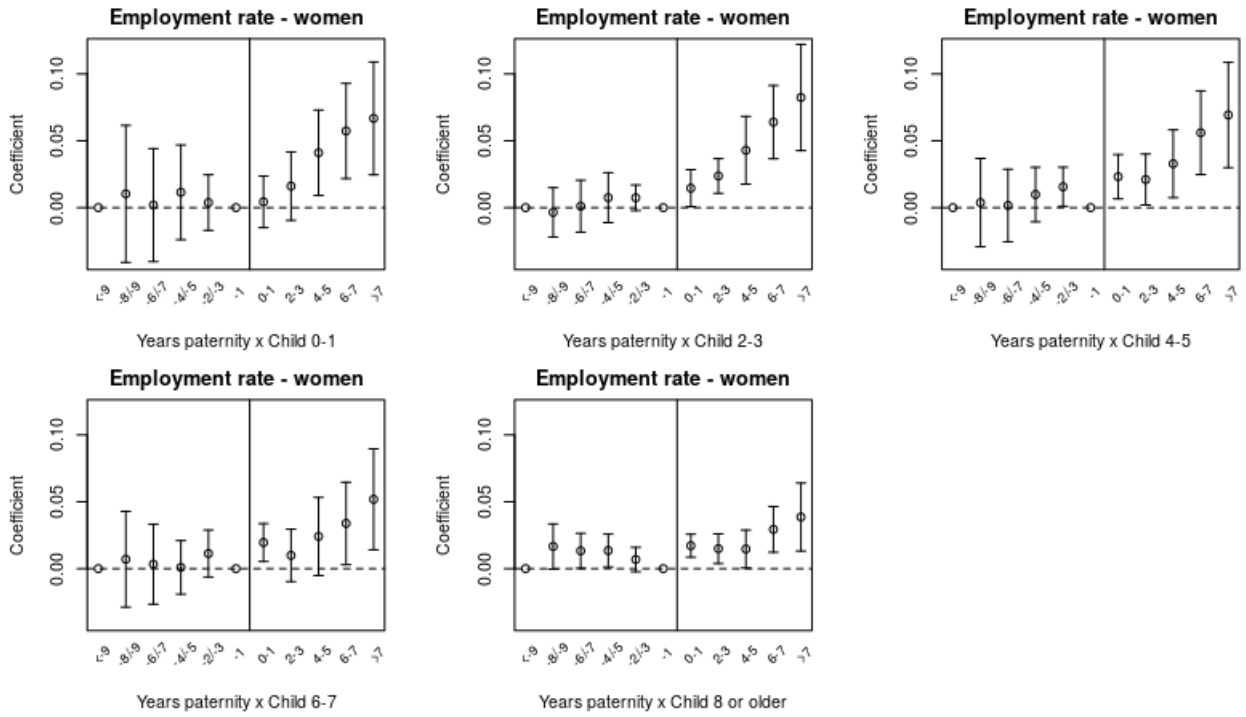

Figure C.8: Event study estimates for the effect of paternity leave on women's employment rate

Note : 95% confidence intervals
The dependant variable is the share of women in each cell who work more than 15 hours on average per week usually in their main job. Men are excluded from the sample. The control variables are cell means, and contain the average number of children in the cell, the proportion of individuals in the cell who achieved the third level of education or upper secondary (lower secondary is the omitted category), who are divorced/widowed/separated or married (single is the omitted category), who have a previous work experience and who are born in the country of residence. The regressions include country-year and cell fixed effects. The standard errors are clustered at the country-age of the youngest child level and the estimations are made using WLS.

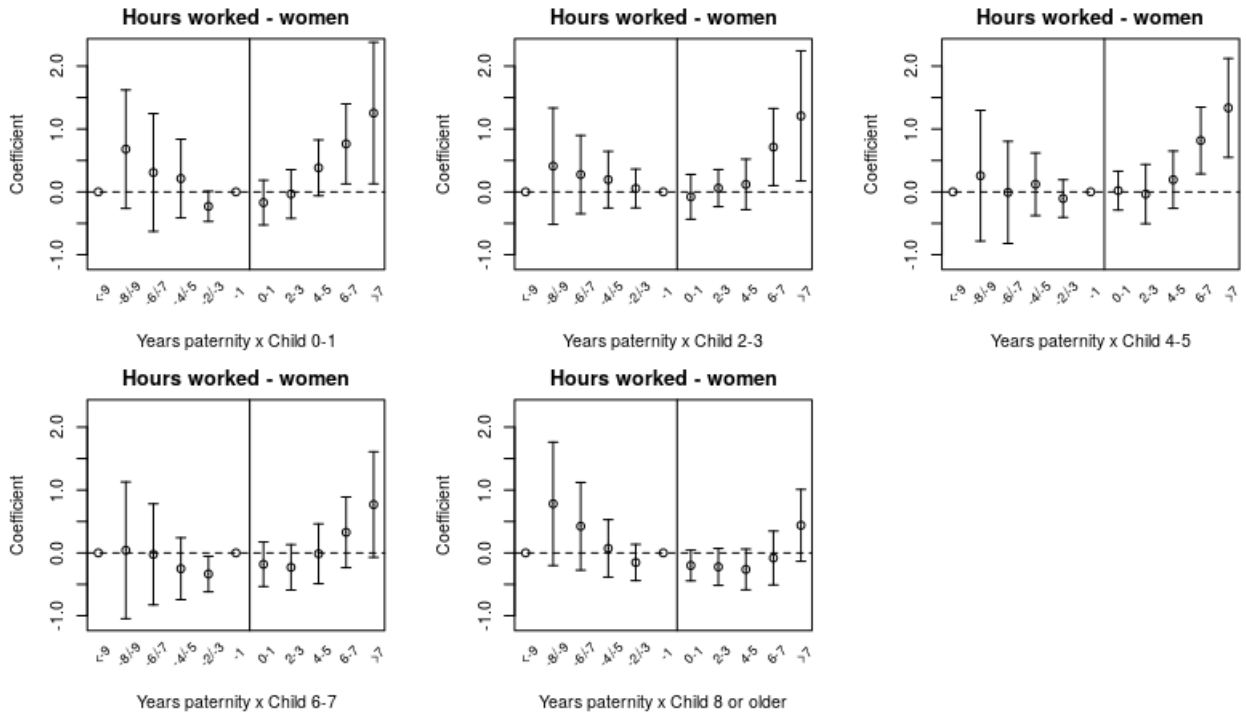

Figure C.9: Event study estimates for the effect of paternity leave on women hours worked

Note : 95% confidence intervals
The dependant variable is the average weekly hours worked usually in the main job in each cell. Men are excluded from the sample. The control variables are cell means, and contain the average number of children in the cell, the proportion of individuals in the cell who achieved the third level of education or upper secondary (lower secondary is the omitted category), who are divorced/widowed/separated or married (single is the omitted category), who have a previous work experience and who are born in the country of residence. The regressions include country-year and cell fixed effects. The standard errors are clustered at the country-age of the youngest child level and the estimations are made using WLS.

Appendix D : Average effect by country

Table D.1: Impact of paternity leave on women's employment rate by country

	Dependent variable : Employment rate				
	Germany	Spain	France	Greece	Hungary
	(1)	(2)	(3)	(4)	(5)
Years_pat = 0-1 x Child 0-1	−0.080***	0.013	−0.016	−0.021	0.008
	(0.014)	(0.016)	(0.011)	(0.022)	(0.022)
Years_pat = 2-3 x Child 0-1	−0.039***	0.047***	−0.003	−0.044**	0.045**
	(0.014)	(0.017)	(0.011)	(0.022)	(0.023)
Years_pat = 4-5 x Child 0-1	0.004	0.108***	−0.006	−0.024	0.009
	(0.014)	(0.018)	(0.011)	(0.022)	(0.022)
Years_pat = 6-7 x Child 0-1	0.038***	0.122***	0.012	−0.027	0.002
	(0.014)	(0.018)	(0.012)	(0.023)	(0.023)
Years_pat = 8 and more x Child 0-1	0.047***	0.113***	0.036***	0.034*	−0.016
	(0.014)	(0.017)	(0.010)	(0.020)	(0.017)
Years_pat = 0-1 x Child 2-3	0.014	0.006	0.011	−0.019	0.026
	(0.016)	(0.017)	(0.011)	(0.021)	(0.022)
Years_pat = 2-3 x Child 2-3	0.046***	0.040**	0.020*	−0.040*	0.041*
	(0.015)	(0.017)	(0.011)	(0.021)	(0.023)
Years_pat = 4-5 x Child 2-3	0.062***	0.089***	0.008	−0.030	0.048**
	(0.015)	(0.018)	(0.012)	(0.021)	(0.022)
Years_pat = 6-7 x Child 2-3	0.102***	0.105***	0.043***	−0.026	0.056**
	(0.015)	(0.018)	(0.012)	(0.022)	(0.022)
Years_pat = 8 and more x Child 2-3	0.116***	0.114***	0.068***	0.0001	0.079***
	(0.015)	(0.018)	(0.010)	(0.019)	(0.017)
Years_pat = 0-1 x Child 4-5	0.020	0.0003	0.025*	−0.021	−0.002
	(0.017)	(0.018)	(0.013)	(0.023)	(0.024)
Years_pat = 2-3 x Child 4-5	0.060***	0.044**	0.001	−0.016	−0.001
	(0.017)	(0.018)	(0.013)	(0.023)	(0.024)
Years_pat = 4-5 x Child 4-5	0.091***	0.047**	0.032**	−0.015	0.010
	(0.017)	(0.018)	(0.013)	(0.023)	(0.024)
Years_pat = 6-7 x Child 4-5	0.107***	0.062***	0.038***	−0.021	0.009
	(0.017)	(0.018)	(0.013)	(0.024)	(0.024)
Years_pat = 8 and more x Child 4-5	0.115***	0.078***	0.049***	−0.001	0.030
	(0.016)	(0.019)	(0.010)	(0.020)	(0.019)
Years_pat = 0-1 x Child 6-7	0.003	0.008	0.018	0.002	0.015
	(0.017)	(0.019)	(0.014)	(0.023)	(0.024)
Years_pat = 2-3 x Child 6-7	0.040**	0.018	0.014	−0.039*	−0.002
	(0.017)	(0.019)	(0.014)	(0.023)	(0.024)
Years_pat = 4-5 x Child 6-7	0.098***	0.027	0.020	−0.007	−0.010
	(0.017)	(0.019)	(0.014)	(0.024)	(0.024)
Years_pat = 6-7 x Child 6-7	0.089***	0.058***	0.034**	−0.047*	0.003
	(0.018)	(0.019)	(0.014)	(0.024)	(0.024)
Years_pat = 8 and more x Child 6-7	0.108***	0.059***	0.045***	−0.029	0.004
	(0.018)	(0.019)	(0.010)	(0.020)	(0.018)
Years_pat = 0-1 x Child 8 or older	−0.005	0.008	−0.003	−0.012	0.019
	(0.010)	(0.011)	(0.008)	(0.014)	(0.015)
Years_pat = 2-3 x Child 8 or older	0.019*	0.012	0.008	−0.020	0.018
	(0.010)	(0.012)	(0.009)	(0.014)	(0.015)
Years_pat = 4-5 x Child 8 or older	0.016	0.026**	−0.003	−0.001	−0.0002
	(0.011)	(0.012)	(0.009)	(0.014)	(0.015)
Years_pat = 6-7 x Child 8 or older	0.047***	0.016	0.019**	−0.009	0.012
	(0.011)	(0.012)	(0.009)	(0.015)	(0.015)
Years_pat = 8 and more x Child 8 or older	0.059***	0.017	0.026***	−0.014	0.011
	(0.011)	(0.012)	(0.007)	(0.012)	(0.012)
Constant	0.141	0.184**	0.136	−0.192*	−0.070
	(0.103)	(0.091)	(0.123)	(0.115)	(0.423)
Controls	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Cell FE	Yes	Yes	Yes	Yes	Yes
Weight	Yes	Yes	Yes	Yes	Yes
Observations	324	342	342	342	342
R^2	0.983	0.964	0.986	0.960	0.986

Note: *p<0.1; **p<0.05; ***p<0.01

The dependant variable is the share of women in each cell who work more than 15 hours on average per week usually in their main job. Men are excluded from the sample. The control variables are cell means, and contain the average number of children in the cell, the proportion of individuals in the cell who achieved the third level of education or upper secondary (lower secondary is the omitted category), who are divorced/widowed/separated or married (single is the omitted category), who have a previous work experience and who are born in the country of residence. All the regressions include year and cell fixed effects and estimated using WLS.

Table D.1: Impact of paternity leave on women's employment rate by country (continued)

	Dependent variable: Employment rate				
	Italy	Netherlands	Poland	Portugal	UK
	(1)	(2)	(3)	(4)	(5)
Years_pat = 0-1 x Child 0-1	0.056***	0.033	0.019	0.045**	−0.002
	(0.009)	(0.021)	(0.013)	(0.022)	(0.012)
Years_pat = 2-3 x Child 0-1	0.036***	0.067***	0.025*	0.005	0.041***
	(0.010)	(0.021)	(0.013)	(0.022)	(0.012)
Years_pat = 4-5 x Child 0-1		0.092***	0.088***	0.027	0.061***
		(0.021)	(0.013)	(0.023)	(0.012)
Years_pat = 6-7 x Child 0-1		0.131***	0.071***	0.015	0.093***
		(0.022)	(0.017)	(0.023)	(0.012)
Years_pat = 8 and more x Child 0-1		0.168***		0.005	0.119***
		(0.019)		(0.020)	(0.009)
Years_pat = 0-1 x Child 2-3	0.049***	0.040*	−0.004	0.030	−0.014
	(0.009)	(0.023)	(0.012)	(0.023)	(0.013)
Years_pat = 2-3 x Child 2-3	0.030***	0.069***	0.017	−0.008	0.016
	(0.009)	(0.023)	(0.013)	(0.023)	(0.013)
Years_pat = 4-5 x Child 2-3		0.143***	0.005	0.017	0.017
		(0.023)	(0.012)	(0.024)	(0.013)
Years_pat = 6-7 x Child 2-3		0.168***	−0.017	0.021	0.047***
		(0.024)	(0.016)	(0.024)	(0.013)
Years_pat = 8 and more x Child 2-3		0.222***		−0.008	0.081***
		(0.020)		(0.020)	(0.010)
Years_pat = 0-1 x Child 4-5	0.044***	0.005	0.015	0.012	0.006
	(0.010)	(0.027)	(0.012)	(0.024)	(0.014)
Years_pat = 2-3 x Child 4-5	0.035***	0.036	−0.022*	0.002	0.002
	(0.010)	(0.027)	(0.013)	(0.024)	(0.014)
Years_pat = 4-5 x Child 4-5		0.068**	−0.010	0.015	0.001
		(0.027)	(0.013)	(0.025)	(0.015)
Years_pat = 6-7 x Child 4-5		0.143***	−0.008	0.003	0.027*
		(0.027)	(0.017)	(0.025)	(0.014)
Years_pat = 8 and more x Child 4-5		0.192***		−0.001	0.069***
		(0.023)		(0.021)	(0.012)
Years_pat = 0-1 x Child 6-7	0.030***	0.035	0.019	−0.004	0.006
	(0.011)	(0.029)	(0.012)	(0.027)	(0.015)
Years_pat = 2-3 x Child 6-7	0.025**	0.038	0.001	−0.012	0.002
	(0.011)	(0.028)	(0.013)	(0.027)	(0.015)
Years_pat = 4-5 x Child 6-7		0.087***	0.005	−0.006	−0.0004
		(0.029)	(0.013)	(0.027)	(0.015)
Years_pat = 6-7 x Child 6-7		0.111***	−0.014	−0.014	0.002
		(0.029)	(0.017)	(0.028)	(0.016)
Years_pat = 8 and more x Child 6-7		0.171***		0.0004	0.036***
		(0.024)		(0.023)	(0.013)
Years_pat = 0-1 x Child 8 or older	0.027***	0.043**	0.006	0.026	0.010
	(0.007)	(0.018)	(0.008)	(0.017)	(0.010)
Years_pat = 2-3 x Child 8 or older	0.018***	0.046**	0.004	−0.014	0.015
	(0.007)	(0.018)	(0.008)	(0.017)	(0.010)
Years_pat = 4-5 x Child 8 or older		0.054***	−0.008	−0.011	0.021**
		(0.019)	(0.008)	(0.017)	(0.010)
Years_pat = 6-7 x Child 8 or older		0.076***	−0.025**	0.013	0.026**
		(0.019)	(0.010)	(0.017)	(0.010)
Years_pat = 8 and more x Child 8 or older		0.121***		−0.011	0.041***
		(0.015)		(0.014)	(0.008)
Constant	0.056	0.005	−1.549*	1.228***	0.095
	(0.094)	(0.187)	(0.860)	(0.135)	(0.107)
Controls	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Cell FE	Yes	Yes	Yes	Yes	Yes
Weight	Yes	Yes	Yes	Yes	Yes
Observations	342	306	234	342	324
R^2	0.987	0.943	0.989	0.940	0.986

Note: *p<0.1; **p<0.05; ***p<0.01

The dependant variable is the share of women in each cell who work more than 15 hours on average per week usually in their main job. Men are excluded from the sample. The control variables are cell means, and contain the average number of children in the cell, the proportion of individuals in the cell who achieved the third level of education or upper secondary (lower secondary is the omitted category), who are divorced/widowed/separated or married (single is the omitted category), who have a previous work experience and who are born in the country of residence. All the regressions include year and cell fixed effects and estimated using WLS.

Table D.2: Impact of paternity leave on women hours worked by country

	Dependent variable: Average weekly hours worked				
	Germany	Spain	France	Greece	Hungary
	(1)	(2)	(3)	(4)	(5)
Years_pat = 0-1 x Child 0-1	−1.719***	−1.438***	−0.054	0.515	0.262
	(0.374)	(0.399)	(0.224)	(0.565)	(0.296)
Years_pat = 2-3 x Child 0-1	−1.447***	−0.943**	−0.002	−0.562	0.651**
	(0.389)	(0.412)	(0.230)	(0.574)	(0.306)
Years_pat = 4-5 x Child 0-1	−0.737*	−0.253	0.055	0.214	−0.117
	(0.389)	(0.427)	(0.239)	(0.575)	(0.299)
Years_pat = 6-7 x Child 0-1	0.194	−0.004	−0.251	0.321	−0.314
	(0.387)	(0.435)	(0.249)	(0.594)	(0.307)
Years_pat = 8 and more x Child 0-1	0.450	0.039	−0.157	0.954*	−0.306
	(0.387)	(0.423)	(0.212)	(0.512)	(0.234)
Years_pat = 0-1 x Child 2-3	−0.372	−1.146***	0.041	0.083	−0.345
	(0.424)	(0.414)	(0.240)	(0.554)	(0.295)
Years_pat = 2-3 x Child 2-3	−0.594	−0.982**	−0.070	0.151	0.761**
	(0.408)	(0.417)	(0.244)	(0.560)	(0.306)
Years_pat = 4-5 x Child 2-3	−1.002**	−0.611	−0.445*	−0.127	0.514*
	(0.415)	(0.426)	(0.247)	(0.560)	(0.299)
Years_pat = 6-7 x Child 2-3	0.325	−0.004	−0.542**	0.019	−0.042
	(0.412)	(0.431)	(0.262)	(0.574)	(0.300)
Years_pat = 8 and more x Child 2-3	0.693*	−0.176	−0.273	0.029	0.053
	(0.418)	(0.429)	(0.213)	(0.492)	(0.235)
Years_pat = 0-1 x Child 4-5	−0.327	−0.961**	0.198	0.559	0.399
	(0.465)	(0.444)	(0.266)	(0.595)	(0.323)
Years_pat = 2-3 x Child 4-5	0.125	−1.088**	−0.164	0.245	0.016
	(0.450)	(0.448)	(0.271)	(0.597)	(0.328)
Years_pat = 4-5 x Child 4-5	0.633	−1.146**	0.081	1.024*	0.693**
	(0.452)	(0.449)	(0.268)	(0.594)	(0.329)
Years_pat = 6-7 x Child 4-5	1.456***	−0.374	−0.023	0.416	0.449
	(0.455)	(0.448)	(0.276)	(0.621)	(0.329)
Years_pat = 8 and more x Child 4-5	1.760***	0.344	0.380*	0.708	0.322
	(0.449)	(0.466)	(0.208)	(0.514)	(0.253)
Years_pat = 0-1 x Child 6-7	0.438	−1.368***	−0.040	0.158	−0.345
	(0.473)	(0.451)	(0.288)	(0.604)	(0.322)
Years_pat = 2-3 x Child 6-7	0.027	−0.710	0.137	−0.580	−0.060
	(0.474)	(0.459)	(0.289)	(0.607)	(0.327)
Years_pat = 4-5 x Child 6-7	0.913*	−0.695	0.334	−0.013	−0.096
	(0.473)	(0.458)	(0.290)	(0.614)	(0.330)
Years_pat = 6-7 x Child 6-7	0.866*	0.434	0.336	−0.646	0.293
	(0.485)	(0.458)	(0.296)	(0.624)	(0.328)
Years_pat = 8 and more x Child 6-7	1.877***	−0.371	0.458**	−0.876*	0.297
	(0.479)	(0.463)	(0.220)	(0.509)	(0.247)
Years_pat = 0-1 x Child 8 or older	−1.141***	−0.694**	−0.134	0.330	0.033
	(0.281)	(0.275)	(0.180)	(0.372)	(0.199)
Years_pat = 2-3 x Child 8 or older	−0.430	−0.732**	0.058	0.216	0.075
	(0.278)	(0.289)	(0.185)	(0.374)	(0.204)
Years_pat = 4-5 x Child 8 or older	−0.614**	−0.696**	0.250	0.059	−0.224
	(0.293)	(0.287)	(0.195)	(0.374)	(0.203)
Years_pat = 6-7 x Child 8 or older	0.230	−0.932***	0.102	−0.492	0.051
	(0.295)	(0.301)	(0.199)	(0.379)	(0.206)
Years_pat = 8 and more x Child 8 or older	0.631**	−0.409	0.271*	0.087	0.071
	(0.300)	(0.301)	(0.152)	(0.323)	(0.157)
Constant	39.759***	37.062***	33.142***	30.409***	46.764***
	(2.804)	(2.202)	(2.615)	(2.986)	(5.744)
Controls	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Cell FE	Yes	Yes	Yes	Yes	Yes
Weight	Yes	Yes	Yes	Yes	Yes
Observations	324	342	342	342	342
R^2	0.989	0.911	0.934	0.841	0.831

Note: *p<0.1; **p<0.05; ***p<0.01

The dependant variable is the average weekly hours worked usually in the main job in each cell. Men are excluded from the sample. The control variables are cell means, and contain the average number of children in the cell, the proportion of individuals in the cell who achieved the third level of education or upper secondary (lower secondary is the omitted category), who are divorced/widowed/separated or married (single is the omitted category), who have a previous work experience and who are born in the country of residence. All the regressions include year and cell fixed effects and estimated using WLS.

Table D.2: Impact of paternity leave on women hours worked by country (continued)

	Dependent variable: Average weekly hours worked				
	Italy	Netherlands	Poland	Portugal	UK
	(1)	(2)	(3)	(4)	(5)
Years_pat = 0-1 x Child 0-1	1.414***	0.219	0.574**	0.231	0.428
	(0.287)	(0.649)	(0.273)	(0.436)	(0.383)
Years_pat = 2-3 x Child 0-1	0.385	1.161*	0.564**	−0.207	0.535
	(0.297)	(0.652)	(0.276)	(0.438)	(0.391)
Years_pat = 4-5 x Child 0-1		1.620**	0.752***	0.450	1.153***
		(0.665)	(0.277)	(0.447)	(0.383)
Years_pat = 6-7 x Child 0-1		2.584***	0.929**	−0.056	1.599***
		(0.693)	(0.361)	(0.451)	(0.390)
Years_pat = 8 and more x Child 0-1		4.374***		0.001	2.152***
		(0.599)		(0.398)	(0.298)
Years_pat = 0-1 x Child 2-3	0.894***	0.605	−0.145	−0.008	0.065
	(0.282)	(0.718)	(0.249)	(0.457)	(0.410)
Years_pat = 2-3 x Child 2-3	0.475*	0.850	0.028	−0.401	−0.052
	(0.287)	(0.714)	(0.269)	(0.457)	(0.415)
Years_pat = 4-5 x Child 2-3		2.080***	−0.118	−0.231	−0.070
		(0.732)	(0.267)	(0.462)	(0.420)
Years_pat = 6-7 x Child 2-3		2.699***	−0.180	−0.306	1.177***
		(0.753)	(0.334)	(0.463)	(0.421)
Years_pat = 8 and more x Child 2-3		4.706***		−0.207	1.314***
		(0.629)		(0.397)	(0.337)
Years_pat = 0-1 x Child 4-5	0.963***	0.049	−0.364	0.038	0.997**
	(0.297)	(0.842)	(0.263)	(0.468)	(0.458)
Years_pat = 2-3 x Child 4-5	0.257	0.536	−0.805***	0.643	0.894*
	(0.297)	(0.840)	(0.268)	(0.470)	(0.461)
Years_pat = 4-5 x Child 4-5		0.614	−0.559**	−0.040	0.849*
		(0.851)	(0.283)	(0.481)	(0.471)
Years_pat = 6-7 x Child 4-5		2.105**	−0.158	0.261	1.679***
		(0.846)	(0.363)	(0.485)	(0.463)
Years_pat = 8 and more x Child 4-5		3.705***		0.416	1.860***
		(0.702)		(0.400)	(0.375)
Years_pat = 0-1 x Child 6-7	0.952***	0.716	−0.113	0.592	0.228
	(0.329)	(0.890)	(0.261)	(0.523)	(0.473)
Years_pat = 2-3 x Child 6-7	0.868***	0.828	−0.259	0.426	0.486
	(0.334)	(0.879)	(0.273)	(0.526)	(0.481)
Years_pat = 4-5 x Child 6-7		1.742*	−0.266	0.305	0.666
		(0.893)	(0.273)	(0.532)	(0.488)
Years_pat = 6-7 x Child 6-7		2.602***	−0.421	0.054	0.230
		(0.908)	(0.354)	(0.535)	(0.500)
Years_pat = 8 and more x Child 6-7		3.953***		0.315	0.334
		(0.748)		(0.438)	(0.402)
Years_pat = 0-1 x Child 8 or older	0.510**	0.582	0.028	−0.328	0.339
	(0.208)	(0.556)	(0.168)	(0.324)	(0.314)
Years_pat = 2-3 x Child 8 or older	0.297	0.330	0.017	−1.107***	0.328
	(0.210)	(0.568)	(0.172)	(0.327)	(0.319)
Years_pat = 4-5 x Child 8 or older		0.484	0.004	−1.116***	0.463
		(0.579)	(0.176)	(0.331)	(0.326)
Years_pat = 6-7 x Child 8 or older		0.773	−0.346	−1.102***	0.600*
		(0.579)	(0.219)	(0.333)	(0.328)
Years_pat = 8 and more x Child 8 or older		2.126***		−1.039***	0.375
		(0.474)		(0.276)	(0.273)
Constant	33.408***	21.565***	32.446*	43.700***	25.519***
	(2.878)	(5.834)	(18.368)	(2.635)	(3.436)
Controls	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Cell FE	Yes	Yes	Yes	Yes	Yes
Weight	Yes	Yes	Yes	Yes	Yes
Observations	342	306	234	342	324
R^2	0.965	0.967	0.865	0.516	0.989

Note: *p<0.1; **p<0.05; ***p<0.01

The dependant variable is the average weekly hours worked usually in the main job in each cell. Men are excluded from the sample. The control variables are cell means, and contain the average number of children in the cell, the proportion of individuals in the cell who achieved the third level of education or upper secondary (lower secondary is the omitted category), who are divorced/widowed/separated or married (single is the omitted category), who have a previous work experience and who are born in the country of residence. All the regressions include year and cell fixed effects and estimated using WLS.

Appendix E : Relative effect by country

Table E.1: Impact of paternity leave on relative employment rate by country

	Dependent variable: Employment rate				
	Germany	Spain	France	Greece	Hungary
	(1)	(2)	(3)	(4)	(5)
Woman x Years_pat = 0-1 x Child 0-1	−0.076***	0.030	0.003	−0.014	−0.031
	(0.017)	(0.023)	(0.013)	(0.033)	(0.031)
Woman x Years_pat = 2-3 x Child 0-1	−0.038**	0.047**	0.012	−0.048	0.003
	(0.017)	(0.023)	(0.013)	(0.033)	(0.032)
Woman x Years_pat = 4-5 x Child 0-1	0.023	0.097***	0.019	−0.035	−0.009
	(0.017)	(0.023)	(0.013)	(0.033)	(0.032)
Woman x Years_pat = 6-7 x Child 0-1	0.046***	0.088***	0.039***	−0.046	−0.014
	(0.017)	(0.023)	(0.013)	(0.033)	(0.032)
Woman x Years_pat = 8 and more x Child 0-1	0.056***	0.078***	0.047***	−0.042	−0.036
	(0.017)	(0.023)	(0.009)	(0.026)	(0.023)
Woman x Years_pat = 0-1 x Child 2-3	0.039**	0.027	0.028*	−0.035	−0.027
	(0.018)	(0.025)	(0.014)	(0.032)	(0.031)
Woman x Years_pat = 2-3 x Child 2-3	0.067***	0.050**	0.035**	−0.039	0.014
	(0.018)	(0.025)	(0.014)	(0.032)	(0.032)
Woman x Years_pat = 4-5 x Child 2-3	0.066***	0.089***	0.037**	−0.066**	0.015
	(0.018)	(0.025)	(0.014)	(0.032)	(0.032)
Woman x Years_pat = 6-7 x Child 2-3	0.113***	0.083***	0.069***	−0.059*	0.009
	(0.018)	(0.025)	(0.014)	(0.032)	(0.032)
Woman x Years_pat = 8 and more x Child 2-3	0.135***	0.085***	0.083***	−0.079***	0.055**
	(0.018)	(0.025)	(0.011)	(0.025)	(0.023)
Woman x Years_pat = 0-1 x Child 4-5	0.020	0.011	0.049***	−0.031	−0.057
	(0.020)	(0.027)	(0.016)	(0.035)	(0.034)
Woman x Years_pat = 2-3 x Child 4-5	0.078***	0.001	0.012	−0.031	−0.045
	(0.020)	(0.027)	(0.016)	(0.035)	(0.035)
Woman x Years_pat = 4-5 x Child 4-5	0.127***	0.023	0.049***	−0.028	−0.024
	(0.020)	(0.027)	(0.016)	(0.035)	(0.035)
Woman x Years_pat = 6-7 x Child 4-5	0.125***	0.028	0.055***	−0.026	−0.034
	(0.020)	(0.027)	(0.016)	(0.035)	(0.035)
Woman x Years_pat = 8 and more x Child 4-5	0.140***	0.052*	0.067***	−0.073***	0.010
	(0.020)	(0.027)	(0.012)	(0.027)	(0.026)
Woman x Years_pat = 0-1 x Child 6-7	0.044**	0.046	0.046**	−0.005	0.020
	(0.021)	(0.029)	(0.018)	(0.036)	(0.035)
Woman x Years_pat = 2-3 x Child 6-7	0.064***	0.012	0.023	−0.033	−0.006
	(0.021)	(0.029)	(0.018)	(0.036)	(0.035)
Woman x Years_pat = 4-5 x Child 6-7	0.103***	−0.010	0.038**	−0.009	−0.018
	(0.021)	(0.029)	(0.018)	(0.036)	(0.035)
Woman x Years_pat = 6-7 x Child 6-7	0.107***	0.013	0.054***	−0.036	−0.024
	(0.021)	(0.029)	(0.018)	(0.036)	(0.035)
Woman x Years_pat = 8 and more x Child 6-7	0.126***	0.019	0.066***	−0.065**	−0.010
	(0.021)	(0.029)	(0.013)	(0.028)	(0.026)
Woman x Years_pat = 0-1 x Child 8 or older	−0.004	0.015	0.025**	−0.019	−0.005
	(0.012)	(0.017)	(0.011)	(0.022)	(0.021)
Woman x Years_pat = 2-3 x Child 8 or older	0.010	0.003	0.030***	−0.005	−0.022
	(0.012)	(0.017)	(0.011)	(0.022)	(0.021)
Woman x Years_pat = 4-5 x Child 8 or older	0.026**	0.012	0.025**	0.010	−0.026
	(0.012)	(0.017)	(0.011)	(0.022)	(0.021)
Woman x Years_pat = 6-7 x Child 8 or older	0.042***	−0.018	0.038***	−0.003	−0.020
	(0.012)	(0.017)	(0.011)	(0.022)	(0.021)
Woman x Years_pat = 8 and more x Child 8 or older	0.059***	−0.011	0.043***	−0.040**	−0.043***
	(0.012)	(0.017)	(0.008)	(0.017)	(0.016)
Constant	0.663***	0.568***	0.564***	0.772***	0.382
	(0.069)	(0.072)	(0.075)	(0.082)	(0.301)
Controls	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Cell FE	Yes	Yes	Yes	Yes	Yes
Weight	Yes	Yes	Yes	Yes	Yes
Observations	648	684	684	684	684
R^2	0.990	0.984	0.993	0.987	0.980

Note: *p<0.1; **p<0.05; ***p<0.01

The dependant variable is the share of individuals in each cell who work more than 15 hours on average per week usually in their main job. The control variables are cell means, and contain the average number of children in the cell, the proportion of individuals in the cell who achieved the third level of education or upper secondary (lower secondary is the omitted category), who are divorced/widowed/separated or married (single is the omitted category), who have a previous work experience and who are born in the country of residence. All the regressions include sex-year and cell fixed effects and estimated using WLS.

Table E.1: Impact of paternity leave on relative employment rate by country (continued)

	Dependent variable: Employment rate				
	Italy	Netherlands	Poland	Portugal	UK
	(1)	(2)	(3)	(4)	(5)
Woman x Years_pat = 0-1 x Child 0-1	−0.006	0.047*	0.006	0.035	−0.005
	(0.015)	(0.027)	(0.016)	(0.032)	(0.017)
Woman x Years_pat = 2-3 x Child 0-1	−0.012	0.060**	0.005	−0.007	0.034**
	(0.015)	(0.027)	(0.016)	(0.032)	(0.017)
Woman x Years_pat = 4-5 x Child 0-1		0.093***	0.073***	0.046	0.061***
		(0.027)	(0.016)	(0.032)	(0.017)
Woman x Years_pat = 6-7 x Child 0-1		0.125***	0.079***	0.030	0.074***
		(0.027)	(0.021)	(0.032)	(0.017)
Woman x Years_pat = 8 and more x Child 0-1		0.138***		0.024	0.103***
		(0.022)		(0.025)	(0.013)
Woman x Years_pat = 0-1 x Child 2-3	−0.0001	0.036	−0.0001	0.024	−0.015
	(0.015)	(0.030)	(0.014)	(0.033)	(0.018)
Woman x Years_pat = 2-3 x Child 2-3	0.002	0.064**	0.020	−0.024	0.013
	(0.015)	(0.030)	(0.014)	(0.033)	(0.018)
Woman x Years_pat = 4-5 x Child 2-3		0.113***	0.017	0.012	0.024
		(0.030)	(0.014)	(0.033)	(0.018)
Woman x Years_pat = 6-7 x Child 2-3		0.161***	−0.005	0.044	0.041**
		(0.030)	(0.019)	(0.033)	(0.018)
Woman x Years_pat = 8 and more x Child 2-3		0.185***		−0.010	0.055***
		(0.024)		(0.026)	(0.014)
Woman x Years_pat = 0-1 x Child 4-5	−0.005	−0.003	0.016	−0.0002	−0.001
	(0.016)	(0.035)	(0.015)	(0.034)	(0.021)
Woman x Years_pat = 2-3 x Child 4-5	0.004	0.015	−0.019	−0.012	0.004
	(0.016)	(0.035)	(0.015)	(0.034)	(0.021)
Woman x Years_pat = 4-5 x Child 4-5		0.043	−0.005	−0.009	0.010
		(0.035)	(0.015)	(0.034)	(0.021)
Woman x Years_pat = 6-7 x Child 4-5		0.123***	−0.012	−0.007	0.018
		(0.035)	(0.020)	(0.034)	(0.021)
Woman x Years_pat = 8 and more x Child 4-5		0.144***		−0.017	0.056***
		(0.028)		(0.027)	(0.016)
Woman x Years_pat = 0-1 x Child 6-7	−0.017	0.013	0.017	−0.012	0.003
	(0.018)	(0.037)	(0.015)	(0.038)	(0.022)
Woman x Years_pat = 2-3 x Child 6-7	−0.017	0.028	−0.005	−0.030	−0.004
	(0.018)	(0.037)	(0.015)	(0.038)	(0.022)
Woman x Years_pat = 4-5 x Child 6-7		0.073*	0.005	−0.009	0.003
		(0.037)	(0.015)	(0.038)	(0.022)
Woman x Years_pat = 6-7 x Child 6-7		0.107***	−0.007	−0.015	−0.016
		(0.037)	(0.020)	(0.038)	(0.022)
Woman x Years_pat = 8 and more x Child 6-7		0.126***		−0.031	0.015
		(0.030)		(0.030)	(0.017)
Woman x Years_pat = 0-1 x Child 8 or older	−0.017	0.053**	0.004	0.013	−0.004
	(0.011)	(0.024)	(0.010)	(0.024)	(0.014)
Woman x Years_pat = 2-3 x Child 8 or older	−0.022**	0.046*	0.001	−0.013	0.011
	(0.011)	(0.024)	(0.010)	(0.024)	(0.014)
Woman x Years_pat = 4-5 x Child 8 or older		0.047**	−0.001	−0.031	0.022
		(0.024)	(0.010)	(0.024)	(0.014)
Woman x Years_pat = 6-7 x Child 8 or older		0.087***	−0.001	0.0003	0.009
		(0.024)	(0.013)	(0.024)	(0.014)
Woman x Years_pat = 8 and more x Child 8 or older		0.101***		−0.040**	0.032***
		(0.019)		(0.020)	(0.011)
Constant	0.417***	0.869***	−0.698	1.496***	0.653***
	(0.066)	(0.110)	(0.553)	(0.090)	(0.071)
Controls	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Cell FE	Yes	Yes	Yes	Yes	Yes
Weight	Yes	Yes	Yes	Yes	Yes
Observations	684	612	468	684	648
R^2	0.994	0.977	0.992	0.968	0.987

Note: *p<0.1; **p<0.05; ***p<0.01

The dependant variable is the share of individuals in each cell who work more than 15 hours on average per week usually in their main job. The control variables are cell means, and contain the average number of children in the cell, the proportion of individuals in the cell who achieved the third level of education or upper secondary (lower secondary is the omitted category), who are divorced/widowed/separated or married (single is the omitted category), who have a previous work experience and who are born in the country of residence. All the regressions include sex-year and cell fixed effects and estimated using WLS.

Table E.2: Impact of paternity leave on relative hours worked by country

	Dependent variable: Average weekly hours worked				
	Germany	Spain	France	Greece	Hungary
	(1)	(2)	(3)	(4)	(5)
Woman x Years_pat = 0-1 x Child 0-1	−2.067***	−1.877***	−0.297	0.245	0.341
	(0.451)	(0.507)	(0.325)	(0.782)	(0.356)
Woman x Years_pat = 2-3 x Child 0-1	−0.856*	−0.954*	−0.114	−1.015	0.436
	(0.448)	(0.507)	(0.324)	(0.782)	(0.362)
Woman x Years_pat = 4-5 x Child 0-1	−0.118	0.040	0.222	−0.178	0.080
	(0.450)	(0.507)	(0.326)	(0.783)	(0.357)
Woman x Years_pat = 6-7 x Child 0-1	0.489	0.040	0.011	0.120	0.007
	(0.450)	(0.507)	(0.325)	(0.784)	(0.358)
Woman x Years_pat = 8 and more x Child 0-1	0.673	0.154	−0.042	0.545	0.026
	(0.450)	(0.508)	(0.237)	(0.613)	(0.263)
Woman x Years_pat = 0-1 x Child 2-3	−0.663	−1.415***	0.078	−0.133	0.065
	(0.495)	(0.542)	(0.359)	(0.767)	(0.356)
Woman x Years_pat = 2-3 x Child 2-3	−0.543	−0.985*	−0.545	−0.141	1.026***
	(0.492)	(0.542)	(0.358)	(0.768)	(0.361)
Woman x Years_pat = 4-5 x Child 2-3	−1.009**	−0.471	−0.717**	−1.251	0.836**
	(0.499)	(0.541)	(0.359)	(0.770)	(0.358)
Woman x Years_pat = 6-7 x Child 2-3	0.408	−0.194	−0.383	−1.025	0.697*
	(0.494)	(0.541)	(0.359)	(0.769)	(0.359)
Woman x Years_pat = 8 and more x Child 2-3	0.795	0.342	−0.183	−0.589	0.720***
	(0.493)	(0.542)	(0.263)	(0.603)	(0.265)
Woman x Years_pat = 0-1 x Child 4-5	−0.255	−1.690***	0.211	0.366	0.034
	(0.551)	(0.593)	(0.407)	(0.828)	(0.389)
Woman x Years_pat = 2-3 x Child 4-5	0.388	−1.711***	−0.410	−0.699	−0.227
	(0.545)	(0.594)	(0.408)	(0.829)	(0.392)
Woman x Years_pat = 4-5 x Child 4-5	0.847	−1.907***	−0.672	0.171	0.562
	(0.547)	(0.593)	(0.408)	(0.830)	(0.391)
Woman x Years_pat = 6-7 x Child 4-5	1.604***	−0.747	−0.107	−0.588	0.291
	(0.548)	(0.594)	(0.408)	(0.831)	(0.390)
Woman x Years_pat = 8 and more x Child 4-5	1.723***	0.624	0.601**	−0.314	0.314
	(0.545)	(0.591)	(0.299)	(0.647)	(0.290)
Woman x Years_pat = 0-1 x Child 6-7	0.529	−1.885***	−0.285	−0.102	−0.468
	(0.573)	(0.620)	(0.443)	(0.854)	(0.391)
Woman x Years_pat = 2-3 x Child 6-7	0.033	−1.711***	−0.714	−1.465*	−0.037
	(0.573)	(0.622)	(0.443)	(0.855)	(0.394)
Woman x Years_pat = 4-5 x Child 6-7	0.433	−1.771***	−0.111	−0.772	0.023
	(0.575)	(0.625)	(0.443)	(0.856)	(0.393)
Woman x Years_pat = 6-7 x Child 6-7	1.052*	−0.214	−0.253	−1.782**	0.515
	(0.572)	(0.621)	(0.445)	(0.854)	(0.395)
Woman x Years_pat = 8 and more x Child 6-7	1.561***	−0.331	0.384	−1.885***	0.708**
	(0.573)	(0.621)	(0.324)	(0.674)	(0.288)
Woman x Years_pat = 0-1 x Child 8 or older	−1.331***	−1.258***	−0.504*	0.162	0.180
	(0.333)	(0.369)	(0.271)	(0.526)	(0.241)
Woman x Years_pat = 2-3 x Child 8 or older	−0.945***	−1.159***	−0.647**	−0.132	0.073
	(0.329)	(0.375)	(0.273)	(0.527)	(0.243)
Woman x Years_pat = 4-5 x Child 8 or older	−1.281***	−1.061***	−0.373	−0.215	0.072
	(0.337)	(0.375)	(0.275)	(0.527)	(0.242)
Woman x Years_pat = 6-7 x Child 8 or older	−0.453	−1.460***	−0.637**	−0.653	0.299
	(0.331)	(0.379)	(0.273)	(0.527)	(0.243)
Woman x Years_pat = 8 and more x Child 8 or older	−0.105	−0.922**	−0.232	−1.034**	0.119
	(0.332)	(0.374)	(0.202)	(0.418)	(0.178)
Constant	45.065***	44.986***	42.010***	41.813***	43.169***
	(1.851)	(1.574)	(1.877)	(1.958)	(3.404)
Controls	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Cell FE	Yes	Yes	Yes	Yes	Yes
Weight	Yes	Yes	Yes	Yes	Yes
Observations	648	684	684	684	684
R^2	0.995	0.981	0.992	0.966	0.948

Note: *p<0.1; **p<0.05; ***p<0.01

The dependant variable is the average weekly hours worked usually in the main job in each cell. The control variables are cell means, and contain the average number of children in the cell, the proportion of individuals in the cell who achieved the third level of education or upper secondary (lower secondary is the omitted category), who are divorced/widowed/separated or married (single is the omitted category), who have a previous work experience and who are born in the country of residence. All the regressions include sex-year and cell fixed effects and estimated using WLS.

Table E.2: Impact of paternity leave on relative hours worked by country (continued)

	Dependent variable: Average weekly hours worked				
	Italy	Netherlands	Poland	Portugal	UK
	(1)	(2)	(3)	(4)	(5)
Woman x Years_pat = 0-1 x Child 0-1	0.923**	0.433	0.721**	0.146	0.636
	(0.453)	(0.846)	(0.362)	(0.580)	(0.503)
Woman x Years_pat = 2-3 x Child 0-1	0.485	1.237	1.093***	−0.667	0.825
	(0.455)	(0.846)	(0.361)	(0.579)	(0.505)
Woman x Years_pat = 4-5 x Child 0-1		2.191**	1.418***	0.445	2.127***
		(0.849)	(0.362)	(0.579)	(0.505)
Woman x Years_pat = 6-7 x Child 0-1		3.249***	1.740***	−0.021	2.992***
		(0.854)	(0.482)	(0.579)	(0.509)
Woman x Years_pat = 8 and more x Child 0-1		5.023***		0.021	3.739***
		(0.686)		(0.456)	(0.384)
Woman x Years_pat = 0-1 x Child 2-3	0.476	−0.034	0.577*	−0.382	0.475
	(0.457)	(0.945)	(0.328)	(0.609)	(0.547)
Woman x Years_pat = 2-3 x Child 2-3	0.399	0.501	0.748**	−0.825	0.506
	(0.458)	(0.944)	(0.329)	(0.607)	(0.549)
Woman x Years_pat = 4-5 x Child 2-3		1.047	0.997***	−0.315	1.222**
		(0.945)	(0.330)	(0.606)	(0.552)
Woman x Years_pat = 6-7 x Child 2-3		3.006***	0.992**	−0.587	2.528***
		(0.950)	(0.439)	(0.608)	(0.553)
Woman x Years_pat = 8 and more x Child 2-3		4.580***		−0.420	3.200***
		(0.763)		(0.478)	(0.425)
Woman x Years_pat = 0-1 x Child 4-5	0.095	−0.048	−0.006	0.167	0.516
	(0.482)	(1.125)	(0.353)	(0.626)	(0.624)
Woman x Years_pat = 2-3 x Child 4-5	0.053	0.339	−0.059	0.575	1.721***
	(0.482)	(1.122)	(0.354)	(0.625)	(0.625)
Woman x Years_pat = 4-5 x Child 4-5		0.396	0.271	0.164	2.156***
		(1.122)	(0.355)	(0.627)	(0.626)
Woman x Years_pat = 6-7 x Child 4-5		2.725**	0.442	0.180	2.473***
		(1.125)	(0.470)	(0.628)	(0.629)
Woman x Years_pat = 8 and more x Child 4-5		3.997***		0.481	3.766***
		(0.907)		(0.496)	(0.483)
Woman x Years_pat = 0-1 x Child 6-7	−0.051	−0.110	0.239	0.603	0.143
	(0.538)	(1.181)	(0.350)	(0.695)	(0.647)
Woman x Years_pat = 2-3 x Child 6-7	−0.178	0.377	0.295	0.695	0.682
	(0.537)	(1.177)	(0.350)	(0.696)	(0.647)
Woman x Years_pat = 4-5 x Child 6-7		1.014	0.505	0.767	1.765***
		(1.179)	(0.351)	(0.695)	(0.648)
Woman x Years_pat = 6-7 x Child 6-7		2.142*	0.811*	0.009	0.946
		(1.177)	(0.464)	(0.698)	(0.652)
Woman x Years_pat = 8 and more x Child 6-7		3.519***		0.478	2.253***
		(0.953)		(0.554)	(0.494)
Woman x Years_pat = 0-1 x Child 8 or older	−0.573*	0.567	0.044	−0.842*	0.206
	(0.328)	(0.751)	(0.224)	(0.437)	(0.420)
Woman x Years_pat = 2-3 x Child 8 or older	−1.064***	−0.020	0.017	−1.576***	0.201
	(0.330)	(0.755)	(0.225)	(0.438)	(0.423)
Woman x Years_pat = 4-5 x Child 8 or older		0.041	0.344	−1.180***	0.674
		(0.755)	(0.228)	(0.440)	(0.426)
Woman x Years_pat = 6-7 x Child 8 or older		0.457	0.156	−1.337***	1.038**
		(0.753)	(0.299)	(0.440)	(0.430)
Woman x Years_pat = 8 and more x Child 8 or older		1.577***		−1.166***	1.083***
		(0.607)		(0.360)	(0.337)
Constant	42.133***	52.464***	30.653**	46.845***	43.481***
	(1.998)	(3.492)	(12.794)	(1.638)	(2.121)
Controls	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Cell FE	Yes	Yes	Yes	Yes	Yes
Weight	Yes	Yes	Yes	Yes	Yes
Observations	684	612	468	684	648
R^2	0.988	0.991	0.987	0.949	0.995

Note: *p<0.1; **p<0.05; ***p<0.01

The dependant variable is the average weekly hours worked usually in the main job in each cell. The control variables are cell means, and contain the average number of children in the cell, the proportion of individuals in the cell who achieved the third level of education or upper secondary (lower secondary is the omitted category), who are divorced/widowed/separated or married (single is the omitted category), who have a previous work experience and who are born in the country of residence. All the regressions include sex-year and cell fixed effects and estimated using WLS.

Appendix F : Additional results

Table F.1: Impact of paternity leave on the share of women working part time

	Dependent variable : Part time rate			
	(1)	(2)	(3)	(4)
Years_pat = 0-1 x Child 0-1	0.061	0.009	0.012	0.009
	(0.092)	(0.014)	(0.014)	(0.012)
Years_pat = 2-3 x Child 0-1	0.053	0.002	0.008	0.013
	(0.089)	(0.011)	(0.011)	(0.013)
Years_pat = 4-5 x Child 0-1	0.052	−0.007	0.001	0.003
	(0.096)	(0.010)	(0.011)	(0.010)
Years_pat = 6-7 x Child 0-1	0.045	−0.017	−0.009	−0.008
	(0.098)	(0.011)	(0.011)	(0.011)
Years_pat = 8 and more x Child 0-1	0.032	−0.030	−0.021	−0.019
	(0.118)	(0.019)	(0.018)	(0.016)
Years_pat = 0-1 x Child 2-3	0.040	0.011	0.015*	0.014
	(0.090)	(0.008)	(0.009)	(0.009)
Years_pat = 2-3 x Child 2-3	0.032	0.004	0.010	0.011
	(0.091)	(0.008)	(0.008)	(0.008)
Years_pat = 4-5 x Child 2-3	0.041	0.009	0.014	0.019
	(0.097)	(0.008)	(0.009)	(0.012)
Years_pat = 6-7 x Child 2-3	0.039	−0.003	0.004	0.004
	(0.098)	(0.010)	(0.008)	(0.010)
Years_pat = 8 and more x Child 2-3	0.009	−0.023*	−0.013	−0.011
	(0.123)	(0.012)	(0.010)	(0.012)
Years_pat = 0-1 x Child 4-5	0.031	0.006	0.009	0.005
	(0.085)	(0.007)	(0.008)	(0.008)
Years_pat = 2-3 x Child 4-5	0.028	0.004	0.008	0.007
	(0.085)	(0.007)	(0.008)	(0.007)
Years_pat = 4-5 x Child 4-5	0.022	−0.004	0.003	0.005
	(0.093)	(0.007)	(0.009)	(0.009)
Years_pat = 6-7 x Child 4-5	0.018	−0.017**	−0.010	−0.011
	(0.096)	(0.007)	(0.008)	(0.008)
Years_pat = 8 and more x Child 4-5	−0.020	−0.037***	−0.027***	−0.025***
	(0.121)	(0.009)	(0.007)	(0.009)
Years_pat = 0-1 x Child 6-7	0.039	0.002	0.004	−0.001
	(0.087)	(0.008)	(0.010)	(0.012)
Years_pat = 2-3 x Child 6-7	0.033	−0.003	0.003	−0.008
	(0.087)	(0.006)	(0.007)	(0.010)
Years_pat = 4-5 x Child 6-7	0.029	−0.010	−0.003	−0.005
	(0.092)	(0.008)	(0.010)	(0.012)
Years_pat = 6-7 x Child 6-7	0.034	−0.018**	−0.009	−0.013
	(0.096)	(0.007)	(0.007)	(0.010)
Years_pat = 8 and more x Child 6-7	0.002	−0.037***	−0.025**	−0.020*
	(0.122)	(0.012)	(0.010)	(0.012)
Years_pat = 0-1 x Child 8 or older	0.049	0.010*	0.011**	0.007
	(0.084)	(0.006)	(0.005)	(0.008)
Years_pat = 2-3 x Child 8 or older	0.046	0.008	0.012**	0.009
	(0.084)	(0.005)	(0.005)	(0.007)
Years_pat = 4-5 x Child 8 or older	0.043	0.003	0.008*	0.008
	(0.090)	(0.006)	(0.005)	(0.008)
Years_pat = 6-7 x Child 8 or older	0.049	−0.001	0.006	0.011
	(0.094)	(0.006)	(0.005)	(0.008)
Years_pat = 8 and more x Child 8 or older	0.015	−0.020**	−0.010**	0.002
	(0.117)	(0.008)	(0.005)	(0.011)
Constant	0.133***	0.134***	0.226***	0.157**
	(0.031)	(0.010)	(0.077)	(0.064)
Controls	No	No	Yes	Yes
Cell FE	No	Yes	Yes	Yes
Country-year FE	No	Yes	Yes	Yes
Weights	Yes	Yes	Yes	No
Observations	4014	4014	3762	3762
R^2	0.13186	0.98791	0.98983	0.98316

Note: *p<0.1; **p<0.05; ***p<0.01

The dependant variable is the share of women in each cell working part time. Men are excluded from the sample. The control variables are cell means, and contain the average number of children in the cell, the proportion of individuals in the cell who achieved the third level of education or upper secondary (lower secondary is the omitted category), who are divorced/widowed/separated or married (single is the omitted category), who have a previous work experience and who are born in the country of residence. The standard errors are clustered at the country-age of the youngest child level.

Table F.2: Impact of paternity leave on men's employment rate

	Dependent variable : Employment rate			
	(1)	(2)	(3)	(4)
Years_pat = 0-1 x Child 0-1	0.010	0.002	0.003	0.006
	(0.027)	(0.006)	(0.006)	(0.006)
Years_pat = 2-3 x Child 0-1	0.021	0.012**	0.010	0.012*
	(0.030)	(0.005)	(0.006)	(0.007)
Years_pat = 4-5 x Child 0-1	0.010	0.010**	0.002	0.004
	(0.036)	(0.004)	(0.006)	(0.006)
Years_pat = 6-7 x Child 0-1	0.015	0.017**	0.010	0.013
	(0.042)	(0.007)	(0.008)	(0.008)
Years_pat = 8 and more x Child 0-1	0.030	0.032***	0.027***	0.031***
	(0.034)	(0.008)	(0.009)	(0.009)
Years_pat = 0-1 x Child 2-3	0.014	0.002	−0.001	0.001
	(0.028)	(0.007)	(0.008)	(0.007)
Years_pat = 2-3 x Child 2-3	0.018	0.006	−0.0004	0.001
	(0.031)	(0.006)	(0.007)	(0.007)
Years_pat = 4-5 x Child 2-3	0.011	0.007	−0.001	−0.00003
	(0.037)	(0.005)	(0.007)	(0.006)
Years_pat = 6-7 x Child 2-3	0.016	0.013**	0.004	0.005
	(0.043)	(0.006)	(0.008)	(0.007)
Years_pat = 8 and more x Child 2-3	0.036	0.034***	0.026***	0.023***
	(0.033)	(0.009)	(0.008)	(0.007)
Years_pat = 0-1 x Child 4-5	0.005	0.003	0.002	0.002
	(0.026)	(0.006)	(0.007)	(0.006)
Years_pat = 2-3 x Child 4-5	0.013	0.010	0.007	0.010
	(0.028)	(0.006)	(0.006)	(0.007)
Years_pat = 4-5 x Child 4-5	0.001	0.005	−0.002	−0.006
	(0.035)	(0.007)	(0.007)	(0.007)
Years_pat = 6-7 x Child 4-5	0.006	0.011*	0.005	−0.002
	(0.042)	(0.007)	(0.007)	(0.007)
Years_pat = 8 and more x Child 4-5	0.024	0.032***	0.022***	0.006
	(0.031)	(0.009)	(0.008)	(0.006)
Years_pat = 0-1 x Child 6-7	0.00002	−0.003	−0.006	−0.005
	(0.026)	(0.007)	(0.007)	(0.006)
Years_pat = 2-3 x Child 6-7	0.007	0.003	−0.001	−0.013*
	(0.029)	(0.006)	(0.006)	(0.008)
Years_pat = 4-5 x Child 6-7	0.005	0.008	0.0003	−0.008
	(0.034)	(0.005)	(0.005)	(0.006)
Years_pat = 6-7 x Child 6-7	0.007	0.010	0.002	−0.013*
	(0.041)	(0.008)	(0.007)	(0.007)
Years_pat = 8 and more x Child 6-7	0.031	0.034***	0.025***	−0.003
	(0.031)	(0.010)	(0.008)	(0.007)
Years_pat = 0-1 x Child 8 or older	−0.002	0.004	0.003	−0.003
	(0.025)	(0.004)	(0.005)	(0.007)
Years_pat = 2-3 x Child 8 or older	0.002	0.008**	0.005	−0.010
	(0.028)	(0.004)	(0.005)	(0.008)
Years_pat = 4-5 x Child 8 or older	−0.006	0.007*	0.003	−0.012**
	(0.036)	(0.004)	(0.005)	(0.006)
Years_pat = 6-7 x Child 8 or older	0.001	0.014***	0.009*	−0.016***
	(0.042)	(0.005)	(0.006)	(0.006)
Years_pat = 8 and more x Child 8 or older	0.023	0.034***	0.029***	−0.009
	(0.031)	(0.006)	(0.006)	(0.007)
Constant	0.744***	0.915***	0.801***	0.671***
	(0.017)	(0.005)	(0.136)	(0.071)
Controls	No	No	Yes	Yes
Cell FE	No	Yes	Yes	Yes
Country-year FE	No	Yes	Yes	Yes
Weights	Yes	Yes	Yes	No
Observations	4014	4014	3762	3762
R^2	0.25439	0.96869	0.97467	0.95295

Note: *p<0.1; **p<0.05; ***p<0.01

The dependant variable is the share of men in each cell who work more than 15 hours on average per week usually in their main job. Women are excluded from the sample. The control variables are cell means, and contain the average number of children in the cell, the proportion of individuals in the cell who achieved the third level of education or upper secondary (lower secondary is the omitted category), who are divorced/widowed/separated or married (single is the omitted category), who have a previous work experience and who are born in the country of residence. The standard errors are clustered at the country-age of the youngest child level.

Table F.3: Impact of paternity leave on men's hours worked

	Dependent variable : Average weekly hours worked			
	(1)	(2)	(3)	(4)
Years_pat = 0-1 x Child 0-1	0.335	0.124	0.051	0.150
	(0.702)	(0.104)	(0.089)	(0.097)
Years_pat = 2-3 x Child 0-1	0.364	0.134	0.027	0.086
	(0.684)	(0.101)	(0.111)	(0.113)
Years_pat = 4-5 x Child 0-1	0.155	−0.061	−0.228**	−0.169
	(0.767)	(0.120)	(0.101)	(0.134)
Years_pat = 6-7 x Child 0-1	0.284	0.055	−0.123	−0.106
	(0.796)	(0.175)	(0.159)	(0.159)
Years_pat = 8 and more x Child 0-1	0.216	0.164	−0.063	−0.031
	(1.206)	(0.189)	(0.181)	(0.174)
Years_pat = 0-1 x Child 2-3	0.346	0.010	−0.075	−0.106
	(0.704)	(0.125)	(0.108)	(0.119)
Years_pat = 2-3 x Child 2-3	0.480	0.133	0.020	0.023
	(0.682)	(0.132)	(0.121)	(0.139)
Years_pat = 4-5 x Child 2-3	0.416	0.064	−0.063	−0.047
	(0.784)	(0.198)	(0.175)	(0.185)
Years_pat = 6-7 x Child 2-3	0.527	0.179	0.017	0.065
	(0.856)	(0.224)	(0.205)	(0.198)
Years_pat = 8 and more x Child 2-3	0.407	0.216	−0.022	−0.044
	(1.232)	(0.221)	(0.217)	(0.193)
Years_pat = 0-1 x Child 4-5	0.437	0.107	0.058	−0.045
	(0.701)	(0.121)	(0.106)	(0.108)
Years_pat = 2-3 x Child 4-5	0.459	0.123	0.047	0.049
	(0.702)	(0.133)	(0.129)	(0.104)
Years_pat = 4-5 x Child 4-5	0.485	0.124	0.030	−0.013
	(0.807)	(0.218)	(0.184)	(0.197)
Years_pat = 6-7 x Child 4-5	0.596	0.232	0.119	0.084
	(0.856)	(0.179)	(0.148)	(0.137)
Years_pat = 8 and more x Child 4-5	0.547	0.267	0.058	−0.135
	(1.250)	(0.186)	(0.187)	(0.132)
Years_pat = 0-1 x Child 6-7	0.521	0.219**	0.138	0.017
	(0.699)	(0.091)	(0.084)	(0.139)
Years_pat = 2-3 x Child 6-7	0.576	0.279**	0.183	0.085
	(0.703)	(0.137)	(0.136)	(0.157)
Years_pat = 4-5 x Child 6-7	0.449	0.144	0.041	−0.156
	(0.789)	(0.187)	(0.183)	(0.203)
Years_pat = 6-7 x Child 6-7	0.608	0.323*	0.201	−0.307
	(0.860)	(0.186)	(0.178)	(0.228)
Years_pat = 8 and more x Child 6-7	0.433	0.285	0.104	−0.437**
	(1.264)	(0.222)	(0.210)	(0.209)
Years_pat = 0-1 x Child 8 or older	0.418	0.211***	0.180***	0.0004
	(0.729)	(0.068)	(0.058)	(0.112)
Years_pat = 2-3 x Child 8 or older	0.603	0.398***	0.344***	0.020
	(0.715)	(0.078)	(0.073)	(0.137)
Years_pat = 4-5 x Child 8 or older	0.408	0.207**	0.162**	−0.174
	(0.819)	(0.098)	(0.078)	(0.197)
Years_pat = 6-7 x Child 8 or older	0.503	0.327**	0.275***	−0.213
	(0.839)	(0.132)	(0.099)	(0.192)
Years_pat = 8 and more x Child 8 or older	0.691	0.604***	0.517***	−0.150
	(1.280)	(0.157)	(0.132)	(0.166)
Constant	41.773***	45.787***	41.964***	40.587***
	(0.414)	(0.125)	(1.600)	(1.573)
Controls	No	No	Yes	Yes
Cell FE	No	Yes	Yes	Yes
Country-year FE	No	Yes	Yes	Yes
Weights	Yes	Yes	Yes	No
Observations	4014	4014	3762	3762
R^2	0.15314	0.9672	0.96779	0.916

Note: *p<0.1; **p<0.05; ***p<0.01

The dependant variable is the average weekly hours worked usually in the main job in each cell. Women are excluded from the sample. The control variables are cell means, and contain the average number of children in the cell, the proportion of individuals in the cell who achieved the third level of education or upper secondary (lower secondary is the omitted category), who are divorced/widowed/separated or married (single is the omitted category), who have a previous work experience and who are born in the country of residence. The standard errors are clustered at the country-age of the youngest child level.

Table F.4: Impact of paternity leave on the share of men working part time

	Dependent variable : Part time rate			
	(1)	(2)	(3)	(4)
Years_pat = 0-1 x Child 0-1	−0.012	−0.007**	−0.003	−0.007**
	(0.016)	(0.003)	(0.003)	(0.003)
Years_pat = 2-3 x Child 0-1	−0.014	−0.010***	−0.003	−0.007**
	(0.018)	(0.003)	(0.003)	(0.003)
Years_pat = 4-5 x Child 0-1	−0.010	−0.007**	0.003	−0.001
	(0.020)	(0.003)	(0.003)	(0.002)
Years_pat = 6-7 x Child 0-1	−0.018	−0.014***	−0.004	−0.007
	(0.021)	(0.005)	(0.005)	(0.005)
Years_pat = 8 and more x Child 0-1	−0.020	−0.021***	−0.007	−0.009**
	(0.029)	(0.006)	(0.006)	(0.005)
Years_pat = 0-1 x Child 2-3	−0.013	−0.005	−0.00002	−0.001
	(0.016)	(0.003)	(0.003)	(0.003)
Years_pat = 2-3 x Child 2-3	−0.016	−0.008**	−0.001	−0.003
	(0.017)	(0.004)	(0.003)	(0.003)
Years_pat = 4-5 x Child 2-3	−0.014	−0.007**	0.001	−0.001
	(0.019)	(0.003)	(0.003)	(0.003)
Years_pat = 6-7 x Child 2-3	−0.019	−0.011**	−0.001	−0.001
	(0.021)	(0.005)	(0.004)	(0.004)
Years_pat = 8 and more x Child 2-3	−0.025	−0.020***	−0.006	−0.006
	(0.028)	(0.006)	(0.005)	(0.005)
Years_pat = 0-1 x Child 4-5	−0.017	−0.007**	−0.005	−0.002
	(0.015)	(0.004)	(0.003)	(0.003)
Years_pat = 2-3 x Child 4-5	−0.019	−0.009**	−0.005	−0.004
	(0.017)	(0.004)	(0.003)	(0.003)
Years_pat = 4-5 x Child 4-5	−0.019	−0.009**	−0.003	−0.003
	(0.019)	(0.004)	(0.003)	(0.005)
Years_pat = 6-7 x Child 4-5	−0.022	−0.011**	−0.005	−0.006*
	(0.022)	(0.006)	(0.004)	(0.003)
Years_pat = 8 and more x Child 4-5	−0.029	−0.021***	−0.010*	−0.002
	(0.028)	(0.005)	(0.005)	(0.003)
Years_pat = 0-1 x Child 6-7	−0.016	−0.007***	−0.005**	−0.003
	(0.016)	(0.003)	(0.002)	(0.004)
Years_pat = 2-3 x Child 6-7	−0.020	−0.011***	−0.007**	−0.004
	(0.017)	(0.004)	(0.003)	(0.003)
Years_pat = 4-5 x Child 6-7	−0.017	−0.008**	−0.003	0.004
	(0.019)	(0.004)	(0.004)	(0.007)
Years_pat = 6-7 x Child 6-7	−0.018	−0.009**	−0.004	0.020***
	(0.021)	(0.004)	(0.004)	(0.007)
Years_pat = 8 and more x Child 6-7	−0.026	−0.020***	−0.012**	0.009
	(0.027)	(0.006)	(0.005)	(0.006)
Years_pat = 0-1 x Child 8 or older	−0.012	−0.003	−0.002	0.003
	(0.016)	(0.002)	(0.002)	(0.002)
Years_pat = 2-3 x Child 8 or older	−0.015	−0.005*	−0.004	0.004
	(0.017)	(0.003)	(0.003)	(0.003)
Years_pat = 4-5 x Child 8 or older	−0.014	−0.005*	−0.003	0.005
	(0.019)	(0.003)	(0.002)	(0.003)
Years_pat = 6-7 x Child 8 or older	−0.018	−0.009***	−0.008***	0.005*
	(0.021)	(0.004)	(0.003)	(0.003)
Years_pat = 8 and more x Child 8 or older	−0.025	−0.017***	−0.014***	0.007*
	(0.028)	(0.004)	(0.004)	(0.003)
Constant	0.042***	0.005***	−0.086	−0.020
	(0.008)	(0.001)	(0.059)	(0.044)
Controls	No	No	Yes	Yes
Cell FE	No	Yes	Yes	Yes
Country-year FE	No	Yes	Yes	Yes
Weights	Yes	Yes	Yes	No
Observations	4014	4014	3762	3762
R^2	0.19578	0.94308	0.94868	0.87509

Note: *p<0.1; **p<0.05; ***p<0.01

The dependant variable is the share of men in each cell working part time. Women are excluded from the sample. The control variables are cell means, and contain the average number of children in the cell, the proportion of individuals in the cell who achieved the third level of education or upper secondary (lower secondary is the omitted category), who are divorced/widowed/separated or married (single is the omitted category), who have a previous work experience and who are born in the country of residence. The standard errors are clustered at the country-age of the youngest child level.

Appendix G : Robustness checks

Table G.1: Impact of paternity leave on the employment rate in the different samples

	Dependent variable: Employment rate			
	All sample	Above 100 obs	Own child	First child
	(1)	(2)	(3)	(4)
Years_pat = 0-1 x Child 0-1	−0.0002	−0.00002	0.017***	0.024***
	(0.012)	(0.011)	(0.006)	(0.006)
Years_pat = 2-3 x Child 0-1	0.012	0.012	0.026***	0.035***
	(0.012)	(0.011)	(0.006)	(0.010)
Years_pat = 4-5 x Child 0-1	0.036**	0.037***	0.056***	0.061***
	(0.015)	(0.014)	(0.011)	(0.013)
Years_pat = 6-7 x Child 0-1	0.053***	0.053***	0.069***	0.069***
	(0.016)	(0.015)	(0.014)	(0.012)
Years_pat = 8 and more x Child 0-1	0.062***	0.062***	0.080***	0.082***
	(0.019)	(0.019)	(0.021)	(0.021)
Years_pat = 0-1 x Child 2-3	0.010	0.011	0.010	0.021***
	(0.008)	(0.008)	(0.008)	(0.007)
Years_pat = 2-3 x Child 2-3	0.020***	0.020***	0.019***	0.013*
	(0.006)	(0.006)	(0.005)	(0.007)
Years_pat = 4-5 x Child 2-3	0.039***	0.039***	0.043***	0.045***
	(0.012)	(0.012)	(0.014)	(0.010)
Years_pat = 6-7 x Child 2-3	0.060***	0.060***	0.057***	0.052***
	(0.013)	(0.013)	(0.015)	(0.014)
Years_pat = 8 and more x Child 2-3	0.078***	0.079***	0.077***	0.052**
	(0.018)	(0.017)	(0.023)	(0.023)
Years_pat = 0-1 x Child 4-5	0.015*	0.015**	0.007	0.018**
	(0.008)	(0.007)	(0.006)	(0.008)
Years_pat = 2-3 x Child 4-5	0.013	0.014	0.010	0.010
	(0.011)	(0.010)	(0.008)	(0.012)
Years_pat = 4-5 x Child 4-5	0.025*	0.025*	0.017	-0.006
	(0.013)	(0.013)	(0.011)	(0.012)
Years_pat = 6-7 x Child 4-5	0.048***	0.049***	0.043***	0.018
	(0.015)	(0.014)	(0.015)	(0.016)
Years_pat = 8 and more x Child 4-5	0.061***	0.063***	0.060***	0.019
	(0.018)	(0.017)	(0.021)	(0.020)
	(0.018)	(0.017)	(0.019)	(0.018)
Years_pat = 0-1 x Child 6-7	0.015***	0.016***	0.015***	0.001
	(0.004)	(0.005)	(0.004)	(0.007)
Years_pat = 2-3 x Child 6-7	0.005	0.006	0.006	−0.005
	(0.008)	(0.009)	(0.007)	(0.007)
Years_pat = 4-5 x Child 6-7	0.019	0.020	0.020*	0.006
	(0.014)	(0.013)	(0.011)	(0.010)
Years_pat = 6-7 x Child 6-7	0.029**	0.030**	0.029**	0.011
	(0.014)	(0.014)	(0.014)	(0.017)
Years_pat = 8 and more x Child 6-7	0.047***	0.048***	0.056***	0.017
	(0.017)	(0.017)	(0.018)	(0.015)
Years_pat = 0-1 x Child 8 or older	0.009**	0.010***	0.018***	0.017***
	(0.004)	(0.004)	(0.004)	(0.004)
Years_pat = 2-3 x Child 8 or older	0.007*	0.007*	0.020***	0.016***
	(0.004)	(0.004)	(0.004)	(0.004)
Years_pat = 4-5 x Child 8 or older	0.007	0.006	0.026***	0.023***
	(0.006)	(0.005)	(0.006)	(0.005)
Years_pat = 6-7 x Child 8 or older	0.022***	0.021***	0.040***	0.035***
	(0.007)	(0.007)	(0.009)	(0.007)
Years_pat = 8 and more x Child 8 or older	0.031***	0.031***	0.054***	0.041***
	(0.011)	(0.010)	(0.014)	(0.012)
Constant	−0.093	−0.123	−0.081	−0.175*
	(0.088)	(0.088)	(0.105)	(0.102)
Controls	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Cell FE	Yes	Yes	Yes	Yes
Weight	Yes	Yes	Yes	Yes
Observations	3762	3616	2963	2650
R^2	0.97265	0.97409	0.97596	0.9766

Note: *p<0.1; **p<0.05; ***p<0.01

The dependant variable is the share of women in each cell who work more than 15 hours on average per week usually in their main job. Men are excluded from the sample. All the regressions contain control variables, cell and country-year fixed effects. The control variables are cell means, and contain the average number of children in the cell, the proportion of individuals in the cell who achieved the third level of education or upper secondary (lower secondary is the omitted category), who are divorced/widowed/separated or married (single is the omitted category), who have a previous work experience and who are born in the country of residence. The standard errors are clustered at the country-age of the youngest child level. Column 1 presents the results for all the sample, column 2 for all cells containing at least 100 observations, columns 3 and 4 present respectively results for women living with their own child and women living with their own first child.

Table G.2: Impact of paternity leave on the hours worked in the different samples

	Dependent variable: Average weekly hours worked			
	All sample	Above 100 obs	Own child	First child
	(1)	(2)	(3)	(4)
Years_pat = 0-1 x Child 0-1	-0.205	-0.193	-0.036	0.121
	(0.282)	(0.271)	(0.263)	(0.264)
Years_pat = 2-3 x Child 0-1	-0.067	-0.032	0.094	0.365*
	(0.230)	(0.212)	(0.228)	(0.204)
Years_pat = 4-5 x Child 0-1	0.359*	0.368*	0.514**	0.916***
	(0.215)	(0.211)	(0.228)	(0.267)
Years_pat = 6-7 x Child 0-1	0.741***	0.774***	0.959***	1.308***
	(0.270)	(0.260)	(0.328)	(0.370)
Years_pat = 8 and more x Child 0-1	1.250**	1.289***	1.572**	1.792**
	(0.517)	(0.497)	(0.633)	(0.717)
Years_pat = 0-1 x Child 2-3	-0.190	-0.191	-0.209	-0.124
	(0.187)	(0.186)	(0.215)	(0.222)
Years_pat = 2-3 x Child 2-3	-0.049	-0.040	0.019	-0.018
	(0.158)	(0.157)	(0.191)	(0.202)
Years_pat = 4-5 x Child 2-3	0.011	0.039	0.200	0.083
	(0.182)	(0.178)	(0.224)	(0.196)
Years_pat = 6-7 x Child 2-3	0.607**	0.645***	0.754**	0.653**
	(0.244)	(0.236)	(0.300)	(0.297)
Years_pat = 8 and more x Child 2-3	1.116**	1.162***	1.348**	0.741
	(0.460)	(0.446)	(0.556)	(0.583)
Years_pat = 0-1 x Child 4-5	0.021	0.031	-0.030	-0.228
	(0.200)	(0.192)	(0.223)	(0.259)
Years_pat = 2-3 x Child 4-5	-0.033	-0.058	-0.077	-0.349
	(0.261)	(0.244)	(0.270)	(0.241)
Years_pat = 4-5 x Child 4-5	0.197	0.201	0.040	-0.286
	(0.254)	(0.251)	(0.267)	(0.301)
Years_pat = 6-7 x Child 4-5	0.822***	0.824***	0.762***	0.322
	(0.259)	(0.252)	(0.275)	(0.222)
Years_pat = 8 and more x Child 4-5	1.354***	1.382***	1.360***	0.502
	(0.364)	(0.371)	(0.477)	(0.442)
Years_pat = 0-1 x Child 6-7	-0.009	-0.017	0.031	-0.126
	(0.226)	(0.219)	(0.219)	(0.219)
Years_pat = 2-3 x Child 6-7	-0.053	-0.074	-0.093	-0.227
	(0.179)	(0.180)	(0.193)	(0.189)
Years_pat = 4-5 x Child 6-7	0.169	0.196	0.137	0.244
	(0.245)	(0.230)	(0.209)	(0.191)
Years_pat = 6-7 x Child 6-7	0.513**	0.515**	0.464*	0.031
	(0.233)	(0.225)	(0.256)	(0.252)
Years_pat = 8 and more x Child 6-7	0.963**	0.997***	1.084**	0.281
	(0.380)	(0.375)	(0.448)	(0.351)
Years_pat = 0-1 x Child 8 or older	-0.259*	-0.262*	-0.051	-0.115
	(0.145)	(0.141)	(0.148)	(0.122)
Years_pat = 2-3 x Child 8 or older	-0.280**	-0.287**	-0.136	-0.204*
	(0.129)	(0.126)	(0.153)	(0.117)
Years_pat = 4-5 x Child 8 or older	-0.313**	-0.319**	-0.119	-0.139
	(0.134)	(0.129)	(0.133)	(0.131)
Years_pat = 6-7 x Child 8 or older	-0.130	-0.139	0.095	-0.033
	(0.169)	(0.165)	(0.209)	(0.183)
Years_pat = 8 and more x Child 8 or older	0.409*	0.394*	0.685**	0.379
	(0.230)	(0.219)	(0.325)	(0.269)
Constant	33.212***	32.218***	32.698***	35.196***
	(1.951)	(2.007)	(2.161)	(2.114)
Controls	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Cell FE	Yes	Yes	Yes	Yes
Weight	Yes	Yes	Yes	Yes
Observations	3762	3616	2963	2650
R^2	0.98326	0.98402	0.98457	0.98181

Note: *p<0.1; **p<0.05; ***p<0.01

The dependant variable is the average weekly hours worked usually in the main job in each cell. Men are excluded from the sample. All the regressions contain control variables, cell and country-year fixed effects. The control variables are cell means, and contain the average number of children in the cell, the proportion of individuals in the cell who achieved the third level of education or upper secondary (lower secondary is the omitted category), who are divorced/widowed/separated or married (single is the omitted category), who have a previous work experience and who are born in the country of residence. The standard errors are clustered at the country-age of the youngest child level. Column 1 presents the results for all the sample, column 2 for all cells containing at least 100 observations, columns 3 and 4 present respectively results for women living with their own child and women living with their own first child.