

Father Quotas and the Labor Market and Fertility Decisions of Households

Lidia Farré*

University of Barcelona, IAE-CSIC and IZA

Libertad González

Universitat Pompeu Fabra and Barcelona GSE

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Abstract

This paper studies the effects of the introduction of a parental leave quota for fathers on households' labor market and fertility decisions. Identification is based on the 2007 reform of the Spanish family benefit system, which extended the sixteen weeks of paid parental leave by two additional weeks, exclusively reserved for fathers and non-transferable to mothers. Using a regression discontinuity design, we show that the reform substantially increased the take-up rate of fathers (by 400%), as well as the re-employment probability of mothers shortly after childbirth (by 11%). We also estimate a negative short-term effect on subsequent fertility of around 6%. However, these effects do not persist over time, suggesting a limited scope for the two additional weeks of the fathers' quota to alter household behaviors beyond the parental leave period.

Keywords: Natural experiment, daddy quota, paternity leave, gender and labor market
JEL: J48; J13; J16.

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1. Introduction

Parental leave policies were initially designed to protect a mother and her child's health at an early age, as well as to balance family and market work. The main economic feature of these policies is the right to return to a previous employment position within a certain period (job-protected leave).¹ However, the labor market effects of family policies are complex and not always well-understood.

Extended maternity leave permits reduce effective employment immediately after birth, but have negligible or even positive effects on the labor market attachment of mothers in the long term (Lalive and Zweimüller 2009; Lalive et al. 2014; Schönberg and Ludsteck 2014). However, very generous programs may have a detrimental effect on the wages and job opportunities of women, in particular at the top end of the skill distribution (Blau and Kahn 2013; Albrecht et al. 2015).

While in most countries both parents are eligible to take time off from work after a child is born, the large majority of leave-takers are women (OECD 2015). To increase fathers' involvement in childcare activities and reduce gender specialization within the family, many countries have implemented parental leave entitlements for fathers which are not transferable to mothers. Time reserved for fathers also has the potential to reduce statistical discrimination against women in the labor market if both parents take time off to look after their children.

The existing evidence indicates that a leave period or "quota" reserved for fathers provides strong short-term incentives to increase their participation in parental leave (Ekberg et al. 2013, Bartel et al. 2015, Patnaik 2015). However, its effectiveness in increasing fathers' long-term involvement in childrearing activities and household work has not been confirmed in most countries. Ekberg et al. (2013) argue that the lack of fathers' involvement beyond the paternity leave period may respond to the persistence of social norms that public policy cannot easily modify.

This paper studies the effects of the introduction of a paternity leave quota in Spain. As most Southern European countries, Spain is characterized by a relatively low rate of female employment and a not very generous family benefit system. Prior to the reform, the paid parental leave period lasted sixteen weeks, six of them reserved for mothers immediately after birth. While parents had the possibility to share ten weeks of the leave, fathers' participation on parental leave was negligible (see Figure 1). In March

¹ The period of job-absence may be paid, unpaid or partially paid depending on each country specific policy (OECD 2015).

2007, a permit of two weeks exclusively reserved for fathers and non-transferable to mothers was introduced. Figure 1 shows that the new regulation dramatically increased fathers' take-up rate of parental leave. One year after implementation, 279,756 fathers had applied for a paternity leave permit, which represented 54% of all new fathers. Currently, the share of fathers on paternity leave is around 60% of all births.²

We employ a regression discontinuity design to quantify the effects of this "daddy quota" on the labor market outcomes and fertility decision of households. Our empirical analysis indicates that the introduction of a "take-it-or-leave-it" share of the paid parental leave for fathers substantially increased their take-up rate, as well as the employment probability of mothers after childbirth. We also find evidence that shortly after birth fathers take more days off related to family reasons. However, these effects do not go beyond the baby's first birthday. Lastly, we also observe that the quota initially decreases higher order fertility, particularly among women who become first-time mothers after the reform. However, the longer-term fertility pattern of families in the treatment group does not differ from that in the control group.

The paper is structured as follows. In the next section we describe the institutional setting and develop testable hypothesis on how the 2007 reform might have affected households' labor market and fertility decisions. Section 3 describes the methodological approach, followed by the description of the data in Section 4. The results are presented in Section 5, and some concluding remarks follow in section 6.

2. Background and hypotheses

2.1 Institutional setting

As in most countries, parental leave mandates in Spain have evolved to accommodate the increasing number of women in the labor market and to reduce gender disparities at the workplace. Figure 2 shows the evolution of the employment rate for mothers with children under 1 year old. This rate has more than doubled since the late 1980s. The employment rate of fathers has remained constant, around 90%, over the last few decades, slightly decreasing during the last few years as a result of the economic recession.

As compared to other European countries, the system of family benefits in Spain is rather scarce, though it has become more generous and gender neutral over time.

² Note that only employed parents can benefit from a paid period of parental leave.

Until 1989, working women were entitled to 14 weeks of paid protected job leave, and fathers could take 2 days off after the baby's birth.³ In 1989 the maternity leave period was extended to 16 weeks, and mothers could transfer the last 4 weeks of the leave to fathers.⁴

In 1999, a law to promote work and family life (Law 39/1999) allowed mothers to transfer up to 10 weeks of the maternity leave period (16 weeks) to fathers. These weeks could be enjoyed simultaneously or subsequently to those of the mother. The new regulation also established that the first 6 weeks after the baby's birth were compulsory and exclusively reserved to the mother.⁵

In March 2007 the Socialist Party in government passed the Law 3/2007 on effective equality between men and women.⁶ The Law contained measures to foster gender equality in several fields: from electoral norms to violence against women or public contracts. It also modified the parental leave period by introducing a two weeks period of paid leave exclusively reserved for fathers and non-transferable to mothers.⁷ Parents could take the leave simultaneously or subsequently to that of the mother, with the only restriction that the 6 weeks after birth were compulsory and exclusively reserved for the mother. The paternity leave period should have been progressively extended to 4 weeks by 2011. However, the severe economic recession in Spain has postponed this extension. Table 1 summarizes the main contents of the successive parental leave reforms in Spain.

The introduction of the daddy quota immediately increased the participation of fathers in parental leave (Figure 1). Below we investigate the implications of the 2007 reforms on the labor market outcomes of parents and their fertility decisions.

³ Until 1994 (Law 42/1994, December 30, 1994) female workers on maternity leave were considered as transitory disabled to work and received a 100% wage replacement rate.

⁴ The extension of the maternity leave period to 16 weeks was regulated by Law 3/1989. The law was passed on March 3, 1989; published on March 8, 1989 and implemented on March 28, 1989.

⁵ The Law 39/1999 was passed on November 5, 1999; published on November 6, 1999 and implemented on November 7, 1999.

⁶ The Law 3/2007 was passed on March 22, 2007; published on March 23, 2007 and implemented on March 24, 2007.

⁷ Since 1980 fathers were entitled to 2 days of job absence after the baby's birth. The 2007 reform introduced a 13 days period of leave with a 100% wage replacement rate.

2.2 Effects on the labor market and fertility decisions

The main goal of the father's quota was to foster gender equality and promote the labor market chances of women. In the short-run the introduction of the two weeks of "use-it or loss-it" option for fathers should increase their participation in parental leave. The reform is also likely to positively affect the labor supply of mothers, as they can go back to work earlier while the father takes care of the baby. These two effects should be particularly strong if the shared period of parental leave before the reform was binding (Patnaik 2015).

In the long-run there may also be labor market effects related to changes in social norms and statistical discrimination. The father's quota aims at decreasing female specialization in human capital for household work and child care. A more egalitarian distribution of tasks within the household should allow women to increase their labor market attachment and lead to less gendered careers (Becker 1991; Lazear and Rosen 1990). It may also be that the greater involvement of women in the labor market affects employers' hiring and promotion decision in favor of female workers. As a result, the reform should positively affect the long-term labor market outcomes of women in terms of labor market participation, career achievements and earnings (Phelps 1972; Lazear and Rosen 1990). Conversely, the labor market prospects of fathers may worsen as a result of their greater participation in home production.

The quota may also affect the fertility decisions of household members through its effect on parental labor market prospects and on the distribution of child care costs. First, the policy may increase father's involvement in childcare activities and decrease the direct cost of having children for women. This would positively affect fertility. Second, the quota may also increase the opportunity cost of having children for women if it improves their labor market prospects. As a result fertility would decrease (Hotz et al 1997). Finally, the quota represents a shift of child care costs from mothers to fathers. Doepke and Kindermann (2016) show that this change in the distribution of child cost may lead to a decrease in fertility if the amount of men who switches from agreeing to disagreeing with having a child as a result of quota is much larger than that of women who switches from disagreeing to agreeing. Note that this scenario is plausible if initially child care costs are disproportionately borne by women.

3. Methodology- A natural experiment

We follow a regression discontinuity approach and focus on families (mothers and fathers) who had a child right before and right after the implementation of the reform (for instance, 3, 6 and 9 months before and after March 2007). The “running variable” is the month of birth, and the treatment variable is a dummy indicating the “post-reform” period (families who had a child after March 2007). Note that none of the other reforms that were implemented simultaneously with the extended paternity leave (i.e. electoral norms, regulation of gender violence, etc...) would be expected to affect differentially the families with children born right before and right after March 2007.

We estimate the following equation:

$$(1) Y_{it} = \alpha + \beta Post_{it} + \gamma m + \lambda Post * m + \mu X_{it} + u_{it},$$

where Y is an outcome variable (say, mother’s labor market participation 6 months after birth) for household i who had a child in month t , $Post$ is an indicator for the child being born after the paternity leave extension, m is the running variable (taking value 0 for couples who had a child in April 2007, the first month after the reform was implemented, -1 for the month before, 1 for the month after, and so on), and X is a set of demographic controls, such as age, education and immigrant status.

First we examine the leave-taking behavior of mothers and fathers right after birth and their short-term labor market outcomes. Then we look at longer-term effects (up to three years after the implementation of the reform) on the labor market and fertility outcomes of families with children born close to the reform.

4. Data

In the empirical analysis we employ three different data sets. Most of the results are obtained from the Spanish Labor Force Survey (*Encuesta de Población Activa*) that contains information on the labor market and fertility outcomes of households. We complement the analysis with the administrative data from the Muestra Continua de Vida Laborales (MCVL), which includes information on wages. Finally we also employ data on birth records from the Vital Statistics.

The Spanish Labor Force Survey (*Encuesta de Población Activa*) is conducted every quarter and the main purpose is to collect data on the labor market status of families. Each quarter about 65,000 households are interviewed, which include approximately 180,000 people. We define a sample of families with children born

before (control group) and after (treatment group) the date of implementation of the reform (March 24, 2007). Since the Labor Force Survey does not contain information on the exact day of birth, but only month and year, the treatment group includes families with children born from April 2007 onwards. In our main sample we compare families with children born in a span of 6 months around the reform date (i.e. from October 2006 to March 2007 in the control group and from April 2007 to September 2007 in the treatment group).⁸ Only families where the father and the mother both live in the household are considered in the estimation.⁹

Since the Labor Force Survey is not a panel, we do not observe all families at the same point in time after childbirth. Therefore, to conduct the empirical analysis we define a time window for the interviews (e.g., all quarters in 2008) and observe the behavior of families with children born close to the introduction of the reform, who were interviewed during those quarters. As a result, children in the treatment group are, on average, observed at a younger age than children in the control group. While in the empirical analysis we account for this compositional effect by including a trend in month of birth, the comparison of the descriptive statistics between the pre and post-reform groups reflects a mixture of the effects of the reform and the child-age effect.

To measure the short-term effects of the reform, we observe the relevant families shortly after the time of birth of the child. Accordingly, we define a first sample of families who were interviewed by the Labor Force Survey in the last quarter of 2006 or in any quarter in 2007. Children born just before or after the policy change, in March-April 2007, are on average 4 months old in this sample, which we will thus refer to as "*child age 4 months*".

A second sample is defined by adding interviews from the first two quarters in 2008, so that the average age of children born at the threshold is 8 months. We will refer to this sample as "*child age 8 months*". The longer-term effects of the policy are measured on families observed in 2008 or in 2009, where children born at the threshold are, on average, aged 14 and 26 months, respectively. We then refer to these samples as "*child age 14 months*" and "*child age 26 months*". The linear trend in month of birth in equation (1) controls for age in all specifications.

⁸ We investigate the robustness of our results to reducing and expanding the span to 3 and 9 months.

⁹ Notice that the policy under study aims at increasing father's involvement in childcare activities as an instrument to reduce the impact of childbearing on women's career. Thus the policy change is expected to have mainly affected heterosexual couples.

We estimate the effect of the introduction of the fathers' quota on the behavior of both mothers and fathers in terms of participation in parental leave, labor market outcomes, and fertility decisions. Table 2A presents the descriptive statistics for the labor market outcomes, while Table 2B does so for fertility.

One issue with the Labor Force Survey is that individuals are questioned about their labor market status in the week prior to the survey. The survey does not ask about parental leave specifically, but it does identify individuals who are temporarily absent from work due to parental leave (or other reasons) during the week of reference. Since parental leave in Spain is relatively short, particularly for fathers, and we observe leave-taking in only a single week, we will miss most of the leave episodes. However, as long as births and the average length of leave are uniformly distributed throughout the year, the percentage change in leave taking estimated to result from the policy will be accurately captured, although the level will be understated (see Bartel et al. 2015).

Table 2A compares the labor market outcomes of parents of children born 6 months before and after the introduction of the father's quota in the short-term (samples "*child age 4 months*" and "*child age 8 months*") and the longer-term (samples "*child age 14 months*" and "*child age 26 months*"). The table suggests that the policy was effective in increasing the short-term incentives for fathers to take parental leave. In the sample of families observed shortly after birth ("*child age 4 months*") the average take-up rate before the reform was 0.3% and increased to 3.1% immediately after implementation. In the "*child age 8 months*" sample, where families are observed a few additional months after childbirth, the rates are 0.2% before and 1.6% after the policy change. The comparison in terms of the other labor market outcomes does not suggest important differences across groups.

The table also indicates that the take up rate of maternity leave is higher in the post-reform group (28.6% in "*child age 4 months*" and 15.2% in "*child age 8 months*") than in the pre-reform group (14.3% in "*child age 4 months*" and 9.4% in "*child age 8 months*"). Theoretically, the introduction of the two weeks father quota should not have had a first-order effect on the leave taking behavior of mothers. The differences in take up rates of mothers may be driven by the age composition of children in the control and the treatment group and the fact that mothers in the treatment group in the samples "*child age 4 months*" and "*child age 8 months*" are more likely to be observed right after child birth, during the 16 weeks of parental leave. The empirical analysis below allows

us to assess whether these differences persist once the child-age effect is taken into account.

For mothers, the table also reveals some important differences in terms of other labor market outcomes. In the post-reform groups mothers are more likely to work right after birth (59% in "*child age 4 months*" and 56% in "*child age 8 months*") than those in the pre-reform group (52.5% in "*child age 4 months*" and 53.2% in "*child age 8 months*"). However these differences do not persist in the longer term ("*child age 14 months*" and "*child age 26 months*"). There is also an important increase in the short-term probability of being self-employed between pre-reform (3.7% in "*child age 4 months*" and 4.1% in "*child age 8 months*") and post-reform mothers (5.7% in "*child age 4 months*" and 5.2% in "*child age 8 months*").

Table 2B also suggests some effects of the policy on fertility. The comparison of the higher-order birth probabilities between pre and post-reform mothers suggests a decrease in fertility related to the introduction of the father quota. The probability of additional births decreases from 13% for pre-reform mothers to 7.7% for post-reform mothers. The difference is sharper if we compare mothers with the first child born around the reform (20.4% versus 10.9%). This reduction in fertility also appears in the comparison of the total number of children, which decreases from 1.8 to 1.6 before and after the reform or from 1.2 and 1.1 among women who become mothers for the first time around the reform.

We supplement the analysis with information on earnings obtained from the *Continuous sample of working lives*, a large micro-level panel data set assembled by the Spanish Social Security Administration. The information is obtained from a 4% random sample of all individuals that are (or have been at some point in the reference year) affiliated with Social Security. We select the sample of adult men (women) living in a household with a child born close to March-April 2007, and add up all earnings during the 6 and 12 months following the birth of the relevant child. Fathers earned an average of 18,000 euros during the 12 months after having the child, compared with about 12,000 for mothers.

Finally, the fertility analysis is supplemented with information from birth-certificate data. These micro data are publicly available through the National Statistical Institute, and they record information for the universe of children born (and registered) in Spain annually. We use information on the date of birth of each child, as well as the date of birth of the previous child, to construct subsequent birth rates for women having

a child around March 2007. We construct the fraction of women who had a child in the subsequent 2 and 4 years, by exact date of birth of the child born close to the introduction of the father quota. Since we observe the exact date of birth, we can focus on a narrow window of birth-dates around the threshold (between 1 and 16 weeks). On average, about 6-7% of women had another child during the two years after the previous one, while almost 24% had at least one additional child within four years.

5. Results

The identification strategy here relies on comparing the behaviour of families who had a child right before versus right after the introduction of the two weeks father quota in March 24, 2007. Thus, for all labor market and fertility outcomes identification is achieved via a RDD as formalized in equation (1). We supplement the analysis with DiD specifications to account for potential month-of-birth effects.

5.1 Fathers

The reform approved in March 2007 extended the 16 weeks of the parental leave period by 2 weeks exclusively reserved to fathers and non-transferable to mothers. The aim of the policy was to introduce an incentive system for fathers to participate in parental leave. Thus, we first investigate the effect on the take-up rate by fathers. Figure 5 shows the fraction of fathers by month of birth of the child who reported to be on parental leave at the time of the survey interview in the sample "*child age 8 months*" (i.e. interviews conducted between the third quarter in 2006 and the second quarter in 2008) in the Labor Force Survey. The discrete jump right after March 2007 is clear.

Table 4 shows the corresponding regression results. The table displays the coefficient on the post-reform indicator (β) in equation (1). The estimates in column (1) are obtained from the comparison of fathers with children born within a 6-month window before (control) and after (treatment) the reform. The row "*child age 4 months*" shows the short-term effects when households are interviewed in the last quarter of 2006 or in any quarter in 2007 and the relevant children are 4 months old on average. The row "*child age 8 months*" extends the previous sample to also include observations interviewed in the first or second quarter in 2008, so that the average age of the children is now 8 months. These two samples allow us to estimate the short-term effects of the reform. For the longer-term effects we employ households interviewed one year after

the reform (i.e. 2008, row "*child age 14 months*") or two years after (i.e. 2009, row "*child age 26 months*").

The coefficient on the post-reform indicator of column (1) in the samples where the relevant child is aged 4 or 8 months indicates that the introduction of the two weeks father's quota led to a 0.9 - 1.3 percentage point increase in fathers' leave-taking probability. These point estimates are highly statistically and economically significant, representing more than a 400% of the pre-reform average participation rate of 0.2-0.3%. The long-term effects of the reform are almost negligible with a small positive effect, significantly only at the 10% level, in 2009. The absence of persistence in leave taking behavior responds to the design of the parental leave system in Spain. Accordingly, fathers have to be on leave simultaneously or immediately after the 16 weeks of maternal leave. Thus no long-term effects would be expected.

However, an intended effect of the fathers' quota is to alter the within household childcare task distribution not only after birth but also as the child ages. To investigate this possibility we examine the effect of the quota on a variable that captures absences from work not only due to parental leave but also to take care of sick children or other family responsibilities. The estimates in column (2) suggest a similar short-term positive effect on this alternative measure of fathers' childrearing involvement which seems to be slightly more persistent than the effect uncovered for parental leave participation. According to the estimates in column (2) the reform led to a 0.3-0.6% increase in the fathers' probability of being absent from work due to family reasons beyond the first year after birth, which represents a 150% increase with respect to the pre-reform mean of 0.02%.

Column (3) displays the effect of the policy change on the employment rate of fathers. Our estimates indicate that fathers did not change their work behavior in response to the introduction of the quota. One could think that the provision of incentives to participate in parental leave could damage fathers' work careers as they would now invest more time in child care activities. Previous evidence for Sweden suggests that while the introduction of the father's quota of one month had an immediate positive effect on fathers' parental leave participation, it affected neither their employment prospects nor the distribution of household tasks (Ekberg et al. 2013). Thus

it should not come as a surprise that the shorter quota in Spain did not affect the employment of fathers.¹⁰

The remaining columns in Table 4 investigate the robustness of the previous results to the time window used. The estimates in column (4) and (6) are obtained from the comparison of fathers with children born within 3 months around the reform, and those in columns (7) and (9) from that of children born within 9 months around the reform. Both specifications confirm that the introduction of the daddy quota increased the incentives to participate in parental leave, without having any effect on employment.¹¹

While we find evidence that the policy did not affect the extensive margin of fathers' labor supply, it may still have affected other labor market outcomes. To investigate this possibility, Table 5 compares fathers with children born within 6 months before and after the reform in terms of the probability of having a temporary contract (column 1) or a permanent one (column 2), working part-time (column 3) or full-time (column 4), the number of hours worked (column 5), having a managerial occupation (column 6), and being self-employed (column 7). Other than a positive and statistically significant effect on the short-term probability of having a managerial occupation and a positive (negative) effect of having a temporary (permanent) contract, none of the other coefficients is statistically significant. Below we show that only the short-term effect on contract duration is robust after controlling for seasonality. The absence of an economically significant effect on the intensive margin of fathers' labor supply should not come as a surprise given the limited effect of the quota on their time allocation decisions.

The estimates in the previous tables are obtained from comparing the behavior of fathers with children born in different seasons. Children in the control group are born between October 2006 and March 2007, while those in the treatment group are born between April 2007 and September 2007. Previous studies show that there are seasonal changes in the characteristics of women giving birth throughout the year (Clarke et al 2016; Buckles and Hungerman 2008). To incorporate these concerns, we also estimate specifications that include multiple birth years and control for "seasonality" by including calendar month of birth fixed effects in equation (1), thus supplementing the regression discontinuity design (RDD) with difference-in-difference (DiD) estimates. In

¹⁰ The effects were also negligible for the labor market participation rate.

¹¹ The absence of effect on the labor market participation rate are also confirmed in these samples.

particular, we include in estimation fathers with children born 18 months around the reform. That is between October 2005 and September 2008.

The results of the DiD estimates are displayed in Table 6. To conduct the difference in difference estimation we need to modify the timing of our sample. We construct a first sample (DD1) where fathers with children born 18 months around the reform are interviewed in the third or fourth quarter in 2005, or in any quarter in 2006, 2007 and 2008. We also employ a second sample that extends the previous one with the observations in 2009 (DD2), and a third one that adds those in 2010 (DD3). The results in Table 6 confirm that our findings are not driven by seasonality. The estimated effect of the fathers' quota is statistically significant on the probability of being on parental leave and that of being on leave for family reasons. Note that the size of the effect decreases as the span of the sample increases, since fathers are less likely to be on leave as the child ages. In terms of the other employment outcomes, only the positive effect of having a temporary contract in 2008 remains statistically significant. The effect on the probability of having a managerial occupation disappears when controlling for seasonality in the DiD estimation.

The Labor Force Survey does not contain information on wages. Thus we rely on the Social Security data to assess the impact of any effect of the quota on fathers' earnings. We employ the specification in equation (1) and replace the dependent variable by a measure of earnings, either during the 6 or 12 months following birth. Average earnings over the 12 months post-birth are about 18,000 euros. Table 7 reports the estimates of the post-reform coefficient. The results suggest that the father quota did not have an effect on subsequent earnings for fathers. The coefficients are small, switch signs across specifications, and are never statistically different from 0.

5.2 Mothers

We next investigate the effect of the reform on the leave-taking behavior and employment outcomes of mothers. Table 8 presents the same structure than Table 4, but for mothers. Column (1) to (3) shows our preferred specification, where mothers of children born up to 6 months before the reform are compared to those born up to 6 months after. Neither in the short-term (samples "*child age 4 months*" and "*child age 8 months*") nor in the longer ("*child age 14 months*" and "*child age 26 months*") we find any effect of the policy on the leave-taking behavior of mothers or the alternative measure that also includes absence from work to take care of sick children or other

family responsibilities. This result is confirmed by the alternative specifications in columns (4) and (5) where mothers of children born up to 3 months before the reform are compared to those born up to 3 months after and in columns (7) to (8) where mothers of children born up to 9 months before the reform are compared to those born up to 9 months after. This was to be expected, since the reform did not affect the duration or generosity of the leave period available to mothers.

In contrast, the policy seems to have affected the employment behavior of mothers. The estimates in column (3) indicate that post-reform mothers were about 6 percentage points more likely to be employed a few months after giving birth (in samples "*child age 4 months*" and "*child age 8 months*") than pre-reform mothers, which represents an 11% increase from the pre-reform baseline employment rate of 52,5%. This finding is confirmed in columns (6) and (9), and is illustrated graphically in Figure 6.¹²

Increasing the labor market involvement of mothers is an intended effect of the policy. The two weeks of parental leave reserved for fathers should help mothers to smooth their transition into employment after childbirth. However, fathers are allowed to take these two weeks subsequently or simultaneously with mother. Some critical views argue that fathers tend to enjoy their period of leave jointly with mothers reducing the effectiveness of the policy. Table 9 investigate this possibility by estimating the effect of the fathers' quota on the joint leave-taking decisions of cohabiting spouses.¹³ The results show that the reform significantly increased the father-only leave-taking probability by 0.8 to 1.2 percentage points while leaving the other alternatives (mother-only, both or none on leave) unaffected. The magnitude of this effect is similar to that obtained when the leave-taking behavior of fathers is separately analyzed in Table 5. The results in Table 9 reinforce the view that the quota increased the participation of fathers in parental leave and childrearing activities allowing mothers to return to the workplace shortly after birth. However, as it was the case in Table 5, the positive effect of the quota on father-only leave-taking disappears after the first year.¹⁴

Going back to Table 8 the estimates suggest that the positive short-term effects of the quota on mother's employment are also not long lasting. The estimated

¹² The apparent drop in the employment rate in the 4th month post-reform is likely related to the introduction of a universal child benefit in July 2007 (González 2013).

¹³ The regressions include now as additional controls the covariates of both spouses.

¹⁴ These results are also robust when the RDD design is supplemented with a DiD specification to account for potential month-of-birth effects.

coefficients on the probability of being employed are not statistically significant in the "*child age 14 months*" and "*child age 26 months*" samples. The absence of an effect on mothers' employment beyond the first year most probably respond to the limited long-term commitment of fathers in childrearing activities.

Table 10 explores whether the quota had any effect on the other labor market outcomes of mothers. The estimates suggest a positive effect on the probability of having a managerial occupation and being self-employed in the short-term and also in 2008. The effect on self-employment is shown graphically in Figure 7. Table 11 explores the robustness of the results after controlling for seasonality. The DiD estimates confirm that the policy increased mothers' likelihood to return to work shortly after childbirth, as well as the probability of being self-employed, both in the short and the long-term. In particular, the probability of being self-employed increased by 2 percentage points, which represents a 50% increase with respect to the pre-reform mean of 4%. This result would suggest some occupational upgrading by mothers related to the introduction of the fathers' "take-it-or-leave-it" share of parental leave.

Finally, we also investigate the effect of the quota on mothers' earnings prospects using information from the administrative Social Security records. The results are reported in Table 12, for four different specifications and on three different samples that vary in the window in birth months around the threshold included. The first columns suggests that women who had a child after the introduction of the father quota earned significantly more during the first year after birth. The magnitude of the coefficients is close to 6% of annual earnings (for an average of 12,000). However, once we widen the window around the threshold and control for a linear trend in month of birth, the results become smaller in magnitude and insignificant. The results in the third columns suggest that earnings during the 12 years after birth were about 3% higher for women in households that were eligible for the extra weeks of paternity leave, but the coefficient is not precisely estimated, and is only significantly different from 0 with 90% confidence.

In sum, the results for mothers indicate that a policy that reserves time of the parental leave exclusively for fathers allows them to return to work earlier after childbirth. However, this earlier return has a limited effect on their work careers in terms of earnings and other labor market prospects.

5.3 Heterogeneity

The effects of the reform are likely to vary across skill groups. Time off from work may have a higher opportunity cost for high-skilled (or more educated) workers as a result of their higher wages. Moreover, these workers can substitute parental time at home by formal childcare due to their higher incomes. Therefore, high-skilled workers may be less likely to respond to the introduction of the father's quota than the rest of workers.

Table 13 shows the results from the main specifications for fathers and mothers, separately by the level of educational attainment (College graduates in Table 13A and High school graduates or less in Table 13B). The estimates in table 13 confirm that the previous findings are driven by the response of less skilled workers (i.e. high school graduates or less). Column (1) in Table 13 A shows that highly educated fathers (with tertiary education) do not increase participation in parental leave in response to the introduction of the quota. In contrast, the take-up rate of fathers with a high school degree or less increases from 1 to 1.5 percentage points (column 1 in Table 13B). Notice that the magnitude of the effect is in the range of that obtained when the whole sample is employed in estimation in Table 4.¹⁵

Consistently with the non-response to the policy of highly-skilled fathers, we do not observe any effect on the employment behavior of highly educated mothers (see column (6) in Table 13A). In contrast, post-reform low-skilled mothers are 8.5-10.5 percentage points more likely to be employed after childbirth than their pre-reform counterparts (see column (6) in Table 13B). Table 14 also indicates that the impact of the policy on the probability of being self-employed and even that of having a managerial occupation is much larger and persistent than for the highly skilled.¹⁶

The evidence across skill groups indicates that reserving time of the parental leave for fathers had a much stronger effect among low-skilled workers. The quota increased the fathers' take-up rate among those workers and had an economically significant effect on the short-term re-employment probability of low-skilled mothers and also some positive longer-time effects in their occupational distribution.

¹⁵ The DiD estimates in Table A1 in the Appendix confirm that the results in Table 13 are not driven by seasonality.

¹⁶ The DiD estimates in Table A2 in the Appendix confirm that the results in Table 14 are not driven by seasonality

5.4 Fertility

As discussed, the effect of reserving part of the parental leave for fathers on fertility is theoretically ambiguous. If the quota increases father's participation in childrearing activities, the direct cost of having children for women may decrease. In contrast, a greater involvement of women in labor market activities as a result of the quota may increase their opportunity cost of having a baby. Moreover, Doepke and Kinderamn (2016) show that the magnitude of these effects depends on the distribution of men and women preferences over fertility. Figure 6 provides a first visual representation of the effect of the reform on subsequent fertility. It seems that the likelihood of having another child decreases among mothers who had a child right after the introduction of the quota.

Table 15 quantifies this effect. It shows the estimates of the differences in fertility up to three years after the introduction of the father's quota (i.e. 2008, 2009 and 2010) for women who had children around the reform (i.e. up to 6 months before and after). We estimate equation (1) using as dependent variables: an indicator for having had an additional child, and a variable for the total number of children in the household. Column (1) and (2) display the results for all mothers, while columns (3) and (4) show the results only for women who become mothers for the first time around the date of the reform. The results are presented for all levels of education (first row) and separately for high and low-skilled women (subsequent rows).

The estimates indicate that the reform had a negative effect on higher order births, mainly driven by the response of low-educated women. After the reform, low-educated mothers are 2.6 percentage points less likely to have an additional child compared with the pre-reform group. The magnitude of the effect is larger (5.2 percentage points) among women who became mothers for the first time around the date of the reform. This group may be more responsive to the policy change as gender roles and the distribution of tasks within the family may still be not well defined. Thus there is scope for the reform to alter them. In contrast, families who already had children at the time of the reform may have already established a more specialized family model that may be more difficult to change.

The effect on the total number of children in column (2) is also negative. Note that when all mothers are included in the estimation there is no difference across education groups. However, when only first-time mothers are considered (column 4), the reduction in fertility is only statistically significant for low-skilled women. Table A3 in

the appendix presents the results for the difference-in-differences estimation that adds to the model estimated in Table 15 controls for the calendar month of birth. The results in Table A3 show that seasonality is not responsible for the estimated negative effect on fertility.

We can estimate fertility effects more precisely using birth-certificate data. We estimate regressions for the sample of women giving birth within few days of the reform date, where the dependent variable is an indicator for having had an additional child in the following 2 or 4 years, respectively. We again control for a linear trend in date of birth, interacted with the threshold indicator. The main results are reported in Table 16.

Each column includes a different number of birth-dates around March 24, 2007. Our estimates in panel A suggest that families who were eligible for the extended paternity leave were between 6 and 11% less likely to have an additional child during the following two years, consistent with our results using Labor Force Survey data. Panel B shows that the effect is smaller and not significant after four years, suggesting that eligible families took longer to have the following child, but eventually caught up. Results using 6 years (not shown) confirm this conclusion.

The decrease or delay in higher-order births among post-reform mothers may be a non-desirable effect in a country with a lower-than-replacement fertility rate such as Spain. This finding may suggest that while the reform substantially increased fathers' participation in parental leave and reduced the length of mother's career interruptions after childbirth, it may not have induced changes in the distribution of childcare and housework tasks beyond the parental leave period. As a result, the greater labor market attachment of mothers after the reform could have been compensated by a decrease or delay in subsequent fertility.

The short-term negative effect on fertility is also consistent with the predictions of the bargaining fertility model in Doepke and Kinderman (2016). In this model the agreement of both parents is a necessary condition for a birth to occur. The presence of agreement depends on each partner fertility preferences and his or her share of child care costs. In Spain, as in most Southern European countries, child costs are mainly borne by women. The introduction of the father's quota represented a shift in the distribution of child care costs from women to men. In the model by Doepke and Kinderman (2016) this shift may lead to a decrease in fertility if the amount of men who

switch from agreeing to disagreeing with having a child is much larger than that of women who switch from disagreeing to agreeing.

In a survey of 3,307 married or cohabiting women conducted by the CIS in 2006 about 26% of the respondent disagreed with her partner desire to have a(another) child while this number was only 15% among men (see Figure 7).¹⁷ In this survey there is also suggestive evidence that the rate of men's disagreement is more responsive to changes in the distribution of child care costs than that of women (see Figure 8). In this scenario it is plausible that the increase in the father's child costs induced by the reform led to an increase in the number of men who disagreed over having a(another) child larger than that of women who agreed. As a result fertility would have decreased or being postponed.

6. Conclusions

This paper investigates the effect of the introduction of two additional weeks of paid parental leave exclusively reserved for fathers and non-transferable to mothers, from a baseline where fathers were only entitled to 2 days of paid leave after the birth of a child. Using evidence for Spain, we find that the two-week quota substantially increased the short-term incentives of fathers to participate in parental leave. We also find a significant increase in the re-employment probability of mothers shortly after childbirth. Finally, we uncover a negative effect of the reform on higher-order fertility, stronger among women who become mothers for the first time around the reform. These results are mostly driven by low-skilled individuals. While the short-term effects of the 2007 reform are large and economically significant most of them disappear beyond the child's first birthday.

There are at least three possible explanations to account for the short-lasting effects we document in this paper. First, there may be limited scope for public intervention to alter the social or cultural norms that govern the persistent gendered division of household tasks. Indeed our results are consistent with the findings in Ekberg et al. (2013) where the one month daddy quota in Sweden has negligible long-term effects on fathers' involvement in childrearing activities. Second, the size of the quota is not long enough as to motivate a change on individual's behavior in the

¹⁷ In 2006 the CIS conducted a survey to elicit individuals' fertility preferences. The survey "Fertility and values in the XXI century in Spain" is publicly available at http://www.cis.es/cis/openm/ES/1_encuestas/estudios/ver.jsp?estudio=6478.

household and at the workplace. A more intensive reform, such as equalizing the duration of parental leave across both genders, may have a stronger effect on the division of childcare chores. Third, we identify the response to the policy change from comparing the behavior of parents who had children around the reform. This response may not be externally valid for those having children in latter periods. It may be that, as time goes on, the introduction of the quota or an extended version of it leads to a greater involvement of fathers in child care and to a lesser specialization of females in household work. As a result, employers may change their views regarding the hiring and the promotion process of women. In a long-run perspective, if these adjustments take place, the effects of the policy may be potentially stronger. Unfortunately, the effects of the quota on social norms and employers' beliefs will be difficult to capture with the data at hand.

Finally, we report some evidence that a policy that shifts child care costs across parents may have some undesired effects on fertility. This is particularly worrisome in countries with lower-than-replacement fertility rate. The low incidence of the father's quota on the promotion of gender equality and its potential negative effect on fertility suggests that other policies such as subsidized child care may be more effective in balancing the allocation of paid work among gender. For example, flexible and publicly available child care would allow women to choose the optimal amount of time devoted to labor market activities by outsourcing home production. More research is needed to identify the optimal combination of family policies to achieve gender equality in the labor market and at home.

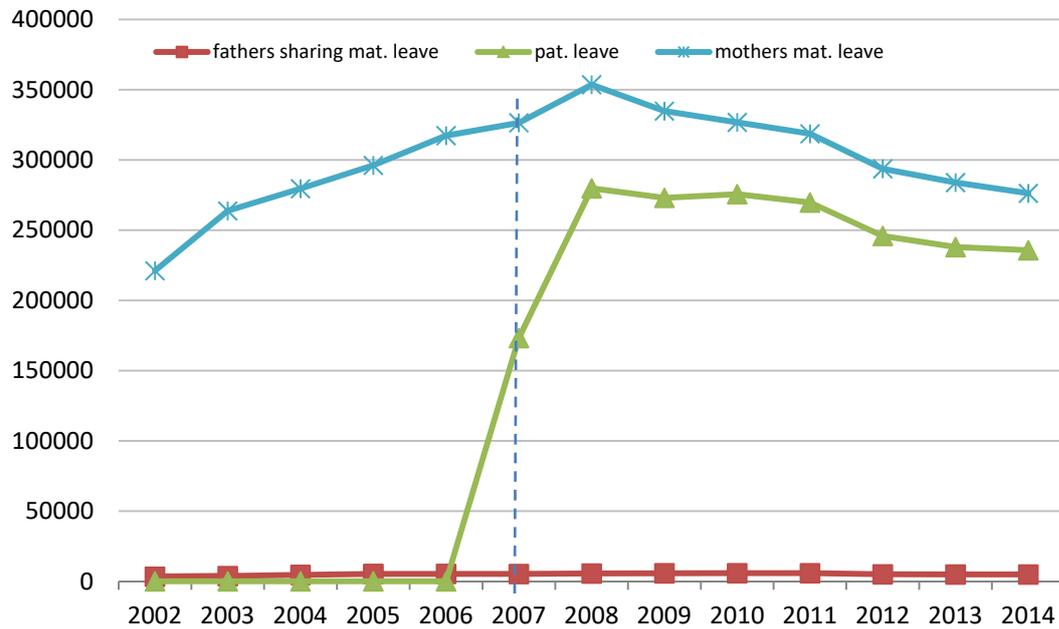
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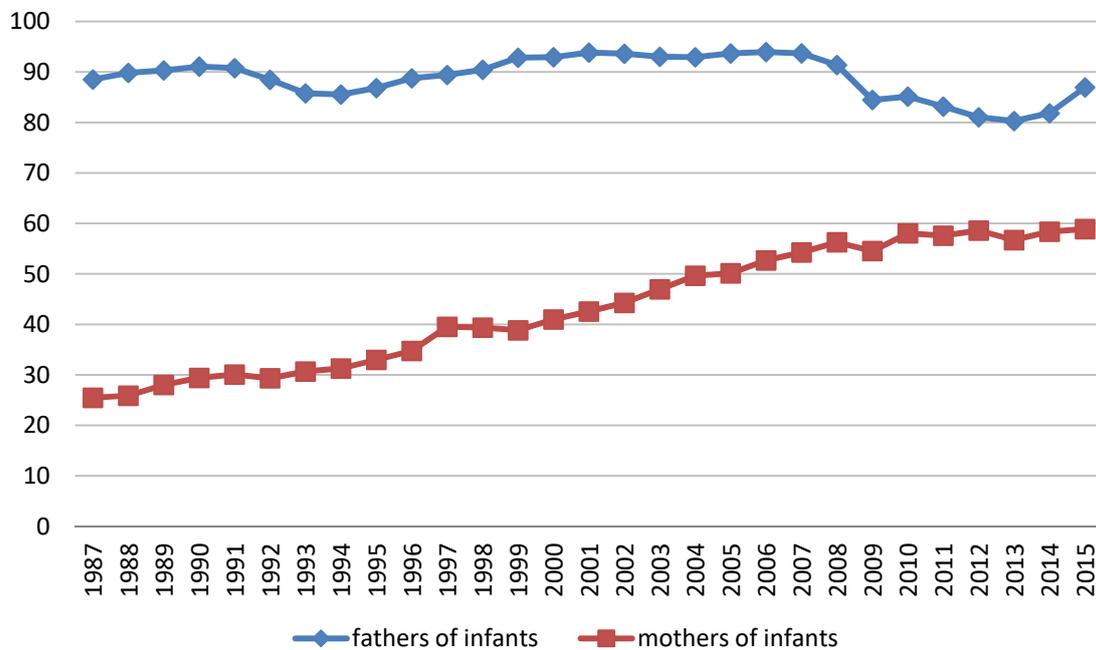
Figures

Figure 1: Number of mothers and fathers taking maternity/paternity leave



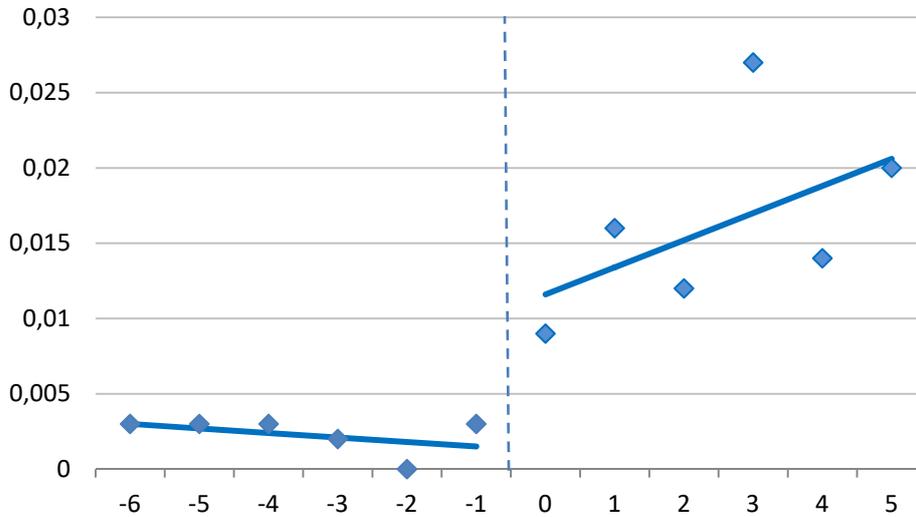
Source: Administrative data from the Social Security Records.

Figure 2: Employment rates of mothers and fathers of infants (less than 1 year old)



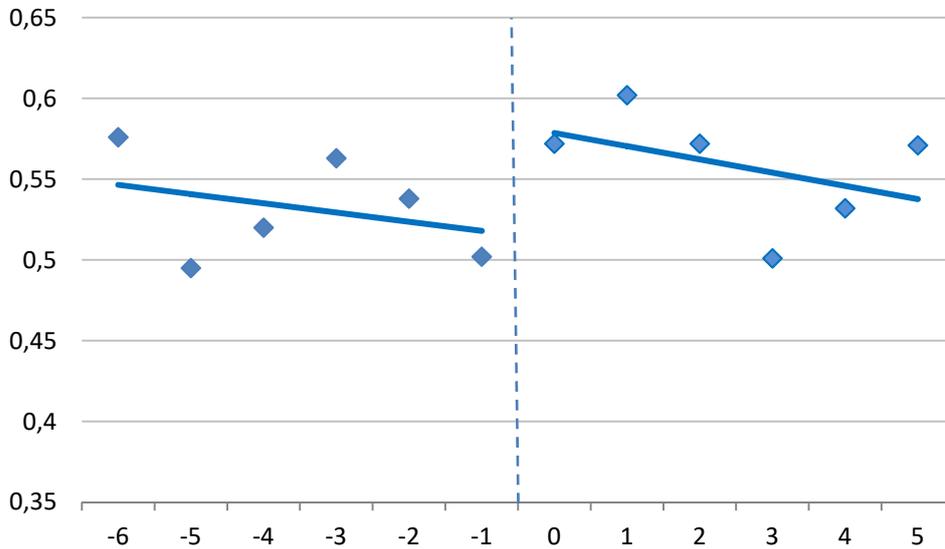
Source: Spanish Labor Force Survey (EPA). Annual employment rate for the period 1987-2015. Employment rates by mothers and fathers of infants (children less than 1 year old).

Figure 3: Fraction of fathers on parental leave, by month of birth



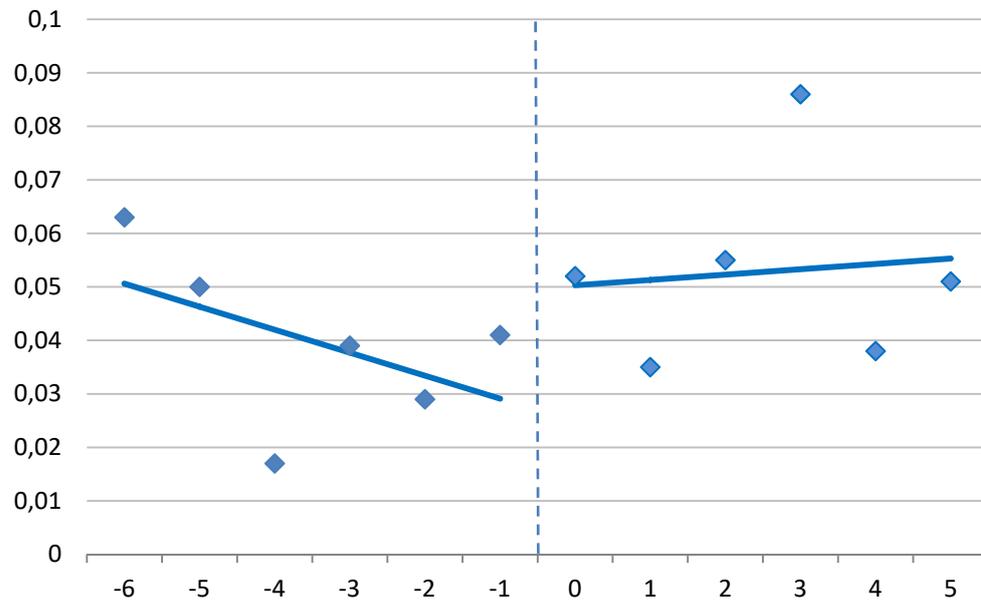
Note: Labor Force Survey data. The horizontal axis is the month of birth of the child, where 0 is April 2007, 1 is May 2007, and so on. The vertical axis is the fraction of fathers aged 16 to 50 living with a partner who report to be on leave from their job at the time of the survey in the sample "child age 8 months" (i.e. interviewed between the third quarter in 2006 and the second quarter in 2008).

Figure 4: Employment rate of mothers about 8 months after birth, by month of birth



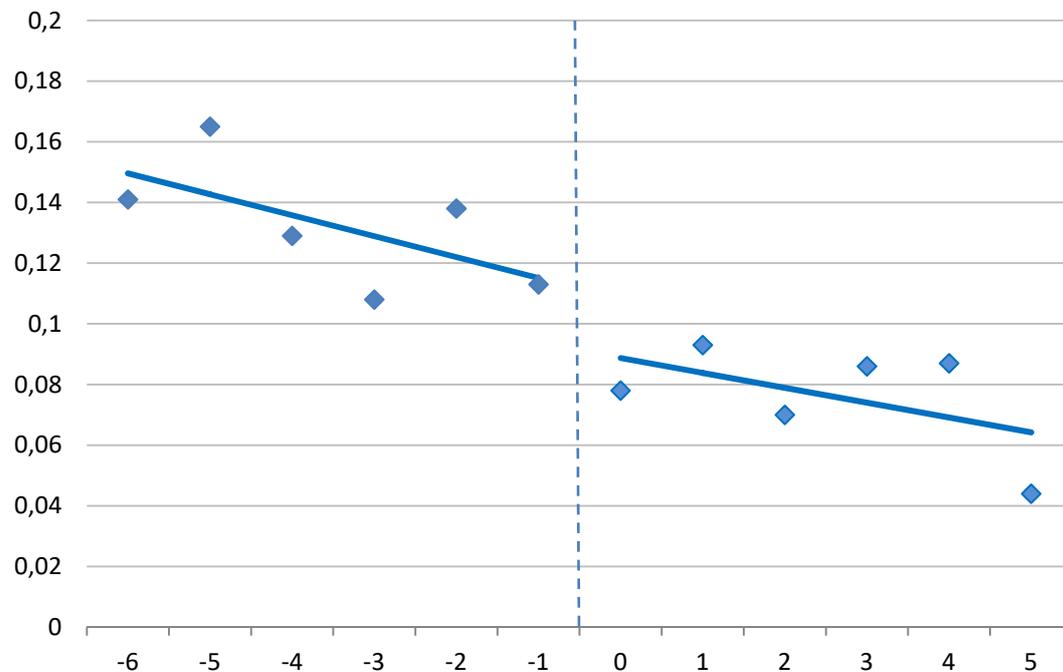
Note: Labor Force Survey data. The horizontal axis is the month of birth of the child, where 0 is April 2007, 1 is May 2007, and so on. The vertical axis is the employment rate of mothers aged 16 to 50 living with a partner at the time of the survey in the sample "child age 8 months" (i.e. interviewed between the third quarter in 2006 and the second quarter in 2008).

Figure 5: Self-employment rate of mothers about 8 months after births, by month of birth



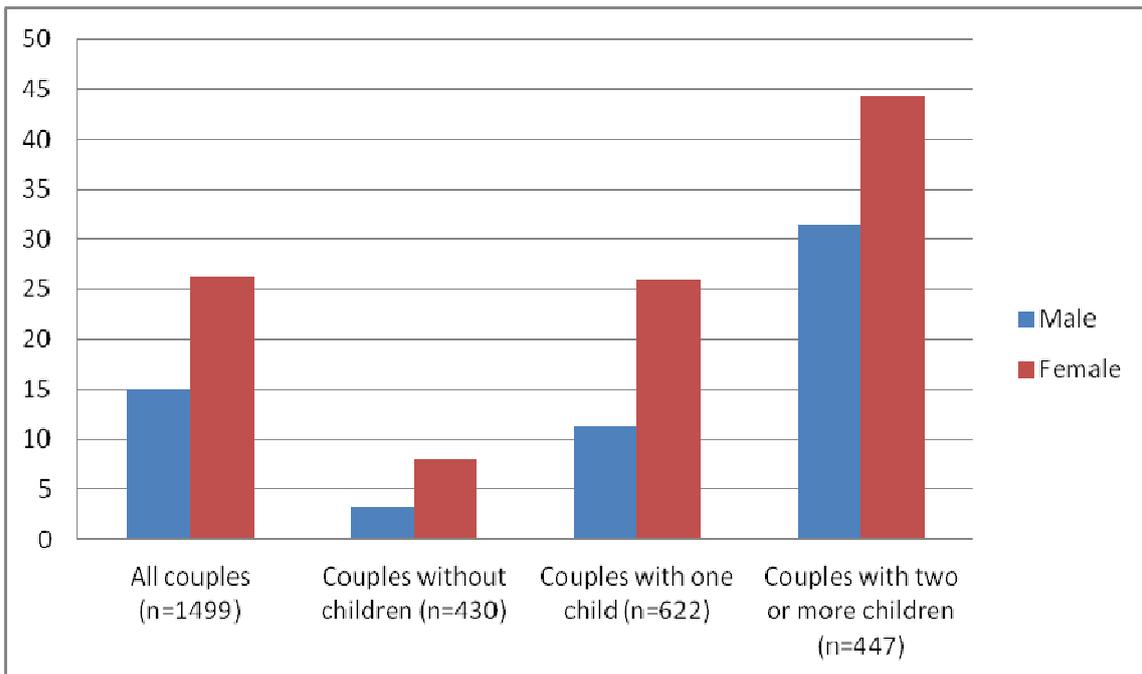
Note: Labor Force Survey data. The horizontal axis is the month of birth of the child, where 0 is April 2007, 1 is May 2007, and so on. The vertical axis is the fraction of self-employed mothers aged 16 to 50 living with a partner at the time of the survey in the sample "child age 8 months" (i.e. interviewed between the third quarter in 2006 and the second quarter in 2008).

Figure 6: Subsequent fertility rate by month of birth



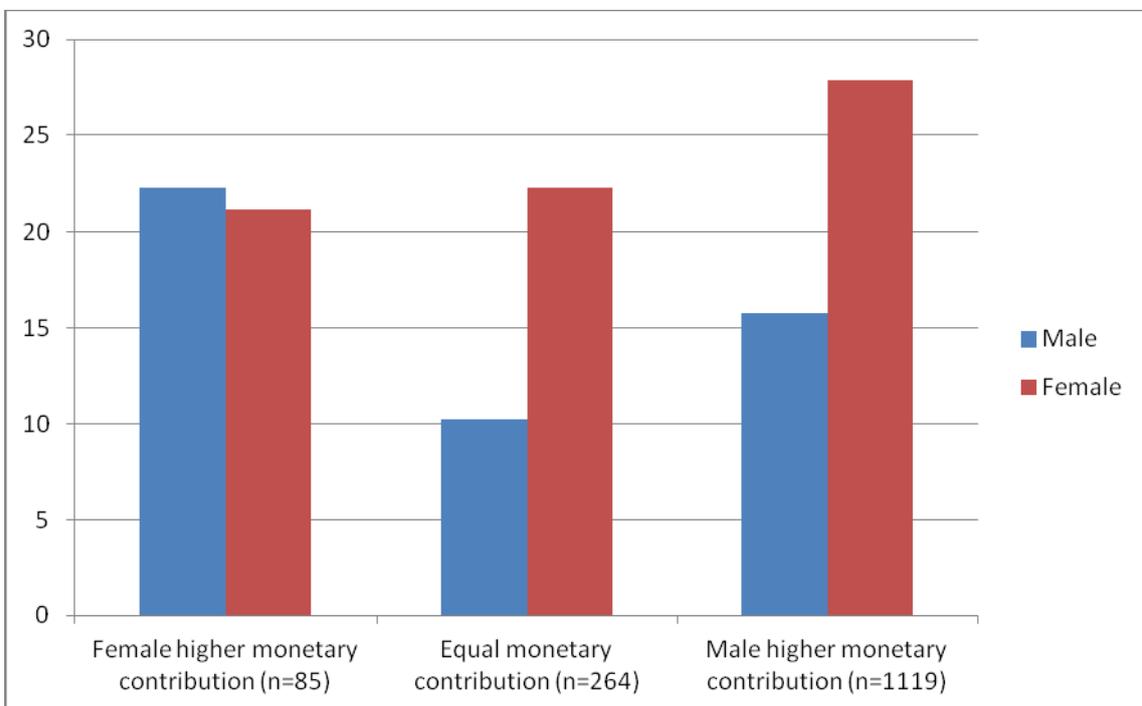
Note: Labor Force Survey data. The horizontal axis is the month of birth of the child, where 0 is April 2007, 1 is May 2007, and so on. The vertical axis is the fraction of women aged 16 to 50 living with a partner at the time of the survey who had another child in 2008, 2009 or 2010.

Figure 7: Disagreement rate over having a(another) child by family size



Source: "Fertility and values in the XXI century in Spain", CIS. Note: The figure displays the disagreement rate over having a(another) child by gender and family size for couples where at least one of the spouses want to have a(another) baby.

Figure 8: Disagreement rate over having a(another) child by type of family



Source: "Fertility and values in the XXI century in Spain", CIS. Note: The figure displays the disagreement rate over having a(another) child by gender across families that differ by the gender of the bread winner. We assume that a higher economic contribution to the family is compensated by a greater participation in childcare and housework activities.

Tables

Table 1: Parental leave reforms in Spain

	<i>March 1980</i> Statute of Rights for Workers <i>March 1984</i> Law 30/1984 for the reform of the Public Service	<i>March 1989</i> Law 3/1989 to extend maternity leave to 16 weeks and to promote gender equality at the work place	<i>November 1999</i> Law 39/1999 to promote work and family life	<i>March 2007</i> Law 3/2007 on effective equality between men and women
Fathers	2 days of paid job absence after the baby's birth	2 days of paid job absence after the baby's birth	2 days of paid job absence after the baby's birth	2 days of paid job absence after the baby's birth 13 days of job protected paid absence (non-transferable)
Mothers	14 weeks of job protected paid absence (non-transferable)	16 weeks of job protected paid absence, the first 6 weeks after birth are compulsory and exclusive for the mother, the last 4 weeks of the leave can be transferred to the father	16 weeks of job protected paid absence, the first 6 weeks after birth are compulsory and exclusive for the mother, 10 weeks of the leave can be transferred to the father and enjoyed simultaneously or subsequently to that of the mother	No change

Table 2: Descriptive statistics - Labor market outcomes

	Nobs Pre-reform	Nobs Post-reform	Employed Pre-reform	Employed Post-reform	on parental leave Pre-reform	on parental leave Post-reform	Managerial occupations Pre-reform	Managerial occupations Post-reform	Self-employed Pre-reform	Self-employed Post-reform
Mothers [+/-6 months]										
Sample : <i>Child age 4 months</i>	2,562	1,373	0.525	0.590	0.143	0.286	0.032	0.035	0.037	0.057
Sample: <i>Child age 8 months</i>	3,970	2,764	0.532	0.561	0.094	0.152	0.033	0.031	0.041	0.052
Sample: <i>Child age 14 months</i>	2,815	2,816	0.553	0.552	0.005	0.012	0.037	0.029	0.042	0.045
Sample: <i>Child age 26 months</i>	2,808	2,888	0.585	0.580	0.014	0.014	0.038	0.04	0.051	0.037
Father [+/-6 months]										
Sample: <i>Child age 4 months</i>	2,561	1,373	0.930	0.936	0.003	0.031	0.076	0.119	0.114	0.095
Sample: <i>Child age 8 months</i>	3,969	2,764	0.927	0.930	0.002	0.016	0.077	0.107	0.112	0.092
Sample: <i>Child age 14 months</i>	2,815	2,816	0.903	0.912	0.001	0.001	0.077	0.097	0.107	0.092
Sample: <i>Child age 26 months</i>	2,808	2,888	0.824	0.869	0.001	0.003	0.092	0.082	0.094	0.085

Source: Spanish Labor Force Survey (EPA).

Note: The sample "*Child age 4 months*" includes information about individuals interviewed in the third or fourth quarter in 2006 or in any quarter in 2007, "*Child age 8 months*" extends the sample by including individuals interviewed in the first and second quarter in 2008. "*Child age 14 months*" and "*Child age 26 months*" includes interviews in 2008 and 2009, respectively.

Table 3: Descriptive statistics - Fertility

	Nobs	Nobs	Additional births	Additional births	Total number of kids	Total number of kids
	Pre-reform	Post-reform	Pre-reform	Post-reform	Pre-reform	Post-reform
Mothers [+/-6 months]						
Sample: <i>Mothers with first child around the reform</i>	4,813	5,166	0.204	0.109	1.243	1.147
Sample: <i>All mothers</i>	9,279	9,382	0.132	0.077	1.755	1.634

Source: Spanish Labor Force Survey (EPA). Sample period: 2008, 2009 and 2010.

Note: The sample "*All mothers*" includes the fertility records for the period 2008 to 2010 of all women who had children around the time of the reform. The sample "*Mothers with first child around the reform*" includes the fertility records for the period 2008 to 2010 of all women who become mothers around the time of the reform.

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Table 4: Effects on the leave-taking behavior and employment of fathers

	On parental leave (1)	On leave for family reasons (2)	Employed (3)	On parental leave (4)	On leave for family reasons (5)	Employed (6)	On parental leave (7)	On leave for family reasons (8)	Employed (9)
months of birth around the reform	[+/-]6	[+/-]6	[+/-]6	[+/-]3	[+/-]3	[+/-]3	[+/-]9	[+/-]9	[+/-]9
Sample: child age 4 months	0.01280* (0.00664)	0.0153** (0.00730)	0.0144 (0.0147)	0.0194*** (0.00524)	0.0239*** (0.00586)	0.0116 (0.0109)	0.0166** (0.00776)	0.0181** (0.00840)	0.0186 (0.0174)
Nobs	3,934	3,934	3,934	1,961	1,961	1,961	6,038	6,038	6,038
Sample: <i>Child age 8 months</i>	0.00922** (0.00385)	0.0109** (0.00425)	0.000649 (0.0119)	0.0104*** (0.00292)	0.0129*** (0.00328)	0.00164 (0.00878)	0.00893** (0.00449)	0.00997** (0.00492)	0.000578 (0.0141)
Nobs	6,733	6,733	6,733	3,345	3,345	3,345	10,223	10,223	10,223
Sample: <i>Child age 14 months</i>	0.00229 (0.00147)	0.00301* (0.00164)	-0.0146 (0.0154)	-1.29e-05 (0.00103)	-1.29e-05 (0.00103)	-0.00833 (0.0106)	0.00320** (0.00144)	0.00316* (0.00173)	-0.0127 (0.0193)
Nobs	5,631	5,631	5,631	2,766	2,766	2,766	8,416	8,416	8,416
Sample: <i>Child age 26 months</i>	0.00488* (0.00274)	0.00600** (0.00294)	0.0136 (0.0182)	0.00308 (0.00208)	0.00308 (0.00208)	0.0188 (0.0126)	0.00415 (0.00345)	0.00546 (0.00363)	0.0118 (0.0231)
Nobs	5,696	5,696	5,696	2,748	2,748	2,748	8,736	8,736	8,736
Liner trend in m	YES	YES	YES	NO	NO	NO	YES	YES	YES
Quadratic trend in m	NO	NO	NO	NO	NO	NO	YES	YES	YES

Note: Robust standard errors in parenthesis. Coefficients of interest (Post) is shown. Individual controls include: a third order polynomial on the age of the father, dummies for the level of education (less than Primary education, Primary education, High School degree or College) and an immigrant indicator. In columns (1) to (3) the outcomes of fathers with children born 6 months before the reform (March 2007) are compared to those of children born 6 months after. Columns (4) to (6) compare the outcomes of fathers with children born 3 months around the reform and columns (7) to (9) those with children born 9 months around the reform. The raw Sample: "*child age 4 months*" displays the estimated results for individuals interviewed in the third or fourth quarter in 2006 or in any quarter in 2007. The raw Sample "*child age 8 months*" extends the sample by including also individuals interviewed in the first and second quarter in 2008. The raw Sample "*child age 14 months*" includes interviews in 2008 and Sample "*child age 26 months*" in 2009. *** p<0.01, **p<0.05, *p<0.1.

Table 5: Effects on other labor market outcomes of fathers

	Temporary (1)	Permanent (2)	Full-time (3)	Part-time (4)	Number of hours (5)	Managerial (6)	Self-employed (7)
months of birth around the reform	[+/-]6	[+/-]6	[+/-]6	[+/-]6	[+/-]6	[+/-]6	[+/-]6
Sample:	0.0180	-0.00666	0.0141	0.000461	-1.426	0.0598***	-0.0225
<i>Child age 4 months</i>	(0.0234)	(0.0303)	(0.0170)	(0.00911)	(1.306)	(0.0181)	(0.0200)
Nobs	3,935	3,935	3,935	3,935	3,934	3,935	3,935
Sample:	0.0310*	-0.0179	0.000934	-0.000292	-0.914	0.0421***	-0.0213
<i>Child age 8 months</i>	(0.0180)	(0.0233)	(0.0133)	(0.00643)	(1.000)	(0.0137)	(0.0151)
Nobs	6,734	6,734	6,734	6,734	6,733	6,734	6,734
Sample:	0.0426**	-0.0533**	-0.0154	0.000762	-0.136	0.0152	-0.0124
<i>Child age 14 months</i>	(0.0192)	(0.0259)	(0.0163)	(0.00582)	(1.187)	(0.0144)	(0.0168)
Nobs	5,631	5,631	5,631	5,631	5,631	5,631	5,631
Sample:	0.00445	0.0438*	0.0113	0.00233	0.126	-0.00410	-0.0247
<i>Child age 26 months</i>	(0.0177)	(0.0262)	(0.0188)	(0.00622)	(1.205)	(0.0148)	(0.0165)
Nobs	5,696	5,696	5,696	5,696	5,696	5,696	5,696
Liner trend in m	YES	YES	YES	YES	YES	YES	YES

Note: Robust standard errors in parenthesis. Coefficients of interest (Post) is shown. Individual controls include: a third order polynomial on the age of the father, dummies for the level of education (less than Primary education, Primary education, High School degree or College) and an immigrant indicator. In all columns the outcomes of fathers with children born 6 months before the reform (March 2007) are compared to those of children born 6 months after. The raw Sample: "*child age 4 months*" displays the estimated results for individuals interviewed in the third or fourth quarter in 2006 or in any quarter in 2007. The raw Sample "*child age 8 months*" extends the sample by including also individuals interviewed in the first and second quarter in 2008. The raw Sample "*child age 14 months*" includes individuals interviewed in 2008 and Sample "*child age 26 months*" includes interviews in 2009. *** p<0.01, **p<0.05, *p<0.1.

Table 6: Difference in difference estimation of the effects of the reform on the leave-taking behavior and labor market outcomes of fathers

	On parental leave (1)	On leave for family reasons (2)	Employed (3)	Temp. (4)	Permanent (5)	Part-time (6)	Full-time (7)	Number of hours (8)	Managerial (9)	Self-employed (10)
months of birth around the reform	[+/-]18	[+/-]18	[+/-]18	[+/-]18	[+/-]18	[+/-]18	[+/-]18	[+/-]18	[+/-]18	[+/-]18
Sample DD1	0.0135***	0.0157***	-0.0150	0.0407**	-0.0410*	0.00676	-0.0220	-0.493	0.0139	-0.00939
Q305 to Q408	(0.00432)	(0.00469)	(0.0134)	(0.0180)	(0.0240)	(0.00673)	(0.0147)	(1.087)	(0.0139)	(0.0157)
Nobs	28,703	28,703	28,703	28,709	28,709	28,709	28,709	28,703	28,709	28,709
Sample DD2	0.00774***	0.00990***	0.00736	0.0219	0.00963	0.00596	0.00143	0.781	0.0149	-0.00971
Q305 to Q409	(0.00258)	(0.00283)	(0.0116)	(0.0136)	(0.0187)	(0.00506)	(0.0124)	(0.851)	(0.0108)	(0.0120)
Nobs	46,241	46,241	46,241	46,251	46,251	46,251	46,251	46,241	46,251	46,251
Sample DD3	0.00466**	0.00649***	0.0139	0.0264**	0.00862	0.00331	0.0106	0.963	0.000517	-0.00132
Q305 to Q410	(0.00188)	(0.00208)	(0.0104)	(0.0114)	(0.0159)	(0.00443)	(0.0111)	(0.724)	(0.00919)	(0.0101)
Nobs	64,138	64,138	64,138	64,148	64,148	64,148	64,148	64,138	64,148	64,148
linear trend in m	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
quadratic in m	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
month fixed effects	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES

Note: Robust standard errors in parenthesis. The table shows the estimates of the coefficient (Post) in equation (1) when "seasonality" is accounted for by including month of birth fixed effects. Individual controls include: a third order polynomial on the age of the father, dummies for the level of education (less than Primary education, Primary education, High School degree or College) and an immigrant indicator. In all columns the outcomes of fathers with children born 18 months before the reform (from October 2005 to March 2007) are compared to those of children born 18 months after (from April 2007 to September 2008). The raw Sample DD1 displays the estimated results for individuals interviewed in the third or fourth quarter in 2005 or in any quarter in 2006, 2007 and 2008. The raw Sample DD2 extends DD1 by including fathers interviewed in 2009, and the raw Sample DD3 adds interviews in 2010. *** p<0.01, **p<0.05, *p<0.1.

Table 7: Effects on the earnings of fathers

Months of birth around the reform	[+/-]3	[+/-]6	[+/-]9
Earnings first 6 months	-7 (102)	-129 (137)	58 (172)
Earnings first 12 months	117 (205)	-175 (273)	87 (341)
Nobs	7406	15346	22834
linear trend in m	Y	Y	N
quadratic in m	Y	N	N

Data source: Social Security's 2009 continuous sample of working histories.

Note: Robust standard errors in parentheses. Each coefficient come from a different specification. The dependent variable is gross earnings of the father during the first 6 or 12 months after bith. The coefficients are those for the dummy indicating children born after March 2007. Individual controls include: a third order polynomial for the age of the father, dummies for the level of education, and indicators for whether the father had a permanent job or was self-employed three months before birth. Each column uses a sample that includes a different number of months of birth (3, 6 or 9) around the threshold. *** p<0.01, **p<0.05, *p<0.1.

Table 8: Effects on the leave-taking behavior and employment of mothers

	On parental leave (1)	On leave for family reasons (2)	Employed (3)	On parental leave (4)	On leave for family reasons (5)	Employed (6)	On parental leave (7)	On leave for family reasons (8)	Employed (9)
month of birth	[+/-]6	[+/-]6	[+/-]6	[+/-]3	[+/-]3	[+/-]3	[+/-]9	[+/-]9	[+/-]9
Sample:	0.0245	0.0149	0.0606**	0.0250	-0.000659	0.0551	0.00153	0.00578	0.0796**
<i>Child age 4 months</i>	(0.0257)	(0.0278)	(0.0294)	(0.0373)	(0.0403)	(0.0418)	(0.0352)	(0.0343)	(0.0365)
Nobs	3,935	3,935	3,935	1,961	1,961	1,961	6040	6040	6040
Sample:	0.0112	0.00917	0.0602***	0.0178	-0.00106	0.0826**	-0.0214	-0.00290	0.0860***
<i>Child age 8 months</i>	(0.0165)	(0.0189)	(0.0230)	(0.0243)	(0.0277)	(0.0328)	(0.0246)	(0.0236)	(0.0288)
Nobs	6,734	6,734	6,734	3,345	3,345	3,345	10,225	10,225	10,225
Sample:	-0.00562	0.0144	0.0390	-0.00899*	-0.00421	0.0591	0.00441	0.00782	0.0494
<i>Child age 14 months</i>	(0.00408)	(0.0107)	(0.0260)	(0.00501)	(0.0155)	(0.0375)	(0.0173)	(0.0134)	(0.0332)
Nobs	5,631	5,631	5,631	2,766	2,766	2,766	8,416	8,416	8,416
Sample:	0.00202	0.00644	-0.0270	-0.00240	-0.00395	-0.0643*	-0.0254	-0.00264	-0.0519*
<i>Child age 26 months</i>	(0.00724)	(0.00997)	(0.0243)	(0.0110)	(0.0142)	(0.0351)	(0.0197)	(0.0127)	(0.0307)
Nobs	5,696	5,696	5,696	2,748	2,748	2,748	8,736	8,736	8,736
Liner trend in m	YES	YES	YES	YES	YES	YES	YES	YES	YES
Quadratic trend in m	NO	NO	NO	NO	NO	NO	YES	YES	YES

Note: Robust standard errors in parenthesis. Coefficients of interest (Post) is shown. Individual controls include: a third order polynomial on the age of the mother, dummies for the level of education (less than Primary education, Primary education, High School degree or College) and an immigrant indicator. In columns (1) to (3) the outcomes of mothers with children born 6 months before the reform (March 2007) are compared to those of children born 6 months after. Columns (4) to (6) compare the outcomes of fathers with children born 3 months around the reform and columns (7) to (9) those with children born 9 months around the reform. The raw Sample: "*child age 4 months*" displays the estimated results for individuals interviewed in the third or fourth quarter in 2006 or in any quarter in 2007. The raw Sample "*child age 8 months*" extends the sample by including also individuals interviewed in the first and second quarter in 2008. The raw Sample "*child age 14 months*" includes interviews in 2008 and Sample "*child age 26 months*" interviews in 2009. *** p<0.01, **p<0.05, *p<0.1.

Table 9: Joint leave-taking decisions

	Only mother	Only father	Both	None
	[+/-]6	[+/-]6	[+/-]6	[+/-]6
Sample:	0.0178	0.0117**	0.00270	-0.0323
<i>Child age 4 months</i>	(0.0277)	(0.00529)	(0.00499)	(0.0280)
Nobs	3,934	3,934	3,934	3,934
Sample:	0.00887	0.00780**	0.00279	-0.0195
<i>Child age 8 months</i>	(0.0187)	(0.00306)	(0.00291)	(0.0190)
Nobs	6,733	6,733	6,733	6,733
Sample:	0.0136	0.00175	0.00134	-0.0167
<i>Child age 14 months</i>	(0.0106)	(0.00107)	(0.00127)	(0.0108)
Nobs	5,631	5,631	5,631	5,631
Sample:	0.00384	0.00250	0.00354**	-0.00987
<i>Child age 26 months</i>	(0.00976)	(0.00236)	(0.00170)	(0.0101)
Nobs	5,696	5,696	5,696	5,696
Liner trend in m	YES	YES	YES	YES

Note: The estimates correspond to the coefficient on Post in equation (1). The set of covariates is extended to include the age, education and immigrant condition of both spouses. In column (1) the dependent variable takes value 1 if only the mother is on leave. We employ the definition of absent from work due to parental leave, to take care of a sick child or other family responsibilities. In column (2) the dependent variable takes value 1 if only the father is on leave, in column (3) is an indicator that takes value 1 if both spouses are on leave and in column (4) if none of the spouses is on leave. The raw Sample: "*child age 4 months*" displays the estimated results for individuals interviewed in the third or fourth quarter in 2006 or in any quarter in 2007. The raw Sample "*child age 8 months*" extends the sample by including also individuals interviewed in the first and second quarter in 2008. The raw Sample "*child age 14 months*" includes interviews in 2008 and Sample "*child age 26 months*" interviews in 2009. *** p<0.01, **p<0.05, *p<0.1.

Table 10: Effects on other employment outcomes of mothers

	Temporary (1)	Permanent (2)	Full-time (3)	Part-time (4)	Number of hours (5)	Self-employed (6)	Managerial (7)
month of birth	[+/-]6	[+/-]6	[+/-]6	[+/-]6	[+/-]6	[+/-]6	[+/-]6
Sample:	0.0232	-0.00514	0.0289	0.0317	2.448**	0.0219*	0.0191*
<i>Child age 4 months</i>	(0.0191)	(0.0299)	(0.0301)	(0.0221)	(0.988)	(0.0125)	(0.0113)
Nobs	3,935	3,935	3,935	3,935	3,935	3,935	3,935
Sample:	0.0219	-0.0121	0.0219	0.0383**	2.639***	0.0244**	0.0220***
<i>Child age 8 months</i>	(0.0150)	(0.0229)	(0.0231)	(0.0177)	(0.843)	(0.0101)	(0.00835)
Nobs	6,734	6,734	6,734	6,734	6,734	6,734	6,734
Sample:	0.0247	-0.0303	0.0308	0.00815	0.796	0.0206*	0.0215**
<i>Child age 14 months</i>	(0.0178)	(0.0253)	(0.0257)	(0.0214)	(1.047)	(0.0119)	(0.00882)
Nobs	5,631	5,631	5,631	5,631	5,631	5,631	5,631
Sample:	0.00930	-0.0269	-0.00531	-0.0217	0.0265	-0.00769	0.0196**
<i>Child age 26 months</i>	(0.0174)	(0.0250)	(0.0254)	(0.0208)	(0.978)	(0.0121)	(0.00985)
Nobs	5,696	5,696	5,696	5,696	5,696	5,696	5,696
Liner trend in m	YES	YES	YES	YES	YES	YES	YES

Note: Robust standard errors in parenthesis. Coefficients of interest (Post) is shown. Individual controls include: a third order polynomial on the age of the mother, dummies for the level of education (less than Primary education, Primary education, High School degree or College) and an immigrant indicator. In all columns the outcomes of mothers with children born 6 months before the reform (March 2007) are compared to those of children born 6 months after. The raw Sample: "*child age 4 months*" displays the estimated results for individuals interviewed in the third or fourth quarter in 2006 or in any quarter in 2007. The raw Sample "*child age 8 months*" extends the sample by including also individuals interviewed in the first and second quarter in 2008. The raw Sample "*child age 14 months*" includes individuals interviewed in 2008 and Sample "*child age 26 months*" includes interviews in 2009. *** p<0.01, **p<0.05, *p<0.1.

Table 11: Difference in difference estimation of the effects of the reform on the leave-taking behavior and employment outcomes of mothers

	On parental leave (1)	Employed (2)	Temp. (3)	Permanent (4)	Full-time (5)	Part-time (6)	Number of hours (7)	Managerial (8)	Self- employed (9)
month of birth	[+/-]6	[+/-]6	[+/-]6	[+/-]6	[+/-]6	[+/-]6	[+/-]6	[+/-]6	[+/-]6
Sample DD1	0.0184	0.0707***	0.0324**	-0.00366	0.0720***	-0.00126	1.497*	0.00776	0.0318***
Q305 to Q408	(0.0150)	(0.0235)	(0.0163)	(0.0234)	(0.0237)	(0.0187)	(0.909)	(0.00888)	(0.0105)
Nobs	28,709	28,709	28,709	28,709	28,709	28,709	28,709	28,709	28,709
Sample DD2	0.0117	0.0188	0.0223*	-0.0308*	0.000328	0.0185	0.378	0.00790	0.0219***
Q305 to Q409	(0.00963)	(0.0181)	(0.0126)	(0.0181)	(0.0147)	(0.0183)	(0.716)	(0.00675)	(0.00835)
Nobs	46,251	46,251	46,251	46,251	46,251	46,251	46,251	46,251	46,251
Sample DD3	0.00896	0.0115	0.0245**	-0.0316**	0.00595	0.00552	0.469	0.00826	0.0124*
Q305 to Q410	(0.00729)	(0.0152)	(0.0107)	(0.0154)	(0.0125)	(0.0154)	(0.610)	(0.00580)	(0.00698)
Nobs	64,148	64,148	64,148	64,148	64,148	64,148	64,148	64,148	64,148
linear trend in m	YES	YES	YES	YES	YES	YES	YES	YES	YES
quadratic in m	YES	YES	YES	YES	YES	YES	YES	YES	YES
month fixed effects	YES	YES	YES	YES	YES	YES	YES	YES	YES

Note: Robust standard errors in parenthesis. The table shows the estimates of the coefficient (Post) in equation (1) when "seasonality" is accounted for by including month of birth fixed effects. Individual controls include: a third order polynomial on the age of the mother, dummies for the level of education (less than Primary education, Primary education, High School degree or College) and an immigrant indicator. In all columns the outcomes of mothers with children born 18 months before the reform (from October 2005 to March 2007) are compared to those of children born 18 months after (from April 2007 to September 2008). The raw Sample DD1 displays the estimated results for individuals interviewed in the third or fourth quarter in 2005 or in any quarter in 2006, 2007 and 2008. The raw Sample DD2 extends DD1 by including mothers interviewed in 2009, and the raw Sample DD3 adds interviews in 2010. *** p<0.01, **p<0.05, *p<0.1.

Table 12: Effects on the earnings of mothers

Month of birth around the reform	[+/-]3	[+/-]6	[+/-]9	[+/-]9
Earnings first 6 months	276*** (91)	84 (132)	160 (106)	96 (169)
Earnings first 12 months	701*** (187)	346 (269)	361* (217)	324 (345)
N.obs.	6579	13541	20313	20313
Linear trend in m	N	Y	Y	Y
Quadratic in m	N	N	N	Y

Note: Data source: Social Security's 2009 continuous sample of working histories.

Note: Robust standard errors in parentheses. Each coefficient come from a different specification. The dependent variable is gross earnings of the mother during the first 6 or 12 months after bith. The coefficients reported are those for the dummy indicating children born after March 2007. Individual controls include: a third order polynomial for the age of the mother, dummies for the level of education, and indicators for whether the mother had a permanent job or was self-employed three months before birth. Each column uses a sample that includes a different number of months of birth (3, 6 or 9) around the threshold.

*** p<0.01, **p<0.05, *p<0.1.

Table 13 A: Heterogenous effect on leave-taking behavior and employment of mothers and fathers (College graduates)

	Father			Mother		
	On parental Leave (1)	On leave for family reasons (2)	Employed (3)	On parental leave (4)	On leave for family reasons (5)	Employed (6)
month of birth	[+/-]6	[+/-]6	[+/-]6	[+/-]6	[+/-]6	[+/-]6
Sample:	-0.000633	-0.0158	0.0225	0.0229	0.0102	-0.00777
<i>Child age 4 months</i>	(0.0132)	(0.0166)	(0.0183)	(0.0518)	(0.0543)	(0.0442)
Nobs	823	823	823	1150	1150	1150
Sample:	0.00486	-0.00384	0.00690	0.0222	0.0322	0.0234
<i>Child age 8 months</i>	(0.00769)	(0.00983)	(0.0139)	(0.0339)	(0.0380)	(0.0360)
Nobs	1393	1393	1393	2032	2032	2032
Sample:	0.00428	0.00854	-0.0421**	0.00993	0.0549**	0.0309
<i>Child age 14 months</i>	(0.00541)	(0.00686)	(0.0186)	(0.00760)	(0.0224)	(0.0415)
Nobs	1163	1163	1163	1774	1774	1774
Sample:	0.00738	0.0135*	-0.0474**	0.00477	0.00154	-0.0844**
<i>Child age 26 months</i>	(0.00551)	(0.00702)	(0.0195)	(0.0175)	(0.0215)	(0.0338)
Nobs	1256	1256	1256	1781	1781	1781
Linear trend in m	YES	YES	YES	YES	YES	YES

Note: Robust standard errors in parenthesis. Coefficients of interest (Post) is shown estimated on the sample of individuals with tertiary education or more. Individual controls include: a third order polynomial on the age of the father or mother and an immigrant indicator. In all columns the outcomes of mothers with children born 6 months before the reform (March 2007) are compared to those of children born 6 months after. The raw Sample: "*child age 4 months*" displays the estimated results for individuals interviewed in the third or fourth quarter in 2006 or in any quarter in 2007. The raw Sample "*child age 8 months*" extends the sample by including also individuals interviewed in the first and second quarter in 2008. The raw Sample "*child age 14 months*" includes individuals interviewed in 2008 and Sample "*child age 26 months*" includes interviews in 2009. *** p<0.01, **p<0.05, *p<0.1

Table 13 B: Heterogenous effect on leave-taking behavior and employment of mothers and fathers (High School graduates or less)

	Father			Mother		
	On parental Leave (1)	On leave for family reasons (2)	Employed (3)	On parental leave (4)	On leave for family reasons (5)	Employed (6)
month of birth	[+/-]6	[+/-]6	[+/-]6	[+/-]6	[+/-]6	[+/-]6
Sample:	0.0145*	0.0211***	0.0123	0.0339	0.0288	0.105***
<i>Child age 4 months</i>	(0.00750)	(0.00799)	(0.0182)	(0.0295)	(0.0324)	(0.0384)
Nobs	3111	3111	3111	2785	2785	2785
Sample:	0.00981**	0.0138***	-0.000297	0.00799	0.00268	0.0848***
<i>Child age 8 months</i>	(0.00435)	(0.00465)	(0.0146)	(0.0184)	(0.0215)	(0.0296)
Nobs	5340	5340	5340	4702	4702	4702
Sample:	0.00167	0.00167	-0.00513	-0.0127***	-0.00617	0.0441
<i>Child age 14 months</i>	(0.00118)	(0.00118)	(0.0189)	(0.00488)	(0.0120)	(0.0331)
Nobs	4468	4468	4468	3857	3857	3857
Sample:	0.00471	0.00444	0.0330	0.00186	0.0104	0.00200
<i>Child age 26 months</i>	(0.00287)	(0.00294)	(0.0234)	(0.00608)	(0.0101)	(0.0333)
Nobs	4440	4440	4440	3915	3915	3915
Linear trend in m	YES	YES	YES	YES	YES	YES

Note: Robust standard errors in parenthesis. Coefficients of interest (Post) is shown estimated on the sample of individuals with a High School degree or lower education. Individual controls include: a third order polynomial on the age of the father or mother and an immigrant indicator. In all columns the outcomes of mothers with children born 6 months before the reform (March 2007) are compared to those of children born 6 months after. The raw Sample: "*child age 4 months*" displays the estimated results for individuals interviewed in the third or fourth quarter in 2006 or in any quarter in 2007. The raw Sample "*child age 8 months*" extends the sample by including also individuals interviewed in the first and second quarter in 2008. The raw Sample "*child age 14 months*" includes individuals interviewed in 2008 and Sample "*child age 26 months*" includes interviews in 2009. *** p<0.01, **p<0.05, *p<0.1.

Table 14: Heterogeneous effect on other employment outcomes of mothers

	College		High School graduate or less	
	Managerial (1)	Self-employed (2)	Managerial (3)	Self-employed (4)
month of birth	[+/-]6	[+/-]6	[+/-]6	[+/-]6
Sample:	-0.0254	0.0142	0.0380***	0.0268*
<i>Child age 4 months</i>	(0.0235)	(0.0225)	(0.0125)	(0.0155)
Nobs	1150	1150	2785	2785
Sample:	-0.0221	0.0130	0.0410***	0.0297**
<i>Child age 8 months</i>	(0.0173)	(0.0187)	(0.00926)	(0.0122)
Nobs	2032	2032	4702	4702
Sample:	-0.00229	-0.00146	0.0318***	0.0285**
<i>Child age 14 months</i>	(0.0198)	(0.0254)	(0.00921)	(0.0130)
Nobs	1774	1774	3857	3857
Sample:	0.0533**	-0.0337	-0.000415	-0.000764
<i>Child age 26 months</i>	(0.0230)	(0.0266)	(0.00908)	(0.0120)
Nobs	1781	1781	3915	3915
Liner trend in m	YES	YES	YES	YES

Note: Robust standard errors in parenthesis. Coefficients of interest (Post) is shown separately for the sample of individuals with tertiary education (College) and those with a high school degree or less (High School degree or less). Individual controls include: a third order polynomial on the age of the father or mother and an immigrant indicator. In all columns the outcomes of mothers with children born 6 months before the reform (March 2007) are compared to those of children born 6 months after. The raw Sample: "*child age 4 months*" displays the estimated results for individuals interviewed in the third or fourth quarter in 2006 or in any quarter in 2007. The raw Sample "*child age 8 months*" extends the sample by including also individuals interviewed in the first and second quarter in 2008. The raw Sample "*child age 14 months*" includes individuals interviewed in 2008 and Sample "*child age 26 months*" includes interviews in 2009. *** p<0.01, **p<0.05, *p<0.1.

Table 15: Effects of paternity leave on fertility, labor force survey data

	All mothers		Mothers with first child born around the reform	
	Additional births	Total number of children	Additional births	Total number of children
Month of birth around the reform	[+/-]6	[+/-]6	[+/-]6	[+/-]6
<i>All education levels</i>	-0.0179* (0.00934)	-0.108*** (0.0218)	-0.0430*** (0.0155)	-0.0358** (0.0171)
Number of observations	18,661	18,661	9,979	9,979
<i>College</i>	0.00777 (0.0174)	-0.115*** (0.0394)	-0.0178 (0.0277)	-0.00829 (0.0308)
Number of observations	5,588	5,588	3,108	3,108
<i>High School Graduates or Less</i>	-0.0256** (0.0111)	-0.117*** (0.0257)	-0.0518*** (0.0188)	-0.0452** (0.0206)
Number of observations	13,073	13,073	6,871	6,871
Year fixed effects	YES	YES	YES	YES
Quarter fixed effects	YES	YES	YES	YES

Note: Robust standard errors in parenthesis. Coefficients of interest (Post) is shown for the whole sample (All education levels), for the sample of individuals with tertiary education (College), and those with a high school degree or less (High School degree or less). Column (1) and (2) report the results for all women and column (3) and (4) for women who become mothers for the first time around the time of the reform. Individual controls include: a third order polynomial on the age of the mother and an immigrant indicator. The estimates in all columns are obtained from comparing the outcomes of mothers with children born 6 months before the reform (March 2007) to those of children born 6 months after. The sample includes observations for the years 2008, 2009 and 2010. *** p<0.01, **p<0.05, *p<0.1.

Table 16. Effects of paternity leave on fertility, birth-certificate data

Two years						
Window	+/- 7 days	+/- 14 days	+/- 21 days	+/- 42 days	+/- 56 days	+/- 112 days
Paternity leave	-0,0068 * (0,0036)	-0,0053 (0,0051)	-0,0074 * (0,0042)	-0,0038 (0,0030)	-0,0047 * (0,0026)	-0,0038 * (0,0020)
Average	0,064	0,0645	0,0655	0,0666	0,0666	0,0665
Coeff./average	-10,6%	-8,2%	-11,3%	-5,7%	-7,1%	-5,7%
Four years						
Paternity leave	-0,0066 (0,0063)	-0,0029 (0,0090)	-0,0069 (0,0073)	-0,0026 (0,0052)	-0,0014 (0,0045)	-0,0038 (0,0035)
Average	0,238	0,239	0,239	0,239	0,239	0,239
Coeff./average	-2,8%	-1,2%	-2,9%	-1,1%	-0,6%	-1,6%
Linear trends	N	Y	Y	Y	Y	Y
Quadratic trends	N	N	N	N	N	N
Nobs	18174	35882	53693	107346	144055	252990

Note: The sample includes all births that took place in a certain window of days around March 24, 2007. The outcome variable is an indicator for the mother having another child within the following 2 or 4 years. The main explanatory variable is an indicator for the (initial) birth taking place on or after March 24, 2007. In all but the first column, we control for a linear trend in date of birth (the running variable, centered at 0 in March 24, 2007), interacted with the main explanatory variable. One asterisk indicates significance at 90%.

Appendix

Table A1: DiD, heterogeneous effects on leave-taking behavior and employment of mothers and fathers (High School graduates or less)

	Father			Mother		
	On parental leave (1)	On leave for family reasons (2)	Employed (3)	On parental leave (4)	On leave for family reasons (5)	Employed (6)
month of birth	[+/-]6	[+/-]6	[+/-]6	[+/-]6	[+/-]6	[+/-]6
Sample DD1	0.0138***	0.0142***	-0.00890	0.0232	0.0125	0.0967***
Q305 to Q408	(0.00480)	(0.00510)	(0.0166)	(0.0166)	(0.0197)	(0.0306)
Nobs	22,508	22,508	22,508	19,917	19,917	19,917
Sample DD2	0.00798***	0.00879***	0.0203	0.0127	0.00567	0.0531**
Q305 to Q409	(0.00287)	(0.00305)	(0.0144)	(0.0105)	(0.0131)	(0.0237)
Nobs	36,245	36,245	36,245	32,016	32,016	32,016
Sample DD3	0.00494**	0.00529**	0.0238*	0.00690	0.00272	0.0470**
Q305 to Q410	(0.00207)	(0.00222)	(0.0130)	(0.00794)	(0.00997)	(0.0201)
Nobs	50,110	50,110	50,110	44,300	44,300	44,300
linear trend in m	YES	YES	YES	YES	YES	YES
quadratic in m	YES	YES	YES	YES	YES	YES
month fixed effects	YES	YES	YES	YES	YES	YES

Note: Robust standard errors in parenthesis. The table shows the estimates of the coefficient (Post) in equation (1) when "seasonality" is accounted for by including month of birth fixed effects. Only individuals with a high school degree are included in estimation. Individual controls include: a third order polynomial on the age of the mother, and an immigrant indicator. In all columns the outcomes of mothers with children born 18 months before the reform (from October 2005 to March 2007) are compared to those of children born 18 months after (from April 2007 to September 2008). The raw Sample DD1 displays the estimated results for individuals interviewed in the third or fourth quarter in 2005 or in any quarter in 2006, 2007 and 2008. The raw Sample DD2 extends DD1 by including mothers interviewed in 2009, and the raw Sample DD3 adds interviews in 2010. *** p<0.01, **p<0.05, *p<0.1.

Table A2: DiD, heterogeneous effects on other employment outcomes of mothers (High School graduates or less)

	Managerial (1)	Self-employed (2)
month of birth	[+/-]6	[+/-]6
Sample DD1	0.0326***	0.0331***
Q305 to Q408	(0.00937)	(0.0116)
Nobs	19,917	19,917
Sample DD2	0.0220***	0.0273***
Q305 to Q409	(0.00691)	(0.00890)
Nobs	32,016	32,016
Sample DD3	0.0193***	0.0187**
Q305 to Q410	(0.00603)	(0.00743)
Nobs	44300	44300
linear trend in m	YES	YES
quadratic in m	YES	YES
month fixed effects	YES	YES

Note: Robust standard errors in parenthesis. The table shows the estimates of the coefficient (Post) in equation (1) when "seasonality" is accounted for by including month of birth fixed effects. Only individuals with a high school degree are included in estimation. Individual controls include: a third order polynomial on the age of the mother, and an immigrant indicator. In all columns the outcomes of mothers with children born 18 months before the reform (from October 2005 to March 2007) are compared to those of children born 18 months after (from April 2007 to September 2008). The raw Sample DD1 displays the estimated results for individuals interviewed in the third or fourth quarter in 2005 or in any quarter in 2006, 2007 and 2008. The raw Sample DD2 extends DD1 by including mothers interviewed in 2009, and the raw Sample DD3 adds interviews in 2010. *** p<0.01, **p<0.05, *p<0.1.

Table A3: Difference in difference estimation, heterogeneous effects on fertility

	All mothers		Mothers with first child born around the reform	
	Additional births	Total number of kids	Additional births	Total number of kids
month of with around the reform	[+/-]6	[+/-]6	[+/-]6	[+/-]6
<i>All education levels</i>	-0.0155*** (0.00430)	-0.0981*** (0.0130)	-0.0356*** (0.00771)	-0.0529*** (0.0103)
Number of observations	52,535	52,535	26,522	26,522
<i>College graduates</i>	-0.00535 (0.00888)	-0.103*** (0.0237)	-0.00556 (0.0150)	-0.00853 (0.0194)
Number of observations	15,427	15,427	8,187	8,187
<i>High School graduates or less</i>	-0.0195*** (0.00484)	-0.0942*** (0.0153)	-0.0479*** (0.00887)	-0.0715*** (0.0121)
Number of observations	37,108	37,108	18,335	18,335
Year fixed effects	YES	YES	YES	YES
Quarter fixed effects	YES	YES	YES	YES
Month fixed effects	YES	YES	YES	YES

Note: the sample includes observations for the years 2008, 2009 and 2010