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IZA DP No. 17509

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ABSTRACT

The Short- and Long-Term Effects of Family-Friendly Policies on Mothers' Employment*

Countries often encourage part-time work among new parents as part of their family policies, aiming to foster mothers' labor market attachment. However, this approach may unintentionally impede women's long-term career prospects. We examine the impact of a 1999 Spanish reform that allowed parents to reduce their working hours by up to a half while their youngest child was under age 6, along with job protection measures. Leveraging eligibility rules, we follow a regression kink design, comparing ineligible women to mothers who had varying lengths of eligibility, and tracking their subsequent work trajectories. Our findings show that longer eligibility led to a modest increase in maternal part-time work during her child's early years, with mothers working approximately one additional day part-time for each extra month of eligibility. This increase in part-time work substituted for days spent in unemployment rather than reducing full-time work, leading to a rise in earnings. In the long term, extended eligibility also led to improvements in both employment and earnings. Overall, we find that the policy had a positive impact on the labor supply and earnings of women with children, both in the short and long term.

JEL Classification: J08, J13, J16, J18

Keywords: worktime reduction, maternity, childcare policies

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1. Introduction

The participation of women in the labor force experienced a significant surge globally in recent decades, particularly among married women with children. To support this trend, policymakers have implemented various family policies, such as cash transfers to households with children, parental leave, and subsidized childcare. These initiatives aim not only to bolster households with children, but also to empower parents to better combine their work and family responsibilities, while maintaining their attachment to the labor market. A rich literature has explored the impact of such policies on maternal participation in the labor market, both in the short and long term (Bartel 2018, Olivetti and Petrongolo 2017, Rossin-Slater 2018).

Many previous studies focused on the duration of maternity leave and its effects on mothers' labor market outcomes and fertility: a non-exhaustive list of influential references includes Ruhm (1998), Schönberg and Ludsteck (2007), Lalive and Zweimüller (2009), Olivetti and Petrongolo (2017), and Rossin-Slater (2018). However, these parental leave schemes (whether paid or unpaid) only cover a short time-span immediately after the child is born. In contrast, policies that allow for reductions in working time can have a more significant and longer-lasting impact on mothers' employment careers.

In many countries, policies actively encourage part-time work among parents as a means of facilitating work-life balance. In 2018, 27 percent of workers in the EU reported having adjusted working hours because of childcare responsibilities, and 82 percent of those were women.¹ In Spain, almost 15 percent of working parents with children aged 17 or younger had a part-time arrangement in 2020. Approximately 27 percent of them cited family care responsibilities, such as caring for children or disabled relatives, as the primary reason, and notably 94 percent of them were women.²

¹ European Union Labor Force Survey (EU-LFS), 2018. *Ad hoc* module "Reconciliation between work and family life". According to EU-LFS 2018 estimates, Finland, Iceland, and Norway have the lowest rate of women working short hours because of childcare responsibilities (about 60%), while this figure exceeds 90% in Cyprus, Lithuania, and Czech Republic.

² Spanish Labor Force Survey, Spanish National Institute of Statistics.

An influential study by Kleven et al. (2019) in Denmark points at the decrease in mothers' working hours after having their first child as one of the key drivers of the so-called child penalty in earnings, that is, the proportion of the gender wage gap linked to motherhood. In Spain, women's earnings have been shown to fall by 11 percent on the first year after birth, reaching a child penalty of 28 percent in the long run (De Quinto et al., 2021). De Quinto et al. (2021) also show that women are 40 percent more likely to adopt part-time work the year after giving birth to their first child, an increase that persists even 10 years following birth.

Despite the prevalence of part-time work policies, their long-term impact on women's labor market attachment remains unclear. While some descriptive analyses argue that a greater availability of part-time jobs could also foster women's employment in countries with notoriously low female labor market participation (Thévenon 2013), empirical evidence on whether part-time work increases long-term employment remains unclear (Boeri et al. 2005 and OECD 2010). In France, Joseph et al. (2013) use a difference-in-differences model and propensity score matching to estimate the impact of short parental leave on mothers' employment status and wages. They can differentiate between full- and part-time leave takers, and conclude that short part-time leave has negative effects on wages but stimulates mothers' labor force participation. Baertsch and Sandner (2024) also follow a difference-in-differences strategy to study a German policy that incentivizes new parents to reduce their working hours while receiving parental leave benefits during the two years following childbirth. They find that the reform does increase part-time work arrangements among mothers in the two years following childbirth, but has no effect on women's long-term labor market attachment.

We explore the short- and long-term effects of incentivizing part-time work among parents by exploiting a natural experiment in Spain. A law passed on November 1999³ granted all workers the right to reduce their working hours after the parental leave period and until their (youngest) child turned 6 years old, while protecting them from dismissal. Several existing papers have explored some

³ *Law to Promote the Reconciliation of Work and Family Life.*

impacts of this policy. Fernández-Kranz and Rodríguez-Planas (2020) found that this reform led to statistical discrimination against women of childbearing age: after the reform, employers were less likely to hire women or promote them from fixed-term to permanent contracts, and they were more prone to end their contracts, thus decreasing overall female employment. Bover et al. (2021) conclude that the introduction of this reform increased fertility among working women with permanent contracts, but decreased it for women who were not employed or working under temporary contracts. They also find a strong reaction of firms to the reform, in line with the previously mentioned study. Lastly, a descriptive study by Domínguez-Folgueras et al. (2021) identifies a negative association between the use of what they call “unpaid part-time leave” for family care reasons and women’s earnings, and this association is increasing in the length of the leave.

In this context, we examine the extent to which the Spanish 1999 reform, facilitating part-time employment among parents with young children, may have affected mothers’ attachment to the labor market (and earnings) during their childbearing years. We use administrative data from Spanish Social Security records,⁴ from which we re-construct workers’ complete work histories from 1990 to 2010. We contribute to this growing literature by analyzing the effects of the Spanish reform on women’s short- and long-term labor market outcomes.

Regarding the short term, the expected direct effect of the reform would have been to increase the incidence of part-time work among women with children under age 6. The increase in part-time work may be accompanied by a decrease in non-employment, or a decrease in full-time work. Thus, the sign of the effect on earnings (while eligible) is unclear a priori. Once eligibility runs out, the expected effects on women’s participation and earnings are less straightforward. Part-time work in the preceding years may have increased women’s labor market attachment (for those for whom the counterfactual was non-employment), thus leading to higher employment and earnings in the longer

⁴ *Muestra Continua de Vidas Laborales, MCVL.*

run. On the other hand, if the increase in part-time was driven by a reduction in full-time work, the policy may have lowered mothers' labor market attachment, thus decreasing earnings in the long run.

Our main empirical strategy relies on a Regression Kink Design (RKD) to identify the impact of the policy on women's labor market outcomes. We exploit the fact that the duration of eligibility (i.e. the number of months a mother is granted the workweek reduction) depends directly on the ages of her children at the time when the reform is passed.⁵ We are able to estimate effects on women's labor market outcomes (employment and earnings) both while they are eligible for the program, and in the long-term, after they age out of eligibility.

Our results show a significant, yet modest, positive aggregate effect of the policy on mothers' labor market outcomes while the child is younger than 6 years old, both in terms of employment (number of days worked) and labor income. On average, one additional month of worktime reduction eligibility increases part-time work by roughly one day, while the child is under 6 years of age. This comes entirely from non-employment, since we find that an additional month of eligibility results in an increase in the number of days worked overall (and no fall in full-time), along with a corresponding rise of labor income by 140 euros. The increase in part-time work is more pronounced for the subgroup of women who held a permanent contract at the time of birth. However, for this subgroup the increase in part-time comes at the expense of a reduction in full-time work (instead of from non-employment), and thus has a negative effect on earnings.

As for the long-term effects, which we define as the period when the child is between 6 and 10 years old, we find that on aggregate the policy led to higher maternal employment. Longer eligibility leads to higher participation (and earnings) even after the child has turned six. This suggests that overall the policy was successful at strengthening the labor market attachment of women who would otherwise have dropped out of the labor force. This comes with a caveat: women who were

⁵ Workers with children born in Dec'93 could benefit from the workweek reduction for only 1 month, given that their child was 5 years 11 months old when the law was adopted in Nov'99. Similarly, workers with children born from Nov'99 on were granted the maximum: 72 months (6 years) workweek reduction.

very attached to the labor market before motherhood (those who had a permanent contract before childbirth) remain more likely to work part-time after eligibility runs out, which leads to slightly lower earnings. In sum, the policy seemed to strengthen labor market attachment for the average mother both in the short- and long-term, while reducing hours (and earnings) persistently for those with (pre-existing) strong attachment.

As a robustness check, we supplement the RKD analysis with a difference-in-differences design that compares mothers with a prolonged exposure to the policy (depending on the birth-date of their children) with those not eligible at all. The results of this alternative approach are in line with our main findings: the policy increased participation persistently for the average mother.

The remainder of the paper is organized as follows. Section 2 provides an overview of the relevant features of the Spanish labor market and the institutional setup. We describe the dataset and the main empirical strategy (RKD) in Section 3, and present the main results in Section 4. The alternative difference-in-differences design and results are covered in Section 5. Section 6 concludes.

2. Institutional background

2.1. Labor market

The Spanish labor market is characterized historically by two features: a strong duality, with temporary contracts (with low firing costs) coexisting with highly protected permanent contracts, and very high fluctuations in the unemployment rate along the cycle.

Both features are especially visible for women, as they are more likely to work under fixed-term and/or part-time contracts, and also exhibit higher unemployment rates. In 2021, 25 percent of employed women were on a fixed-term contract (versus 19 percent of men), accounting for 53 percent of all temporary contracts.⁶ While the incidence of temporary contracts falls with workers' age, part-time employment increases after childbirth and with the number of children. About 22 percent of

⁶ Source: OECD Labour Force Statistics (2021), Dataset: Employment by job tenure intervals and type, Indicator: Temporary employment, share of total employment by sex.

female workers had part-time work arrangements (compared with 6 percent of men), representing 76 percent of all part-time contracts. The fraction of part-time workers increases to 33 percent for women on temporary contracts (16 percent for men).⁷ The gender gap in unemployment narrowed considerably during the Great Recession, but started widening again in 2013 along with the economic recovery, reaching 3.6 percentage points in 2021.⁸

Since the late 1970s, women's labor force participation in Spain has followed a steep and persistent upward trend until the early 2010s, stalling thereafter at around 70 percent. On the other hand, men's participation rates have declined slightly, resulting in a markedly narrower gender gap in labor force participation, from 53 percentage points in 1980 to 8 in 2021.⁹ The growing number of women entering the labor market has led to dual-income households that still adopt the traditional specialization model, whereby women take on most of the childcare and housework tasks (Farré et al., 2022). Despite the observed convergence, the gender ratio in median gross salary in Spain was 80 percent in 2019.¹⁰

Finally, Spain has experienced a dramatic decline in fertility, even in comparison with other advanced economies, with the total fertility rate falling from 2.2 children per women in 1980 to 1.4 in 2020.¹¹ Among the main drivers of this demographic transformation are job insecurity, long periods of high and persistent unemployment, women's increasing enrollment in college education, and other cultural and institutional factors (De la Rica and Iza 2005, Adserà 2011, Guner et al. 2019, Lopes 2020).

⁷ Source: Eurostat, Labour Force Survey (LFS), Part-time and full-time employment statistics.

⁸ Source: Eurostat, Labour Force Survey (LFS), Unemployment statistics.

⁹ Source: OECD Labour Force Statistics (2021), Dataset: Labour Force Statistics by sex and age, Indicator: Labour force participation rate by sex, ages 15-64.

¹⁰ Source: Eurostat, Structure of Earnings Survey (SES) 2019, Indicator: Gender Pay Gap in unadjusted form, median gross hourly earnings.

¹¹ Source: Eurostat, Fertility Statistics.

2.2. Family-friendly policies

Parental leave. Since 1989, Spanish mothers were entitled to six weeks of compulsory, fully paid maternity leave, while fathers were granted only two days of paid job absence (until 2007). Families were granted ten additional weeks of full-pay parental leave, to be used interchangeable by mothers and/or fathers. In practice, the full 16 weeks were taken by mothers in the vast majority of cases.

Paid and non-transferable paternity leave was introduced in 2007, with the goal of facilitating a more gender-equal sharing of care and related housework and supporting mothers' return to the labor market. Fathers were granted 13 days of leave at full pay which could be taken at the same time or immediately after the maternity leave period. From then on, Spain has extended paternity leave to four weeks in 2017, five weeks in 2018, eight weeks in 2019, twelve weeks in 2020, and sixteen weeks in 2021, catching up with the maternity leave in force since 1989.

Childcare leave. After the paid leave period, either parent could resort to two additional arrangements: unpaid leave for up to 3 years, with the right to return to the same job, or reducing working hours until the (youngest) child turned 6 (since 1999). In practice, very few fathers made use of the unpaid leave, or reduced their working hours, with most of the burden of childcare and housework falling on women (Farré and González, 2019).

Regarding the reduction of working hours, the *Law to Promote the Reconciliation of Work and Family Life*¹² was published on November 5th, 1999 and became effective the day after. The legislation allowed all workers (male and female) with children aged under 6 years or disabled family members to reduce their usual weekly working time by a fraction between one-third and one-half, with a proportional salary reduction,¹³ regardless of their partner's employment status, working time arrangement, or contract nature. Both parents could even request it simultaneously on the same

¹² In Spanish, *Ley 39/1999 para promover la conciliación de la vida familiar y laboral de las personas trabajadoras*.

¹³ The workweek reduction does not affect the worker's paid vacation days, unemployment insurance benefit and, during the first two years, retirement, disability, widow, or maternity/paternity benefits.

eligible child, provided they did not work for the same company. Since 1999, several reforms were passed, such that the child's age limit was raised to 8 years old in 2007, and to 12 in 2013. In addition, since 2012 the reduction started to be computed on a working-day instead of a weekly basis.

The law explicitly bans workers' dismissal when they have previously requested a workweek reduction. However, this provision only protects (*de facto*) permanent workers, since temporary workers can always be dismissed (and not renewed) once their contract expires. The application process is straightforward as it only requires a two-week written notice. The only documentation that the worker can be asked for is proof confirming that he or she has a child below the threshold age or a disabled family member. If the employer denies the request, the worker has 20 days to file a claim in court requesting the reduction, with the trial taking place within 5 days. The court decision cannot be appealed, and will grant the worker the reduction unless the hours requested fall outside the worker's usual schedule.

There are no official statistics on take-up of this policy. Based on Social Security data,¹⁴ we estimate that about 8.9% of women with children under age 6 (and 1.4% of men) were working reduced hours in the range allowed by the policy (between one half and two-thirds of full-time hours) at some point during 2005 (five years after implementation). Similarly, Labor Force Survey data for 2005 indicate that about 8.2% of women with children under age 5 (0.2% of men) were working part-time (in their main job) for reasons related to childcare obligations. Given the very low take-up among men, we concentrate our analysis on women.

3. Main Empirical Strategy: Regression Kink Design

3.1. Identification strategy: Regression Kink Design (RKD)

Our main objective is to identify the causal impact of promoting part-time work for parents on women's long-term labor market outcomes. The setup of the policy introduction frames well into a

¹⁴ Continuous Sample of Working Lives (2005).

regression kink design (RKD), where the policy variable of interest (number of months a mother can benefit from the workweek reduction) is determined by a known assignment rule (the date of birth of the reference child). The relationship between both variables induces two kinks (Figure 1). The lower kink affects women with children born close to November of 1993, while the upper kink affects mothers of children born around November of 1999 (the month of the policy introduction). We focus our analysis on the lower kink since births taking place after the introduction of the policy in 1999 are potentially affected by any fertility effects of the reform (Bover et al 2021).

We thus focus on women with children born between January 1990 (by convention) and October 1999 (the last month before policy introduction). Women with children born before the kink (November of 1993) would be ineligible for the workweek reduction (since their child turned 6 the month of the policy change), while women with children born after the kink would be (partially) eligible, since their reference child would not have turned 6 yet in November of 1999.

[Figure 1 around here]

Analytically, if M is our treatment variable (months of eligibility for the workweek reduction) and B is the assignment variable (birthdate of the reference child), the labor market outcome of interest L will be a function of both: $L \equiv l(M, B)$. The causal effect of the treatment of the outcome is represented by the derivative of L with respect to M at the kink point $B = b_0$:

$$E \left[\frac{\partial L}{\partial M} \right]_{B=b_0} = \frac{\lim_{B \rightarrow b_0^+} \frac{\partial E[Y|B = b_0]}{\partial B} - \lim_{B \rightarrow b_0^-} \frac{\partial E[Y|B = b_0]}{\partial B}}{\lim_{B \rightarrow b_0^+} \frac{\partial M(B)}{\partial B} - \lim_{B \rightarrow b_0^-} \frac{\partial M(B)}{\partial B}} \quad (1)$$

Equation (1) shows that the RKD estimator is a ratio of two terms: The numerator represents the variation in the slope of the relationship between the outcome L and B at the kink; the denominator is the change in the slope of the treatment variable M at b_0 . In practice, estimation is achieved by running local non-parametric regressions at both sides of the kink:

$$Y_{it} = \alpha_0 + \alpha_1 m_t + \beta D_{it} \times m_t + \delta C_{it} + u_{it} \quad (2)$$

In this equation, Y_{it} represents the labor outcome of interest for woman i who had her youngest child in month t . We consider both short- and long-term outcomes. The “short term” refers to the period between birth and the month when the reference child turns 6, while we define as “long term” the period when the child is between 6 and 10. We consider four labor market outcomes: the number of days worked part-time during the period, which serves as our primary outcome as it directly reflects the policy aim to enable mothers to work reduced hours, and three secondary outcomes: number of days worked full-time, total number of days worked, and labor income (in 2010 euros). Our secondary outcomes are informative about the effects of the policy on labor market attachment.

Our assignment variable m_t is the date of birth of the reference child expressed in months and normalized to zero in November 1993, the month of birth of children who turned 6 just when the policy became effective (i.e. at the kink). D_{it} is an indicator variable for the child being born after the kink ($m = 0$), and C_{it} is a set of covariates including fixed effects for the birth year of the mother, her education level, the presence of older siblings in the household, the region of residence, and municipality size.

Implementing an RKD requires us to set values for three parameters: the type of kernel, the order p of the polynomial in the regression, and the bandwidth around the kink (h). We follow the literature (Card et al. 2015) and employ a triangular kernel, which is commonly used in RKD settings since it provides higher weights to observations closer to the kink point. This choice helps mitigate potential bias that might arise from including observations far from the threshold, which are less informative about the treatment effect. For the order of the polynomial, we use a first-order (linear) polynomial as our baseline. This choice strikes a balance between bias and variance: while higher-order polynomials can offer more flexibility fitting the data, they also risk overfitting, particularly with limited data near the kink. The linear specification is also in accordance with the policy function (eligibility increases linearly with the running variable). Finally, we choose a bandwidth of $[-46,71]$

months in the base case, which corresponds to the span of the lower kink sample (births between Jan. 1990 and Oct 1999), normalized so that $m(\text{Nov. 1993}) = 0$. In our robustness checks, we repeat the analysis with a second-order polynomial, and use narrower (symmetrical) bandwidths.

3.2. Data and sample design

Our main analysis sample relies on administrative records from the 2010 wave of the Continuous Sample of Working Histories (MCVL).¹⁵ Each year, the Spanish Social Security draws a 4 percent random sample of all affiliates and pensioners in the system *in that year*; thus our sample is representative of all individuals that were working in the formal sector or receiving social security benefits (such as unemployment benefits, social assistance, disability, retirement or survivors' pensions, or parental leave) in 2010.¹⁶ Additionally, the MCVL features longitudinal information on workers' labor market histories going as far back as 1967 (though data on earnings is only complete from 1980 onwards), thus allowing us to recover employment histories for each individual at monthly frequency.

These records are enriched with data from the Tax Bureau and the Municipal Census, and include information on workers' personal characteristics (gender, birthdate, nationality and province of birth, municipality of residence, and education level), employment features for each contract (start and end date, monthly earnings, reason of dismissal, time arrangement, type of contract,¹⁷ industry, sector, occupation, firm size, location, and Social Security regime), and household cohabitants (gender and birthdate of each cohabitant).

¹⁵ *Muestra Continua de Vidas Laborales, MCVL.*

¹⁶ We also conduct a robustness check merging the samples of years 2005 to 2010.

¹⁷ Temporary contracts were introduced in Spain in 1984, so that contract type is not available before that time (as all contracts were open-ended). Additionally, contract type information in the MCVL is known to be unreliable before 1996 due to data limitations, and even post-1996, there are some missing values.

Sample selection

Our sample includes women born between 1945 and 1984 who had at least one child between January of 1990 and November of 1999.¹⁸ Since the MCVL does not explicitly define household relationships, children are identified as any cohabitant born between January 1, 1990 and October 31, 1999, with the assumption that the mother was between 15 and 45 years old at the time of the child's birth.¹⁹ We refer to the youngest child born by November 1999 as the *reference child*.

Then, we classify these working mothers by their exposure to the reform as a function of the age of their children in that month. Given the enactment date of the policy, mothers whose children were all born before or in November of 1993 were unexposed to the reform, as every child would be older than 6 by the time the law was passed. Women with at least one child born from December 1993 onwards were exposed to the policy, with exposure increasing from 1 month up to a maximum of 72 months (6 years) for women whose youngest child was born in November 1999 (and later). That is, mothers can reduce their working hours for a varying number of months, until their youngest child turns 6. This gradual exposure arranges mothers in three different groups: those who were never exposed to the policy, or nn-eligible (i.e. mothers with all children born before or in November 1993), those partially exposed (i.e. mothers whose youngest child was born between December 1993 and October 1999), and those fully exposed (i.e. mothers whose youngest child was born from November 1999 on).

In our main analysis sample, we classify women based on the age of their children in November 1999, regardless of their (potential) later fertility, as the introduction of the policy may have affected

¹⁸ The decision to focus on women born between 1945 and 1984 ensures that we capture a relevant cohort of women who were of working age during the period under study and who were likely to have had children by the time of the policy reform in 1999. Moreover, the 2007 extension, which raised the eligibility age to 8 years, would not affect children in our sample, who were born between January 1990 and October 1999. By 2007, the youngest children in this cohort were already 8 years old, placing them outside the new eligibility window that allowed parents to request reduced working hours for children up to 8 years of age.

¹⁹ We identify children based on cohabitation and an assumed mother-child age difference of 15 to 45 years.

subsequent fertility decisions. This implies that some women in our sample would in practice have been eligible for a longer period, if they had additional children after November of 1999.

Table 1 presents descriptive statistics for our main sample, which encompasses over 78,500 women. Mothers in our sample were on average 29 years old at the time of birth of the reference child (between January 1990 and October of 1999). This implies that the mothers of children born near the kink (November of 1993) would be on average 46 years old in 2010 (when we sample them). The 25th and 75th age percentiles are 25 and 33, so that a quarter of women who had a child near the kink would be 50 or older. Women who had their reference child closer to January of 1990 (the starting point of our sample) would be 49 on average in 2010.

[Table 1 around here]

We chose to sample women in 2010 in order to capture at least ten years after the birth of the reference child for all the women in the sample, since we are interested in long-term effects. Given that the most recent births in our sample took place in October of 1999, this requires us to sample women after October of 2009, thus the choice of the 2010 Social Security sample.²⁰

Employment Data Construction

Our analysis relies on a balanced panel of monthly spells, containing personal and labor market information for each individual from the month of birth until 10 years later. For each individual woman, we calculate the number of days worked in each month. In the few cases where individuals held more than one job simultaneously (i.e., multiple contracts within a monthly spell), we consider only the primary employment activity *in each month*, i.e. the one with the higher number of days worked since the contract started and higher monthly earnings, prioritizing permanent contracts over

²⁰ One may worry that some children may have left the parental home by 2010, and thus we would not be able to identify their mothers. The oldest children in our sample (born in 1990) would turn 20 in 2010. While it is likely that a (small) fraction would have left the parental home by then, there are two reasons why we think this does not pose an important problem. First, many children will remain registered in the parental home even after moving out, and second, we do not anticipate any discontinuity in the fraction leaving home around the kink (children born close to November of 1993, who would turn 17 in 2010).

fixed-term ones. Months without any employment record in a given month are included as zero earnings and zero days worked.²¹

This process results in a monthly panel, which includes:

- Number of days worked in the month: This variable measures the total number of days a woman was employed in a given month, accounting for both full- and part-time employment. If an individual was employed for only part of the month, whether due to starting or ending a job, the variable reflects the exact number of days actively employed.
- Number of days worked full-time and part-time in a month: These variables capture the number of days a woman was employed in either a full- or part-time capacity during a given month. A part-time day is recorded when the individual worked less than the standard full-time hours, as indicated by the part-time coefficient variable.
- Monthly earnings: This variable is calculated based on the total contribution base for each individual in a given month.²² If an individual worked part-time or for only part of the month, the earnings are prorated accordingly.

Then, for each woman, we add up her days worked and her earnings in two sub-periods: the 72 months between the birth of the reference child and the month before the child turns 6 (this is the period when we measure the short-term effects of the policy), and the 48 months when the child is between 6 and 10 years old (when we measure the long-term effects, after the child has aged out of eligibility for the policy). Table 1 shows that the average woman in our sample worked 971 days while their reference child was under 6 years old (120 of those part-time), and 834 days when the child was between ages 6 and 10 (141 part-time).

²¹ Self-employment spells are not included in the analysis.

²² This variable represents the total earnings used for social security contributions, which includes both salary and other remunerations subject to contributions. In cases where multiple jobs are held in the same month, the earnings from the primary employment (as defined above) are used.

One may be concerned that the older women in our sample may have dropped out of the labor market by 2010, and thus would not appear in our data (as our main sample only includes individuals linked to the Social Security system in 2010). Relatedly, Fernández-Kranz and Rodríguez-Planas (2021) find negative effects of the same reform on female employment, plausibly due to statistical discrimination, which may lead to an under-representation of women in Social Security data after 1999.²³ To address these potential issues of selection, we expand our main sample by merging the 2010 wave of Social Security records with the ones for the previous five years (2005 to 2009).²⁴ Note that this alternative sample only allow us to examine the short-term effects of the policy, since in the 2005 wave, some of the reference children have not yet reached 10 years of age.

3.3. Tests of Identifying Assumptions

For the treatment effects in our RKD to be properly identified, two assumptions must hold. Firstly, the density function of the assignment variable (the date of birth of the reference child) should be smooth at the kink,²⁵ in other words, women have not chosen to belong to the eligible nor the non-eligible group. This assumption is plausible in our case, as the policy was discussed in the public sphere only very shortly before it was enacted, and the kink is defined based on the date of birth of children born six years before. Figure 2 confirms (visually) that there is no bunching of births around the kink.

[Figure 2 around here]

In addition to the graphical evidence, we perform a battery of analytical tests to discard sorting through the assignment variable around the kink (see Table A1). The natural choice is a McCrary test, ubiquitous in the RDD literature (McCrary, 2008), which checks for breaks in the density of the assignment variable at the kink. We extend this exercise by testing the first derivative of the density

²³ Note that this issue does not represent a threat to our identification strategy, since the negative employment effects driven by statistical discrimination would not affect women of both sides of our kink differentially.

²⁴ We construct the merged data set by tracking women in the MCVL dataset backwards from 2010 to 2005, thus incorporating those who may have left the labor market before 2010 but were still present in earlier waves.

²⁵ This is often known as the “no sorting” assumption.

function, as proposed by Card et al. (2015). We also report the estimates using local polynomials following Cattaneo et al. (2020).

Secondly, absent the policy of interest, the slope of the relationship between the labor market outcomes and the assignment variable should not change noticeably around the kink. This assumption cannot be directly tested as we ignore the shape of such relationship had the policy not been in place; however, we can gauge the smoothness of our covariates in the vicinity of the kink. As shown in Figure A1, our covariates evolve smoothly around the kink (maternal age and education, birth order, and urban/rural). To complement this evidence, Table A2 in the Appendix presents the estimates of running local polynomial nonparametric regressions for each covariate around the kink. The results confirm that the covariates evolve smoothly around the kink.

4. Main Results

We first present the results for our main outcome of interest (part-time work) in the short-term, i.e. before the reference child turns 6. Figure 3 shows the average number of days worked part-time when the reference child was younger than 6 years old, by month of birth of the child.²⁶ It is apparent that the slope of the linear trend changes precisely at the beginning of the eligibility span, thus suggesting the existence of a kink and a non-negligible positive impact of the policy on part-time work during the eligibility period. This can be seen as the “direct” effect of the policy, and a sort of “first stage” for the rest of our analysis.

[Figure 4 around here]

The corresponding regression results are shown in Table 2. We present our estimates of the RKD setup obtained by running separate local polynomial non-parametric regressions of order 1. The baseline specification spelled out in equation 2 includes the assignment variable (normalized birthdate of the reference child), a dummy indicating whether the mother is eligible for the workweek

²⁶ We use the full sample, from 46 months before to 71 months after the kink (the kink is in October 1993). That is, the bandwidth coincides with the lower-kink subsample span (i.e. January 1990 to October 1999).

reduction, and a set of covariates such as the presence of older siblings in the household, the mother's birth year and education level, the region of residence, and municipality size (column 2). The coefficient of interest is the interaction between the assignment variable and the eligibility indicator, which captures the change in the number of days worked part-time (while the reference child is less than 6 years old) as the exposure to the policy increases by one month.

Throughout the specifications we use the full sample of mothers who had a child between January 1990 and October 1999, regardless of whether they had additional children after the reform (except in column 3, as we explain later), and hence during the full bandwidth from 46 months before to 71 months after the kink (October 1993).

[Table 2 around here]

We find that, on average, mothers eligible for one additional month of worktime reduction increase the number of days worked part-time while their child is under 6 by roughly one day. The sign and magnitude of the effect is robust across the different specifications. We start by excluding the covariates from the regression (column 1), then include the covariates (column 2). In column 3, we exclude from the sample women who had additional children after November 1999, and whose eligibility would thus have been extended beyond the reference child turning 6. In terms of magnitude, the “intent to treat” effect in our main specification is 0.71 days per extra month of eligibility (column 2). This is equivalent to 10 percent of eligible women effectively increasing their part-time days by one week (7.1 days) for each extra month of eligibility.

The magnitude of the estimated effects on part-time work might seem small, but several aspects should be considered. Firstly, our analysis includes *all* women with children born between Jan. 1990 and Oct. 1999, meaning we are estimating intent-to-treat effects, which may dilute the observed impact on the treated. Secondly, one might expect that the impact is stronger for specific subgroups that were more responsive to the policy. Thirdly, mothers with a short eligibility span might not have

reacted to the reform, suggesting that the effect may be larger among women who benefitted from the workweek reduction for a longer duration.

In columns 4 and 5, we restrict the sample to subgroups of women who may have been more prone to request the workweek reduction: those who were working full-time and those who were working under a permanent contract the month before giving birth to the reference child. We find that take-up is particularly high in the subsample of women with permanent contracts (column 5). The effect is 3.5 times higher than in the full sample (2.5 versus 0.71 days per month of eligibility). This suggests that mothers with permanent contracts were more inclined to take advantage of the policy, consistently with them being the ones who benefitted *de facto* from protection against job separation. In terms of magnitude, the “intent to treat” effect for this group was 2.5 days per extra month of eligibility, equivalent to 10 percent of eligible women effectively increasing their part-time days by 25 days for each extra month of eligibility. This aligns with the findings of Fernández-Kranz and Rodríguez-Planas (2021), who suggest that female employees working under permanent contracts are the most likely to request a workweek reduction, as they have less risk of employer retaliation or job loss.

Figure 4 shows similar descriptive plots for our additional short-term outcomes: the number of days worked full-time (Panel A), the total number of days worked (Panel B), and labor earnings (Panel C), during the same period. The figures suggest a change in the slope at the kink for the three outcomes, with eligibility for the policy leading to more days worked full time, more total days, and higher accumulated earnings. The increase in part-time work does not seem to have come at the expense of full-time work, but inactivity.

[Figure 4 around here]

Table 3 shows the accompanying regression results for our secondary outcomes. Our results confirm that the increase in part-time as a result of the policy does not come at the expense of a reduction in full-time work in the full sample, but instead it comes from an increase in total days

worked (column 3). We find that an increase in mothers' exposure by one month increases their total number of days worked by 3.5 on average. In fact, full-time days also increase (by 2.7, column 1). As a result of this increased labor force attachment, a month of eligibility leads to additional labor income of 140 euros (column 5). These findings suggest that the policy lured into part-time work women who would otherwise have transitioned to unemployment or left the workforce altogether. The effect on earnings is not small. Full eligibility (72 months) is estimated to increase earnings over the six years by 10,000 euros, almost 30% of mean earnings (see Table 1).

[Table 3 around here]

The effects are quite different for the (small) subsample of women with a permanent contract before childbirth. As shown in column 2, in this subgroup the increase in part-time days came from a decrease in the number of days worked full-time, with no increase in total days worked (column 4). These women ended up working fewer hours as a result of the policy, and their earnings fell by 193 euros per month of eligibility (column 6). These results suggest that mothers on permanent contracts, strongly attached to the labor market, tended to reduce full-time workdays in favor of part-time arrangements, and this led to a reduction in their total labor supply.

Our results for short-term outcomes are very similar when we supplement the sample with additional waves of data (merged samples 2005-2010). Table A3 shows that in the full sample, an additional month of exposure results in a 0.75-day increase in part-time work (column 2). This effect is more pronounced among mothers who did not give birth to another child after the policy enactment, who experienced an increase of 1.05 days worked part-time (column 3). The estimated effect is again even larger among mothers with a permanent contract, with a 2.47-day increase (column 5). These findings suggest again that permanent workers are more likely to take advantage of the policy and shift towards part-time work.

Table A4 presents the results for the secondary outcomes in the extended 2005-2010 sample. We find again an overall positive effect of the policy on days worked and earnings as a result of an

extra month of eligibility (columns 1, 4 and 7). The results are again very different for women on permanent contracts: longer eligibility leads to a reduction in days worked full-time (and total days worked), and an associated reduction in earnings (columns 3, 6 and 9).

Overall, our analysis of the short-term effects of the policy show that eligibility did increase part-time work among eligible mothers, as expected. For the average mother, eligibility led to an increase in employment (more total days worked) and earnings. However, we identify a subgroup of women with strong pre-existing attachment to the labor force (those on permanent contracts before childbirth) for whom the increase in part-time comes at the expense of a reduction in full-time work, thus leading to lower earnings.

We next ask how these short-term effects of the policy may have affected women's employment and earnings in the long term, once they become ineligible for the workweek reduction after their children turn 6. The long-term results for the full sample are summarized visually in Figure 5. First, longer eligibility is associated with more part-time work, even past the eligibility period (Panel A). We don't find evidence of a reduction in full-time days (Panel B), but instead, treated women work more total days (Panel C) and earn more (Panel D). These results suggest that, on average, the policy strengthened mothers' attachment to the labor force, leading to higher earnings in the long term.

[Figure 5 around here]

[Table 4 around here]

The corresponding regression results are shown in Tables 4 and 5. Regarding part-time work, our main specification (column 2 in Table 4) shows that women who were eligible for one extra month of workweek reduction when their child was under 6 worked part-time one more day when the child was between 6 and 10, relative to ineligible women. The effect magnitude is similar for women who worked full-time before childbirth (column 4) and for women who had a permanent contract (column 5). Thus, we find a persistent increase in part-time work as a result of the policy.

[Table 5 around here]

Table 5 shows the long-term effects for our secondary outcomes. On average, women affected by the policy worked more days even after aging out of eligibility (column 3), with the increase coming from part-time work (we find no effect on days worked full-time, column 1). As a result of their stronger labor force attachment, we also find a persistent positive effect on earnings (column 5). Note that the 46-euro effect on earnings corresponds to one month of eligibility, suggesting that full eligibility (72 months) would increase long-term earnings by more than 3,000 euros, or 11% of average earnings over the four-year period (see Table 1).

The effects are again different for women on permanent contracts, who worked less in the short term as a result of the policy. In the long term their total days are unaffected (column 4), but their full-time days are lower, leading to a small negative effect on earnings (column 6). The 118 earnings reduction is equivalent to 0.4% of mean earnings. If we extrapolate to women with full eligibility (72 months), the effect amounts to a 29% earnings reduction. In this group of women, the persistent increase in part-time work as a result of the policy leads to significantly lower earnings in the long-term.

We performed a number of robustness checks for our baseline specification, shown in Appendix table A5 to A9, to assess the stability of our baseline results under alternative specifications. These robustness checks include using narrower bandwidths (symmetric bandwidths of 37 and 42 months around the kink) and testing higher-order polynomial terms. The results confirm the overall positive impact of the policy in the short term (on total days worked and income, see Table A6). While the positive effects remain robust across different bandwidths, we observe some sensitivity in the results when introducing higher-order polynomials. We also confirm the negative short-term effect on full-time days for women with permanent contracts (Table A9).

[Table 6 around here]

We also explore potential heterogeneity in the policy effects by examining subgroups based on firm size and education (Table 6).²⁷ For mothers working in small and medium firms, the effect of the policy on part-time workdays is more pronounced, with an increase of 1.14 days when the child is under 6 years old (column 2). This effect is also slightly higher among college-educated mothers, with an increase of 1.35 days (column 4). The long-term effects are also stronger for women in small and medium firms and college-educated mothers (columns 6 and 8).

Our RKD estimates primarily compare ineligible women with those who were eligible for the policy for a very short period (mothers with children close to turning 6 when the reform was passed). This comparison might understate the impact of the reform, particularly for those who had more extended eligibility. To address this concern, we perform a supplementary difference-in-differences analysis in the next section. This alternative approach allows us to compare non-eligible women with those who were eligible for the policy for at least one year, thereby focusing on the effects on women with longer eligibility periods.

5. Alternative Identification Strategy: Difference-in-differences

In addition to our RKD exercise, we implement a difference-in-differences design that compares mothers differentially exposed to the policy depending on the cohort of birth of their children. This approach only includes in the treatment group women who were eligible for the policy for at least 12 months.

Our control group includes non-eligible mothers (i.e. women whose reference child was older than 6 when the policy was enacted) with their youngest child born between Nov. 1992 and Oct. 1993 (i.e. their youngest child had just turned 6 when the policy came into effect). For the treatment group,

²⁷ Large firms are defined as having more than 250 employees, while small and medium-sized enterprises (SMEs) consist of firms with fewer than 250 employees. Beyond firm size and education, we also performed an analysis using sector of activity and occupation. We found no important differences in the policy effects among these groups.

we consider three different subsets of partially exposed mothers as a function of the birthdate of their reference child:

- 1- **1995 cohort:** Women with reference children born between Nov. 1994 and Oct. 1995. These mothers qualified for 1 to 2 years of workweek reduction, as their children were 4 to 5 years old when the law became effective.
- 2- **1996 cohort:** Reference children born between Nov. 1995 and Oct. 1996. These mothers qualified for 2 to 3 years (their children were 3 to 4 years old when the reform was passed).
- 3- **1997 cohort:** Reference children born between Nov. 1996 and Oct. 1997. These mothers qualified for 3 to 4 years (their children were 2 to 3 years old when the reform was passed).

We design our analysis at a quarterly frequency to have enough granularity for all the treatment groups. Moreover, we use a balanced panel of mothers who had their reference child in the different cohorts, regardless of whether they gave birth to subsequent children after that period.

Firstly, we compare the number of days worked part-time in each quarter for the non-eligible mothers (control group) and the partially exposed mothers (either the 1995, 1996 or 1997 cohort treatment group). To this end, we estimate the following specification separately for each quarter q , from 12 quarters before to 24 quarters after the birth event:

$$Y_{it} = \alpha + \gamma T_i + v_{it}, \forall q \in [-12, 24] \quad (3)$$

Where Y_{it} represents the outcome of interest for mother i with her reference child born in quarter t , and T_i is an indicator for the mother being in the treatment group (either in the 1995, 1996, or 1997 cohort group).

Figure A2 shows the estimates of the coefficient γ in Equation (3) for the different treatment groups. The presence of an effect is unclear due to strong pre-trends, which complicates the interpretation of the results. Equation (3) estimates the average difference in the outcomes between the treatment and the control groups across various quarters relative to the birth event, but does not fully account for pre-existing trends.

To address this limitation, we estimate equation (4), which controls for pre-trends and post-implementation dynamics by incorporating event study indicators for each quarter relative to childbirth. Moreover, it includes an interaction term that specifically captures the effect of being eligible for the policy during the relevant quarters (i.e., when the reference child is under 6 years old). Therefore, unlike Equation (3), which averages the effect over the entire post-birth period, this approach identifies the impact specifically during the quarters of eligibility.

$$Y_{it} = \alpha + \sum_{q=L}^U \delta_q I_{it}^q + \gamma T_i + \beta T_i \times P_{it} + v_{it} \quad (4)$$

Y_{it} represents the outcome of interest for mother i with her reference child born in quarter t , observed in quarter q relative to childbirth. I_{it}^q is an event study indicator for each quarter relative to childbirth (from $L = -12$ quarters before to $U = 24$ quarters after the event), T_i is an indicator for whether the mother is in the treatment group (either in the 1995, 1996, or 1997 cohort group), and P_{it} is an indicator for the quarters in which treated mothers (i.e. partially exposed) could actually benefit from the policy.²⁸ The coefficient of interest (the interaction between the eligibility T_i and P_{it} indicators) captures the difference in the number of days worked part-time while the reference child is under 6 years old, between mothers in the treatment and control groups.

[Table 7 around here]

The results are presented in Table 7. On average (column 1), mothers with children born between Nov. 1996 and Oct. 1997 (i.e. the 1997 cohort) worked part-time 1.5 more days than non-eligible mothers per quarter (or 0.5 days per month), in the eligibility period (i.e. after the reform and while their children were younger than 6). This result remains stable across different specifications. We exclude the pre-birth quarters from the analysis in column 2, then account for mothers more susceptible to request the workweek reduction, those working under a full-time and a permanent

²⁸ For the 1995 cohort group, the mothers qualified for 2 to 3 years, hence $P_{it} = 1$ for quarters 16 to 24. Similarly, for the 1996 cohort group, $P_{it} = 1$ for quarters 12 to 24, and for the 1997 cohort group, for quarters 8 to 24.

contract one quarter before giving birth (columns 3 and 4, respectively). For the 1996 cohort, the sign and magnitude of this effect are preserved (see Table A10, columns 5 to 8). The estimate for the 1995 cohort is marginally significant (Table A10, column 1), but much milder, and not present in the additional specifications (columns 2 to 4).

The small magnitude of the estimated effects may stem from women with a brief eligibility span not actively pursuing a reduction in their workweek or, alternatively, from a concentration of the effects within a specific subset of working mothers. Another plausible explanation for the limited impact lies in the varying awareness and understanding of the policy among mothers with children of different ages. It is conceivable that mothers with older children may not have been fully aware of the policy or its implications regarding part-time work, when it was first introduced in 1999. The understanding of the new policy may have increased gradually over the years, potentially contributing to the divergent effects observed across different cohorts of mothers.

6. Conclusions

We evaluate the extent to which policies promoting part-time work among new parents affect women's long-term labor market outcomes. This is particularly relevant given that women are much more likely than men to take up part-time working arrangements, especially after having children, as a way to better reconcile family and work.

We exploit a Spanish reform in 1999 that granted mothers (and fathers) the right to reduce their work hours while they had children younger than 6 years old, with the corresponding downward wage adjustment. We estimate the effects of this policy on short- and long-term outcomes using Social Security administrative records and following a regression kink design approach.

Our findings show that the policy had a positive effect on mothers' labor market attachment and earnings in the long term. Mothers who could benefit from the worktime reduction for an additional month increased their number of part-time workdays while their child was less than 6 years old, leading to an overall increase in total working days. The increase in part-time work (and total days

worked) translated into higher earnings. The positive effects of the policy on women's labor market attachment persisted beyond the eligibility period, with persistent increases in labor supply and earnings measured up to 10 years following childbirth.

We also find evidence of heterogeneous effects, with women more attached to the labor market actually reducing their hours (and earnings) persistently as a result of the policy. We show that women who held a permanent contract before birth, and who were thus strongly attached to the labor market before motherhood, reduced their work hours while eligible for the policy (working fewer full-time days), thus reducing their earnings. In the long-term (when no longer eligible), some remained in part-time arrangements, earning less as a result.

Our findings highlight the potential of family-friendly policies to affect women's long-term attachment to the labor market, with heterogeneous effects. Promoting part-time work may induce some women (who may have otherwise become inactive) to work more, while reducing hours for others (who would have worked full-time), with the potential for important long-term impacts on hours and earnings. The heterogeneous impacts suggest that the overall effect of family-friendly policies on child penalties is likely to differ across households.

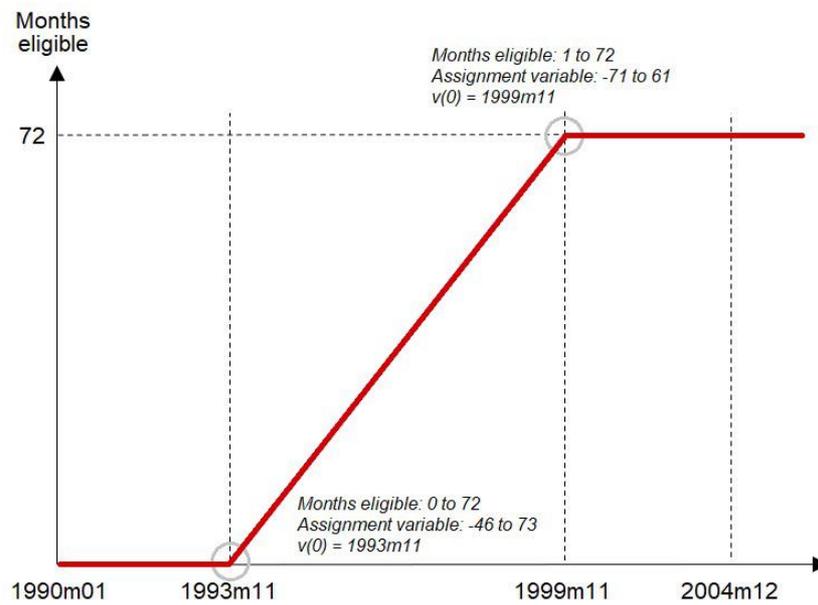
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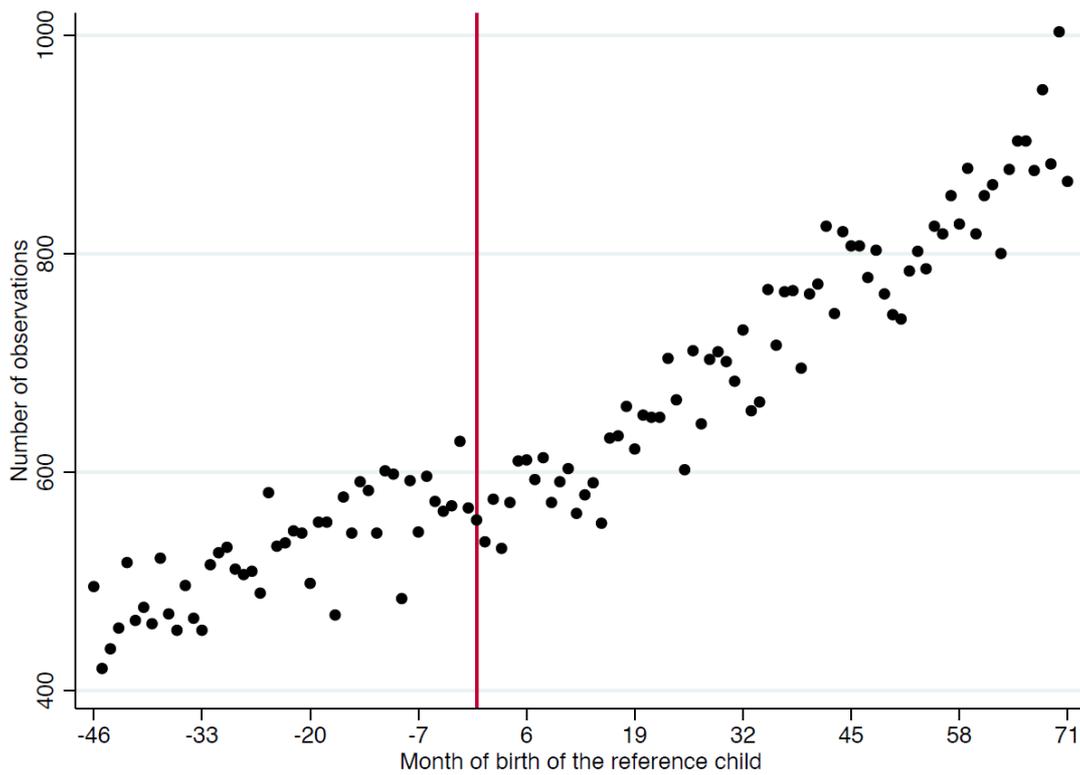
Figures and tables

Figure 1. Kinks in eligibility induced by the policy (as a function of the date of birth of the youngest child)



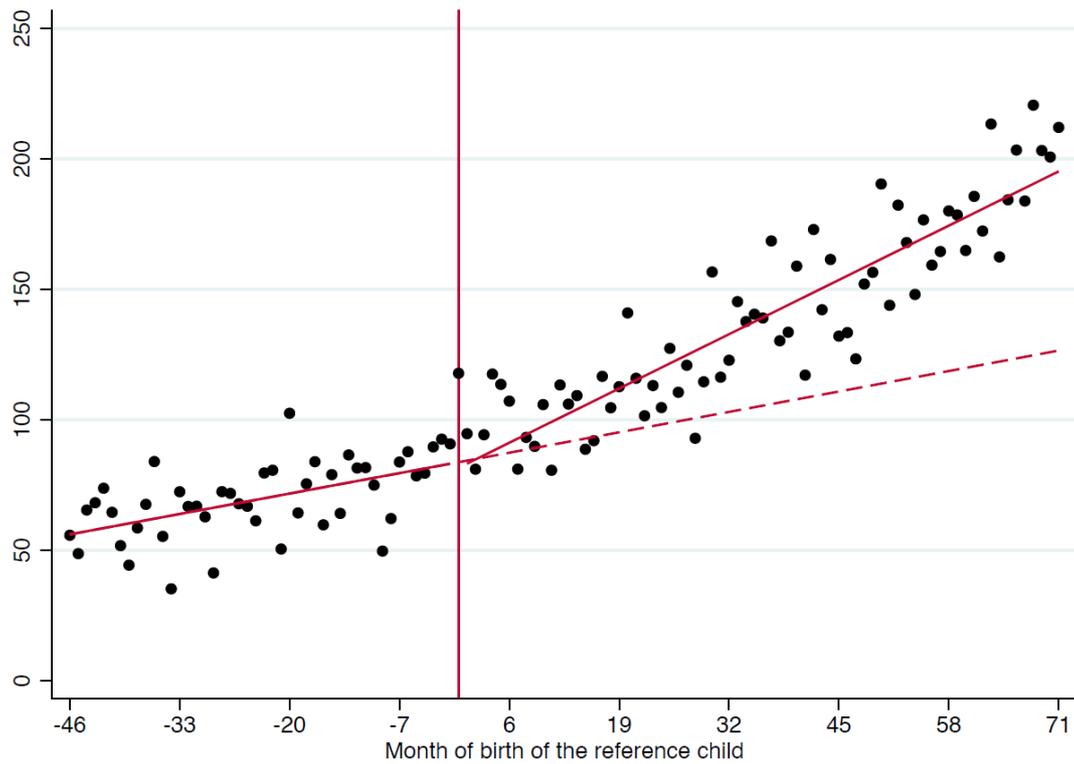
Note: Own elaboration from *Ley 39/1999 para promover la conciliación de la vida familiar y laboral de las personas trabajadoras*.

Figure 2. Density of births around the kink (Validity checks: no sorting)



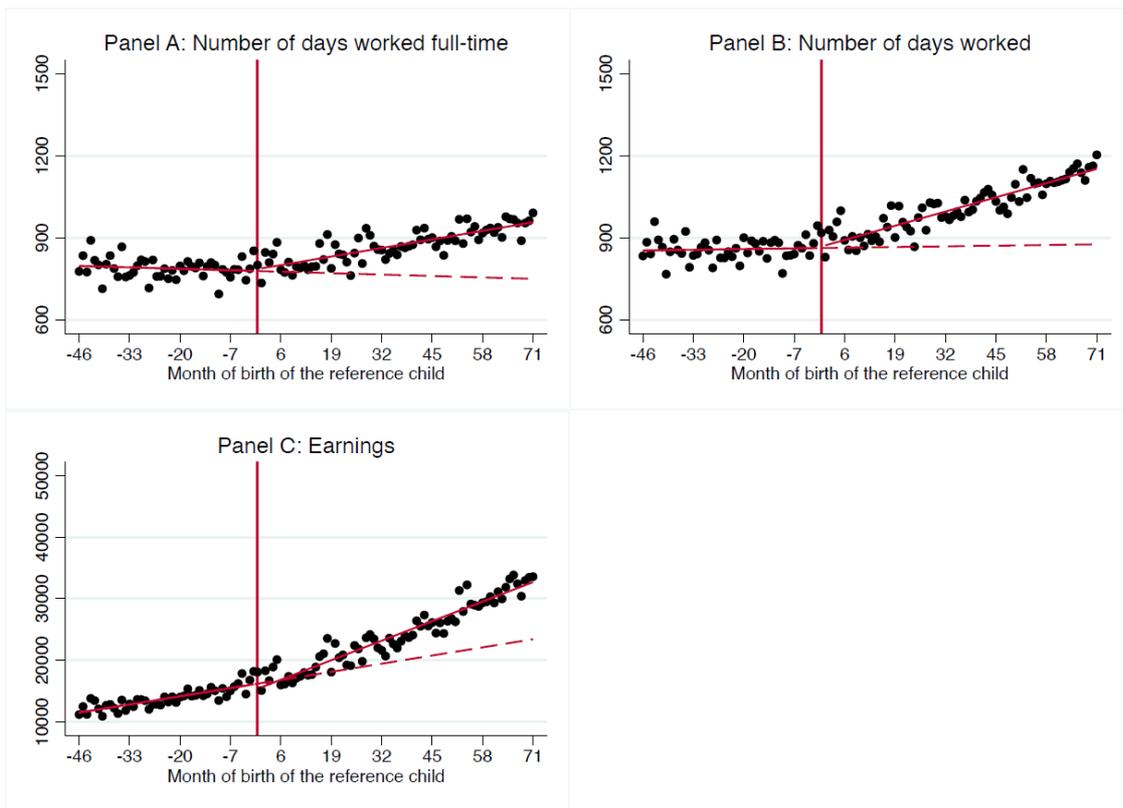
Note: The graph evaluates the validity of the “no sorting” assumption, which implies that the density of the assignment variable (in this case, the normalized birthdate of the reference child) evolves smoothly at the kink. This graph shows the frequency distribution of the assignment variable in one-month bins over the full bandwidth from 46 months before to 71 months after the kink.

Figure 3. Main outcome: Number of days worked part-time when child is 0-6.



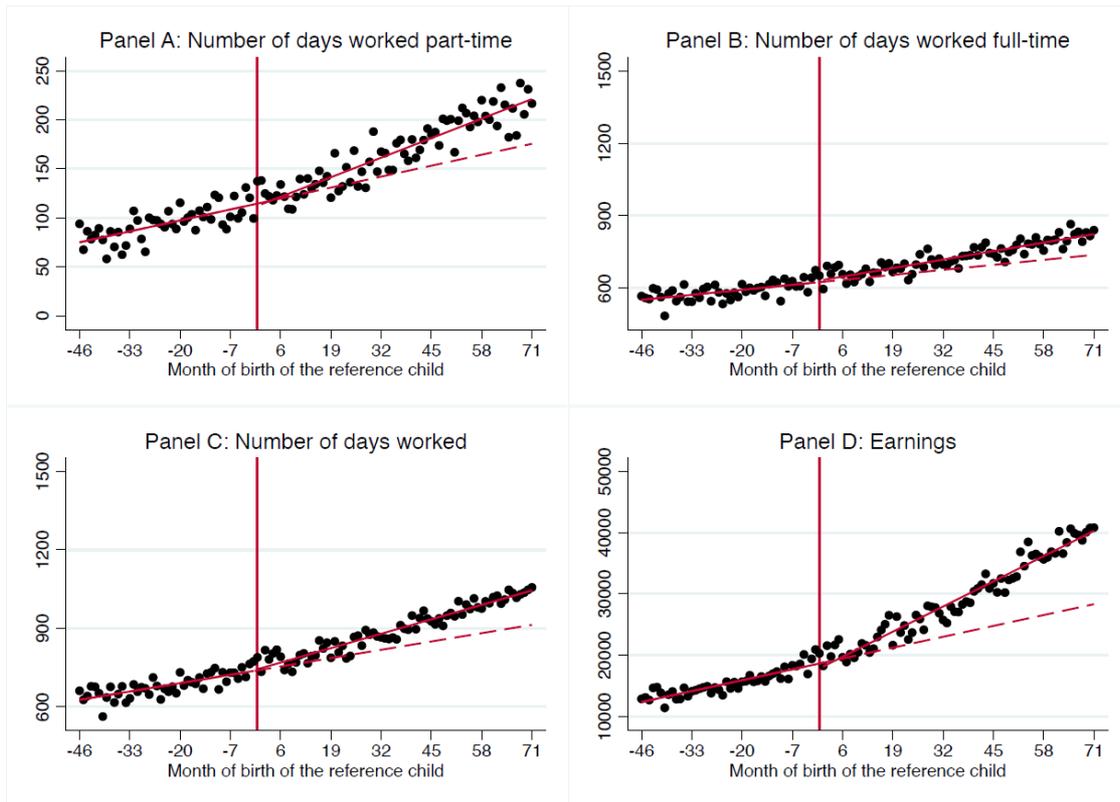
Note: This figure plots the mean of the outcome for each bin of the assignment variable, defined as the normalized birthdate of the reference child relative to the kink. In this case, we set one-month bins over the full bandwidth from 46 months before to 71 months after the kink. The linear fit shows the underlying linear relationship in both sides of the kink, which is estimated using local nonparametric regressions.

Figure 4. Secondary outcomes (ages 0-6).



Note: This figure plots the mean of the outcome for each bin of the assignment variable, defined as the normalized birthdate of the reference child relative to the kink. In this case, we set one-month bins over the full bandwidth from 46 months before to 71 months after the kink. The linear fit shows the underlying linear relationship in both sides of the kink, which is estimated using local nonparametric regressions.

Figure 5. All outcomes when the child is 6-10 years old.



Note: This figure plots the mean of the outcome for each bin of the assignment variable, defined as the normalized birthdate of the reference child relative to the kink. In this case, we set one-month bins over the full bandwidth from 46 months before to 71 months after the kink. The linear fit shows the underlying linear relationship in both sides of the kink, which is estimated using local nonparametric regressions.

Table 1

Descriptive statistics, MCVL 2010

	Mean	s.d.	Min	p25	Median	p75	Max	N
<i>The child is 0 to 6 years old (0 to 72 months old)</i>								
Number of days working part-time	120	341	0	0	0	0	2037	78595
Number of days working full-time	834	820	0	0	605	1738	2037	78595
Number of days worked	971	836	0	0	915	1917	2037	78595
Labor income (in 2010 euros)	34101.4	50808.4	0,0	0,0	7417.4	50888.4	239477.9	78595
<i>The child is 6 to 10 years old (73 to 120 months old)</i>								
Number of days working part-time	141	329	0	0	0	31	1337	78595
Number of days working full-time	679	569	0	0	668	1337	1337	78595
Number of days worked	834	547	0	222	1097	1337	1337	78595
Labor income (in 2010 euros)	29464.2	37869.3	0,0	0,0	12766,0	47181.9	173288.9	78595
Months eligible	26	25	0	0	23	49	71	78595
Assignment variable	18	34	-46	-11	22	48	71	78595
Mother's age at birth event	29	6	15	25	29	33	45	78595
	Percent							
Dummy: College education	0.10							78007
Dummy: Older siblings in the household	0.62							78595
Dummy: Urban area	0.52							78595

Notes: Descriptive statistics of a balanced panel of mothers who had a child between Jan. 1990 and Oct. 1999, unconditional to the fact of giving birth to the following children afterwards.

Table 2

Main outcome: Number of days worked part-time when the child is 0-6 years old (MCVL, 2010)

	(1)	(2)	(3)	(4)	(5)
Eligible	-4.032 (4.626)	-5.010 (4.666)	-9.894 (6.692)	2.911 (9.464)	-22.698 (23.548)
Assignment variable	0.807*** (0.122)	1.074*** (0.361)	1.704*** (0.520)	0.349 (0.861)	-1.017 (2.138)
Eligible × assignment var (Kink)	0.632*** (0.146)	0.709*** (0.147)	1.051*** (0.212)	0.569* (0.292)	2.498*** (0.692)
N	78,007	78,007	40,388	30,792	7,223
Window (n.months)	-46/+71	-46/+71	-46/+71	-46/+71	-46/+71
Controls	N	Y	Y	Y	Y
Unconditional	Y	Y	N	Y	Y
Sample	Full	Full	Full	Restricted: Full-time contract (1 month before birth event)	Restricted: Permanent contract (1 month before birth event)
Order of polynomial	1	1	1	1	1

Notes: This table shows the estimates of the RKD specification (Equation 2). These results are obtained running separate local polynomial nonparametric regressions of order 1 (linear), using the full bandwidth from 46 months before to 71 months after the kink (i.e., the kink corresponds to Oct. 1993). The coefficient of interest (Kink) captures the change in the number of days worked part-time (for the period in which the child is 0 to 6 years old) if the exposure to the policy increases by one month (i.e. a mother may benefit from childcare leave one additional month). The analysis uses a balanced panel of mothers who had a child between Jan. 1990 and Oct. 1999, unconditional to the fact of giving birth to following children after (columns 1 and 2); and three different sample restrictions (columns 3, 4, and 5, respectively): conditioning on mothers who did not give birth to further children after Oct. 1999 (i.e. mothers that would never be fully exposed to the policy), and mothers working under a full-time contract or a permanent contract one month before giving birth to their child (i.e. mothers that are de facto protected against layoff). The controls used in specifications 2 to 5 are the presence of older siblings in the household, mother's birthyear and education level, autonomous region and municipality size (all defined as dummies). Heterokedasticity-robust standard errors are displayed in parentheses. Significance levels: *** $p < 0.01$; ** $p < 0.05$, * $p < 0.1$.

Table 3
Secondary outcomes when the child is 0-6 years old (MCVL, 2010)

	Number of days worked <i>full-time</i>			Number of days worked			Labor income (in euros of 2010)		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Eligible	-3.445 (11.991)	85.909*** (16.634)	44.922* (25.257)	-6.955 (12.273)	93.463*** (14.644)	22.460** (9.263)	-1,038.009 (661.838)	1,605.094 (1,197.802)	5,151.341* (2,734.862)
Assignment variable	-0.223 (0.856)	-1.520 (1.377)	-0.944 (2.340)	0.818 (0.869)	-1.341 (1.158)	-2.000* (1.068)	65.023 (48.314)	154.650 (101.817)	22.859 (199.839)
Eligible × assignment var (<i>Kink</i>)	2.738*** (0.399)	0.297 (0.541)	-4.504*** (0.752)	3.518*** (0.408)	0.897* (0.486)	-1.938*** (0.291)	140.382*** (21.932)	52.964 (39.045)	-193.033** (90.698)
N	78,007	30,792	7,223	78,007	30,792	7,223	78,007	30,792	7,223
Window (n.months)	-46/+71	-46/+71	-46/+71	-46/+71	-46/+71	-46/+71	-46/+71	-46/+71	-46/+71
Controls	Y	Y	Y	Y	Y	Y	Y	Y	Y
Unconditional	Y	Y	Y	Y	Y	Y	Y	Y	Y
Sample	Full	Restricted: Full-time contract (1 month before birth event)	Restricted: Permanent contract (1 month before birth event)	Full	Restricted: Full-time contract (1 month before birth event)	Restricted: Permanent contract (1 month before birth event)	Full	Restricted: Full-time contract (1 month before birth event)	Restricted: Permanent contract (1 month before birth event)
Order of polynomial	1	1	1	1	1	1	1	1	1

Notes: This table shows the estimates of the RKD specification (Equation 2). These results are obtained running separate local polynomial nonparametric regressions of order 1 (linear), using the full bandwidth from 46 months before to 71 months after the kink (i.e., the kink corresponds to Oct. 1993). The coefficient of interest (*Kink*) captures the change when the exposure to the policy increases by one month (i.e. a mother may benefit from childcare leave one additional month). The analysis uses the full sample of mothers who had a child between Jan. 1990 and Oct. 1999, unconditional to the fact of giving birth to following children after (columns 1, 3, and 5) and a restricted sample of mothers working under a permanent contract one month before giving birth to their child (columns 2, 4, and 6). The controls used in all specifications are the presence of older siblings in the household, mother's birthyear and education level, autonomous region and municipality size (all defined as dummies). Heterokedasticity-robust standard errors are displayed in parentheses. Significance levels: *** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$.

Table 4Main outcome: Number of days worked part-time when the child is **6-10** years old (MCVL, 2010)

	(1)	(2)	(3)	(4)	(5)
Eligible	-3.538 (4.543)	-4.813 (4.586)	-7.978 (6.505)	-4.151 (7.958)	-3.889 (18.654)
Assignment variable	0.601*** (0.124)	0.531 (0.353)	0.833* (0.500)	0.697 (0.717)	1.514 (1.662)
Eligible × assignment var (Kink)	0.904*** (0.145)	0.996*** (0.147)	1.380*** (0.210)	0.847*** (0.247)	0.928* (0.543)
N	78,007	78,007	40,388	30,792	7,223
Window (n.months)	-46/+71	-46/+71	-46/+71	-46/+71	-46/+71
Controls	N	Y	Y	Y	Y
Unconditional	Y	Y	N	Y	Y
Sample	Full	Full	Full	Restricted: Full-time contract (1 month before birth event)	Restricted: Permanent contract (1 month before birth event)
Order of polynomial	1	1	1	1	1

Notes: This table shows the estimates of the RKD specification (Equation 2). These results are obtained running separate local polynomial nonparametric regressions of order 1 (linear), using the full bandwidth from 46 months before to 71 months after the kink (i.e., the kink corresponds to Oct. 1993). The coefficient of interest (Kink) captures the change in the number of days worked part-time (for the period in which the child is 6 to 10 years old) if the exposure to the policy increases by one month (i.e. a mother may benefit from childcare leave one additional month). The analysis uses a balanced panel of mothers who had a child between Jan. 1990 and Oct. 1999, unconditional to the fact of giving birth to following children after (columns 1 and 2); and three different sample restrictions (columns 3, 4, and 5, respectively): conditioning on mothers who did not give birth to further children after Oct. 1999 (i.e. mothers that would never be fully exposed to the policy), and mothers working under a full-time contract or a permanent contract one month before giving birth to their child (i.e. mothers that are de facto protected against layoff). The controls used in specifications 2 to 5 are the presence of older siblings in the household, mother's birthyear and education level, autonomous region and municipality size (all defined as dummies). Heterokedasticity-robust standard errors are displayed in parentheses. Significance levels: *** $p < 0.01$; ** $p < 0.05$, * $p < 0.1$.

Table 5

Secondary outcomes when the child is 6-10 years old (MCVL, 2010)

	Number of days worked <i>full-time</i>			Number of days worked			Labor income (in Euros of 2010)		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Eligible	-6.492 (8.612)	9.164 (12.979)	11.103 (22.198)	-12.614 (8.469)	3.383 (11.246)	7.062 (12.852)	-828.270* (500.007)	587.628 (906.227)	3,018.416 (2,080.244)
Assignment variable	1.672*** (0.610)	0.347 (1.084)	-3.608* (1.887)	2.215*** (0.585)	1.134 (0.898)	-2.145** (1.028)	100.252*** (36.277)	152.705** (77.023)	-144.559 (153.668)
Eligible × assignment var (<i>Kink</i>)	0.316 (0.287)	-2.296*** (0.436)	-1.024 (0.642)	1.385*** (0.284)	-1.355*** (0.391)	-0.021 (0.356)	46.121*** (16.579)	-72.592** (29.862)	-118.234* (67.368)
N	78,007	30,792	7,223	78,007	30,792	7,223	78,007	30,792	7,223
Window (n.months)	-46/+71	-46/+71	-46/+71	-46/+71	-46/+71	-46/+71	-46/+71	-46/+71	-46/+71
Controls	Y	Y	Y	Y	Y	Y	Y	Y	Y
Unconditional	Y	Y	Y	Y	Y	Y	Y	Y	Y
Sample	Full	Restricted: Full-time contract (1 month before birth event)	Restricted: Permanent contract (1 month before birth event)	Full	Restricted: Full-time contract (1 month before birth event)	Restricted: Permanent contract (1 month before birth event)	Full	Restricted: Full-time contract (1 month before birth event)	Restricted: Permanent contract (1 month before birth event)
Order of polynomial	1	1	1	1	1	1	1	1	1

Notes: This table shows the estimates of the RKD specification (Equation 2). These results are obtained running separate local polynomial nonparametric regressions of order 1 (linear), using the full bandwidth from 46 months before to 71 months after the kink (i.e., the kink corresponds to Oct. 1993). The coefficient of interest (*Kink*) captures the change when the exposure to the policy increases by one month (i.e. a mother may benefit from childcare leave one additional month). The analysis uses the full sample of mothers who had a child between Jan. 1990 and Oct. 1999, unconditional to the fact of giving birth to following children after (columns 1, 3, and 5) and a restricted sample of mothers working under a permanent contract one month before giving birth to their child (columns 2, 4, and 6). The controls used in all specifications are the presence of older siblings in the household, mother's birthyear and education level, autonomous region and municipality size (all defined as dummies). Heterokedasticity-robust standard errors are displayed in parentheses. Significance levels: *** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$.

Table 6

Heterogeneous effects: Number of days worked part-time, MCVL 2010

	When the child is 0-6 years old				When the child is 6-10 years old			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Eligible	2.437 (17.551)	-15.295 (12.985)	-5.422 (4.860)	1.015 (16.991)	2.691 (15.742)	3.508 (12.230)	-6.369 (4.825)	13.296 (14.652)
Assignment variable	0.053 (1.287)	1.424 (1.014)	1.135*** (0.375)	0.405 (1.310)	-0.949 (1.187)	0.018 (0.919)	0.669* (0.373)	-0.956 (1.118)
Eligible × assignment var (<i>Kink</i>)	0.438 (0.553)	1.141*** (0.412)	0.644*** (0.153)	1.354** (0.577)	0.514 (0.513)	0.870** (0.383)	0.987*** (0.154)	1.417*** (0.500)
N	8,167	15,871	69,922	8,085	8,167	15,871	69,922	8,085
Window (n.months)	-46/+71	-46/+71	-46/+71	-46/+71	-46/+71	-46/+71	-46/+71	-46/+71
Controls	Y	Y	Y	Y	Y	Y	Y	Y
Unconditional	Y	Y	Y	Y	Y	Y	Y	Y
Sample	Restricted: Large firms (1 month before giving birth)	Restricted: Small and medium firms (1 month before giving birth)	Restricted: Non-college educated	Restricted: College educated	Restricted: Large firms (1 month before giving birth)	Restricted: Small and medium firms (1 month before giving birth)	Restricted: Non-college educated	Restricted: College educated
Order of polynomial	1	1	1	1	1	1	1	1

Notes: This table shows the estimates of the RKD specification (Equation 2) when accounting for potential within-sample heterogeneity in education and firm size. We estimate the effect on the main outcome - number of days worked part-time when the child is 0 to 6 years old / 6 to 10 years old - for a restricted sample of mothers working in large firms (i.e. more than 250 workers) or, alternatively, small and medium firms (i.e. less than 250 workers) the month before giving birth. Additionally, the analysis uses a restricted sample of college and non-college mothers. These results are obtained running separate local polynomial nonparametric regressions of order 1 (linear), using the full bandwidth from 46 months before to 71 months after the kink. Heterokedasticity-robust standard errors are displayed in parentheses. Significance levels: *** $p < 0.01$; ** $p < 0.05$, * $p < 0.1$.

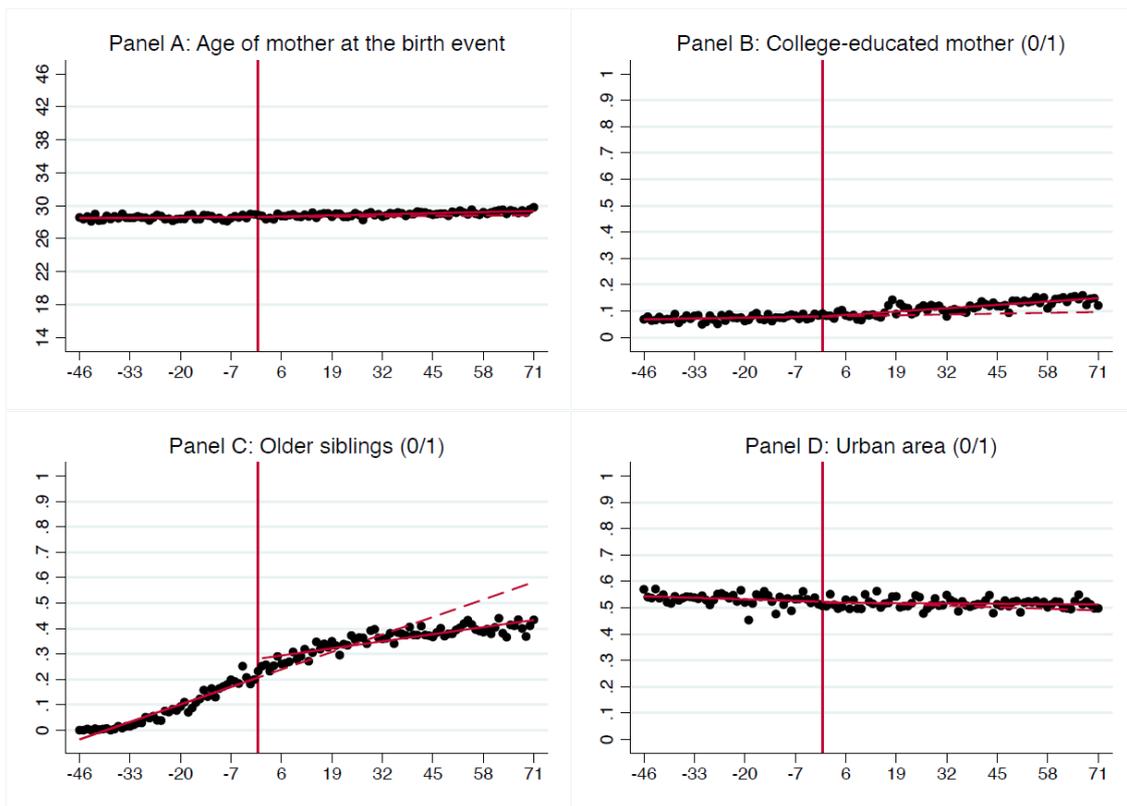
Table 7Main outcome (DiD analysis): Number of days worked part-time when the child is **0-6** years old (MCVL, 2010)

	(1)	(2)	(3)	(4)
Eligible \times post	1.548*** (0.123)	0.983*** (0.149)	1.602*** (0.164)	1.557*** (0.238)
N	412,476	278,700	182,928	107,559
Window (n. quarters)	-12/+24	0/+24	-12/+24	-12/+24
Controls	N	N	N	N
Eligibility cohort	1997	1997	1997	1997
Sample	Full	Full	Restricted: Full-time contract (1 quarter before birth event)	Restricted: Permanent contract (1 quarter before birth event)

*Notes: This table shows the estimates of the DiD specification (Equation 3). These results are obtained by regressing the main outcome - number of days worked part-time when the child is 0 to 6- on: 1- Indicators for each quarter from 3 years before to 6 years after the childbirth; 2- an indicator of eligibility (i.e. mothers whose reference child was born between Nov. 1996 and Oct. 1997); and 3- the interaction of eligibility and post, which is our coefficient of interest. Post refers to the quarters in which eligible mothers actually benefitted from the policy (i.e. it takes value 1 for the quarters 8 to 24 and 0 otherwise). The analysis uses a balanced panel of mothers who had a child between Nov. 1992 and Oct. 1997 and two different sample restrictions (columns 3 and 4, respectively): mothers working under a full-time contract or a permanent contract one month before giving birth to their child. Additionally, we replicate the analysis by discarding pre-birth quarters. Heterokedasticity-robust standard errors are displayed in parentheses. Significance levels: *** $p < 0.01$; ** $p < 0.05$, * $p < 0.1$.*

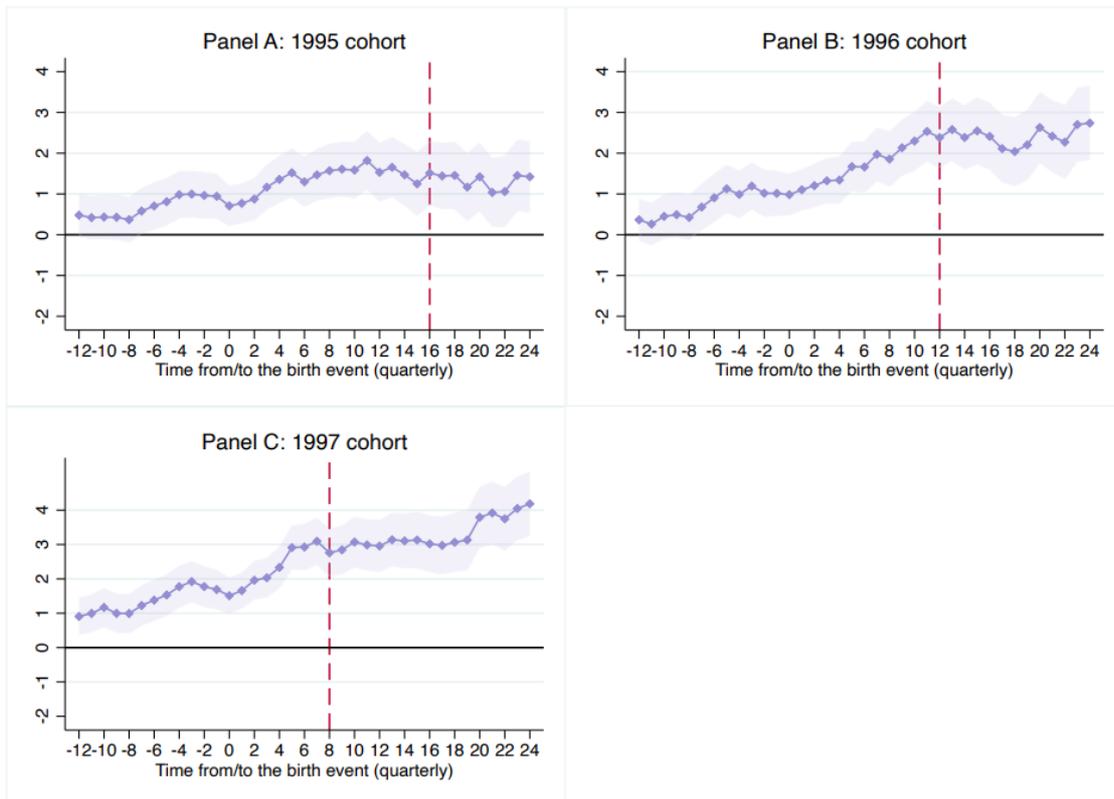
Appendix

Figure A.1. Validity checks: smoothness in covariates at the kink



Note: These graphs provide intuition for the “smoothness” assumption by testing whether the slope of the pre-determined covariates does not change around the kink. For that purpose, we plot the mean values of these pre-determined covariates for each bin of the assignment variable (we set one-month bins over the full bandwidth from 46 months before to 71 months after the kink).

Figure A.2. DiD specification - Main outcome: No. of days worked part-time when the child is 0-6.



Note: The graph shows the estimates of a DiD specification obtained by regressing the number of days worked part-time in each quarter while the child is 0 to 6 on an indicator of eligibility. The regression is repeated for each quarter ranging 3 years before to 6 years after childbirth. We consider three different definitions of eligibility:

- 1995 cohort: mothers whose reference child was born between Nov. 1994 and Oct. 1995.
- 1996 cohort: mothers whose reference child was born between Nov. 1995 and Oct. 1996.
- 1997 cohort: mothers whose reference child was born between Nov. 1996 and Oct. 1997.

In contrast to the RKD design, the time units are quarters instead of months.

Table A.1

Manipulation tests

McCrary test: discontinuity estimate (log difference in height)	0.090 (0.014)
1st. derivative of the pdf	3.575 (0.098)
RD manipulation test using local polynomial density estimation	T = -0.046 P > T = 0.964

Notes: This table includes three different analytical manipulation tests that complement the graphical evidence shown in Figure 2. Firstly, we display the standard McCrary test (McCrary, 2008) that checks for a "jump" in the p.d.f. of the assignment variable. Secondly, we follow the extension of Card et al. (2015) to test that the first derivative of the p.d.f. is also continuous at the kink. For that purpose, we regress the number of individuals in each bin (each month) on a second-order polynomial of the assignment variable interacted with a dummy for being in the partially-treated group (above the kink). We report the coefficients and standard errors of these two tests. Lastly, we include a novel manipulation test proposed by Cattaneo et al. (2020) that uses local polynomials for the estimation, which is reported with the corresponding p-value. These formal tests suggest that the density of children born around the kink (Nov. 1993) evolves smoothly and hence manipulation can be discarded.

Table A.2

Predetermined covariates (at the birth event)

	Coeff./s.e.	N
Mother's age at birth event	0.007 (0.003)	78,595
<i>Dummy</i> : College education	0.003 (0.001)	78,007
<i>Dummy</i> : Older siblings in the household	-0.006 (0.001)	78,595
<i>Dummy</i> : Urban area	0.001 (0.001)	78,595

*Notes: This formal analysis validates the smoothness assumption, thus complementing the graphical evidence in Figure 3. We run separate local polynomial nonparametric regressions of order 1 (linear) for each covariate, using the full bandwidth from 46 months before to 71 months after the kink. All the coefficients are insignificant, meaning that the slope of the predetermined covariates does not change next to the kink. This analysis uses a balanced panel of mothers who had a child between Jan. 1990 and Oct. 1999, unconditional to the fact of giving birth to following children after. Heterokedasticity-robust standard errors are displayed in parentheses. Significance levels: *** $p < 0.01$; ** $p < 0.05$, * $p < 0.1$.*

Table A.3

Main outcome: Number of days worked part-time when the child is 0-6 years old (MCVL, 2005-2010)

	(1)	(2)	(3)	(4)	(5)
Eligible	-0.623 (3.133)	-2.057 (3.168)	-6.413 (4.645)	7.245 (6.404)	-28.231* (15.987)
Assignment variable	0.826*** (0.082)	0.885*** (0.244)	1.254*** (0.356)	0.061 (0.578)	0.446 (1.441)
Eligible × assignment var (Kink)	0.654*** (0.098)	0.755*** (0.099)	1.002*** (0.147)	0.535*** (0.197)	2.474*** (0.472)
N	172,028	172,028	88,358	67,967	15,615
Window (n.months)	-46/+71	-46/+71	-46/+71	-46/+71	-46/+71
Controls	N	Y	Y	Y	Y
Unconditional	Y	Y	N	Y	Y
Sample	Full	Full	Full	Restricted: Full-time contract (1 month before birth event)	Restricted: Permanent contract (1 month before birth event)
Order of polynomial	1	1	1	1	1

Notes: This table shows the estimates of the RKD specification (Equation 2). These results are obtained running separate local polynomial nonparametric regressions of order 1 (linear), using the full bandwidth from 46 months before to 71 months after the kink (i.e., the kink corresponds to Oct. 1993). The coefficient of interest (Kink) captures the change in the number of days worked part-time (for the period in which the child is 0 to 6 years old) if the exposure to the policy increases by one month (i.e. a mother may benefit from childcare leave one additional month). The analysis uses a balanced panel of mothers who had a child between Jan. 1990 and Oct. 1999, unconditional to the fact of giving birth to following children after (columns 1 and 2); and three different sample restrictions (columns 3, 4, and 5, respectively): conditioning on mothers who did not give birth to further children after Oct. 1999 (i.e. mothers that would never be fully exposed to the policy), and mothers working under a full-time contract or a permanent contract one month before giving birth to their child (i.e. mothers that are de facto protected against layoff). The controls used in specifications 2 to 5 are the presence of older siblings in the household, mother's birthyear and education level, autonomous region and municipality size (all defined as dummies). Heterokedasticity-robust standard errors are displayed in parentheses. Significance levels: *** $p < 0.01$; ** $p < 0.05$, * $p < 0.1$.

Table A.4

Secondary outcomes when the child is 0-6 years old (MCVL, 2005-2010)

	Number of days worked <i>full-time</i>			Number of days worked			Labor income (in euros of 2010)		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Eligible	-8.801 (7.994)	86.629*** (10.994)	36.420** (16.938)	-9.649 (8.162)	97.734*** (9.560)	8.660 (5.748)	-1,000.980** (440.025)	1,862.980** (796.105)	3,501.099* (1,793.730)
Assignment variable	0.879 (0.571)	-1.120 (0.912)	-1.784 (1.571)	1.723*** (0.577)	-1.355* (0.755)	-1.395** (0.686)	105.158*** (32.114)	156.779** (68.052)	147.360 (136.530)
Eligible × assignment var (<i>Kink</i>)	2.645*** (0.264)	0.413 (0.357)	-4.468*** (0.509)	3.502*** (0.270)	0.964*** (0.317)	-1.922*** (0.189)	132.267*** (14.418)	64.182** (25.844)	-192.313*** (60.820)
N	172,028	67,967	15,615	172,028	67,967	15,615	172,028	67,967	15,615
Window (n.months)	-46/+71	-46/+71	-46/+71	-46/+71	-46/+71	-46/+71	-46/+71	-46/+71	-46/+71
Controls	Y	Y	Y	Y	Y	Y	Y	Y	Y
Unconditional	Y	Y	Y	Y	Y	Y	Y	Y	Y
Sample	Full	Restricted: Full-time contract (1 month before birth event)	Restricted: Permanent contract (1 month before birth event)	Full	Restricted: Full-time contract (1 month before birth event)	Restricted: Permanent contract (1 month before birth event)	Full	Restricted: Full-time contract (1 month before birth event)	Restricted: Permanent contract (1 month before birth event)
Order of polynomial	1	1	1	1	1	1	1	1	1

Notes: This table shows the estimates of the RKD specification (Equation 2). These results are obtained running separate local polynomial nonparametric regressions of order 1 (linear), using the full bandwidth from 46 months before to 71 months after the kink (i.e., the kink corresponds to Oct. 1993). The coefficient of interest (*Kink*) captures the change when the exposure to the policy increases by one month (i.e. a mother may benefit from childcare leave one additional month). The analysis uses the full sample of mothers who had a child between Jan. 1990 and Oct. 1999, unconditional to the fact of giving birth to following children after (columns 1, 3, and 5) and a restricted sample of mothers working under a permanent contract one month before giving birth to their child (columns 2, 4, and 6). The controls used in all specifications are the presence of older siblings in the household, mother's birthyear and education level, autonomous region and municipality size (all defined as dummies). Heterokedasticity-robust standard errors are displayed in parentheses. Significance levels: *** $p < 0.01$; ** $p < 0.05$, * $p < 0.1$.

Table A.5

Robustness checks (Main outcome: Number of days worked part-time when child is 0-6 years old), MCVL 2010

	(1)	(2)	(3)	(4)	(5)
Eligible	2.856 (5.734)	1.830 (5.346)	3.130 (8.817)	4.276 (8.243)	1.598 (7.171)
Assignment variable	1.818*** (0.432)	1.701*** (0.421)	2.922*** (0.829)	2.525*** (0.694)	2.236*** (0.635)
Assignment variable ²			0.031 (0.019)	0.019 (0.013)	0.024** (0.010)
Eligible × assignment var (Kink)	0.063 (0.263)	0.187 (0.216)	-2.340** (1.062)	-1.721** (0.871)	-1.674*** (0.599)
Eligible × assignment var ²			0.002 (0.027)	0.008 (0.020)	-0.007 (0.011)
N	45,403	51,752	45,403	51,752	78,007
Window (n.months)	+/- 37	+/- 42	+/- 37	+/- 42	-46/+71
Controls	Y	Y	Y	Y	Y
Unconditional	Y	Y	Y	Y	Y
Sample	Full	Full	Full	Full	Full
Order of polynomial	1	1	2	2	2

Notes: This table reports the estimates using alternative specifications for the main outcome: we run local polynomial nonparametric regressions of order 1 (linear) and order 2 (quadratic) for the main outcome, using in each case two different symmetric bandwidths - 37 and 42 months- around the kink. Additionally, we show the estimates of the quadratic nonparametric regression using the full bandwidth from 46 months before to 71 months after the kink. For this analysis we rely on the full sample of mothers who had a child between Jan. 1990 and Oct. 1999, unconditional to the fact of giving birth to following children after. The controls used in all specifications are the presence of older siblings in the household, mother's birthyear and education level, autonomous region and municipality size (all defined as dummies). Heterokedasticity-robust standard errors are displayed in parentheses. Significance levels: *** $p < 0.01$; ** $p < 0.05$, * $p < 0.1$.

Table A.6

Robustness checks (Secondary outcomes when the child is 0-6 years old), MCVL 2010

	Number of days worked <i>full-time</i>			Number of days worked			Labor income (in euros of 2010)		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Eligible	-5.473 (14.777)	-4.291 (13.771)	-11.698 (18.200)	-2.148 (15.167)	-1.279 (14.125)	-10.947 (18.669)	-1,164.261 (810.868)	-1,014.553 (757.742)	-1,994.612** (1,006.617)
Assignment variable	-0.015 (1.118)	0.055 (1.072)	2.086 (1.655)	1.935* (1.144)	1.848* (1.096)	4.683*** (1.694)	114.599* (61.421)	110.594* (58.999)	263.975*** (90.691)
Assignment variable ²			0.048 (0.029)			0.080*** (0.030)			4.142*** (1.577)
Eligible × assignment var (<i>Kink</i>)	2.173*** (0.677)	2.396*** (0.561)	-0.309 (1.586)	2.195*** (0.693)	2.598*** (0.574)	-2.359 (1.624)	74.920** (37.251)	93.496*** (31.049)	-102.777 (86.645)
Eligible × assignment var ²			-0.037 (0.031)			-0.051 (0.032)			-3.481** (1.661)
N	45,403	51,752	78,007	45,403	51,752	78,007	45,403	51,752	78,007
Window (n.months)	+/- 37	+/- 42	-46/+71	+/- 37	+/- 42	-46/+71	+/- 37	+/- 42	-46/+71
Controls	Y	Y	Y	Y	Y	Y	Y	Y	Y
Unconditional	Y	Y	Y	Y	Y	Y	Y	Y	Y
Sample	Full	Full	Full	Full	Full	Full	Full	Full	Full
Order of polynomial	1	1	2	1	1	2	1	1	2

Notes: This table reports the estimates using alternative specifications for the secondary outcomes: we run local polynomial nonparametric regressions of order 1 (linear) with two alternative symmetric bandwidths - 37 and 42 months- and of order 2 (quadratic) with the full bandwidth from 46 months before to 71 months after the kink. For this analysis we rely on the full sample of mothers who had a child between Jan. 1990 and Oct. 1999, unconditional to the fact of giving birth to following children after. The controls used in all specifications are the presence of older siblings in the household, mother's birthyear and education level, autonomous region and municipality size (all defined as dummies). Heterokedasticity-robust standard errors are displayed in parentheses. Significance levels: *** $p < 0.01$; ** $p < 0.05$, * $p < 0.1$.

Table A.7

Robustness checks (Main outcome: Number of days worked part-time when the child is 6-10 years old), MCVL 2010

	(1)	(2)	(3)
Eligible	0.980 (5.592)	-0.980 (5.228)	0.190 (6.895)
Assignment variable	0.641 (0.428)	0.591 (0.416)	0.696 (0.619)
Assignment variable ²			0.003 (0.010)
Eligible × assignment var (Kink)	0.595** (0.257)	0.546*** (0.212)	0.336 (0.588)
Eligible × assignment var ²			0.004 (0.011)
N	45,403	51,752	78,007
Window (n.months)	+/- 37	+/- 42	-46/+71
Controls	Y	Y	Y
Unconditional	Y	Y	Y
Sample	Full	Full	Full
Order of polynomial	1	1	2

Notes: This table reports the estimates using alternative specifications: we run local polynomial nonparametric regressions of order 1 (linear) with two alternative symmetric bandwidths - 37 and 42 months- and of order 2 (quadratic) with the full bandwidth from 46 months before to 71 months after the kink. For this analysis we rely on the full sample of mothers who had a child between Jan. 1990 and Oct. 1999, unconditional to the fact of giving birth to following children after. The controls used in all specifications are the presence of older siblings in the household, mother's birthyear and education level, autonomous region and municipality size (all defined as dummies). Heterokedasticity-robust standard errors are displayed in parentheses. Significance levels: *** $p < 0.01$; ** $p < 0.05$, * $p < 0.1$.

Table A.8Robustness checks (Secondary outcomes when the child is **6-10** years old), MCVL 2010

	Number of days worked <i>full-time</i>			Number of days worked			Labor income (in Euros of 2010)		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Eligible	-8.667 (10.638)	-8.294 (9.909)	-18.122 (13.075)	-6.605 (10.492)	-8.338 (9.759)	-15.037 (12.866)	-838.792 (613.790)	-794.028 (573.651)	-1,646.346** (759.229)
Assignment variable	2.156*** (0.799)	2.148*** (0.767)	4.170*** (1.185)	2.763*** (0.790)	2.719*** (0.755)	4.742*** (1.170)	152.932*** (46.436)	148.203*** (44.652)	263.313*** (68.296)
Assignment variable ²			0.052** (0.021)			0.052** (0.021)			3.396*** (1.197)
Eligible × assignment var (<i>Kink</i>)	-0.329 (0.486)	-0.040 (0.403)	-2.767** (1.139)	0.269 (0.480)	0.469 (0.396)	-2.471** (1.128)	-9.786 (28.139)	5.099 (23.475)	-150.482** (65.379)
Eligible × assignment var ²			-0.043* (0.022)			-0.033 (0.022)			-2.892** (1.259)
N	45,403	51,752	78,007	45,403	51,752	78,007	45,403	51,752	78,007
Window (n.months)	+/- 37	+/- 42	-46/+71	+/- 37	+/- 42	-46/+71	+/- 37	+/- 42	-46/+71
Controls	Y	Y	Y	Y	Y	Y	Y	Y	Y
Unconditional	Y	Y	Y	Y	Y	Y	Y	Y	Y
Sample	Full	Full	Full	Full	Full	Full	Full	Full	Full
Order of polynomial	1	1	2	1	1	2	1	1	2

Notes: This table reports the estimates using alternative specifications for the secondary outcomes: we run local polynomial nonparametric regressions of order 1 (linear) with two alternative symmetric bandwidths - 37 and 42 months- and of order 2 (quadratic) with the full bandwidth from 46 months before to 71 months after the kink. For this analysis we rely on the full sample of mothers who had a child between Jan. 1990 and Oct. 1999, unconditional to the fact of giving birth to following children after. The controls used in all specifications are the presence of older siblings in the household, mother's birthyear and education level, autonomous region and municipality size (all defined as dummies). Heterokedasticity-robust standard errors are displayed in parentheses. Significance levels: *** $p < 0.01$; ** $p < 0.05$, * $p < 0.1$.

Table A.9

Robustness checks: sample restricted to permanent contracts (All outcomes when the child is 0-6 years old), MCVL 2010

	Number of days worked <i>part-time</i>			Number of days worked <i>full-time</i>			Number of days worked			Labor income (in euros of 2010)		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Eligible	65.534** (31.796)	44.141 (27.736)	59.199* (35.843)	-51.553 (33.342)	-9.383 (29.206)	-19.728 (38.206)	13.901 (9.833)	32.182*** (9.496)	36.900*** (13.513)	-192.457 (3,534.126)	2,772.125 (3,163.835)	2,116.404 (3,969.898)
Assignment variable	4.253 (2.865)	3.215 (2.744)	-3.739 (3.414)	-6.153** (3.005)	-3.254 (2.908)	1.889 (3.658)	-1.747** (0.855)	-0.202 (0.958)	-1.844 (1.338)	-322.604 (301.208)	50.344 (274.152)	42.638 (369.343)
Assignment variable ²			-0.057 (0.057)			0.061 (0.061)			0.004 (0.020)			0.268 (6.845)
Eligible × assignment var (<i>Kink</i>)	1.125 (1.471)	1.262 (1.060)	0.686 (3.095)	-2.358 (1.550)	-3.714*** (1.135)	-4.124 (3.323)	-1.197** (0.470)	-2.253*** (0.415)	-3.234*** (1.200)	106.108 (158.491)	-127.545 (128.259)	-1.395 (352.554)
Eligible × assignment var ²			0.113* (0.060)			-0.101 (0.064)			0.009 (0.022)			-2.859 (7.043)
N	2,824	3,517	7,223	2,824	3,517	7,223	2,824	3,517	7,223	2,824	3,517	7,223
Window (n.months)	+/- 37	+/- 42	-46/+71	+/- 37	+/- 42	-46/+71	+/- 37	+/- 42	-46/+71	+/- 37	+/- 42	-46/+71
Controls	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Unconditional	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Sample	Restricted: Permanent contract (1 month before birth event)											
Order of polynomial	1	1	2	1	1	2	1	1	2	1	1	2

Notes: This table reports the estimates using alternative specifications and a restricted sample of mothers working under a permanent contract the month before giving birth. We run local polynomial nonparametric regressions of order 1 (linear) with two alternative symmetric bandwidths - 37 and 42 months- and of order 2 (quadratic) with the full bandwidth from 46 months before to 71 months after the kink. Heterokedasticity-robust standard errors are displayed in parentheses. Significance levels: *** $p < 0.01$; ** $p < 0.05$, * $p < 0.1$.

Table A.10Main outcome (DiD analysis): Number of days worked part-time when the child is **0-6** years old (MCVL, 2010)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Eligible \times post	0.267* (0.155)	-0.023 (0.165)	-0.119 (0.211)	-0.377 (0.300)	1.208*** (0.134)	0.743*** (0.151)	0.849*** (0.182)	1.083*** (0.263)
N	400,451	270,575	178,007	99,863	401,302	271,150	177,119	100,529
Window (n.quarters)	-12/+24	0/+24	-12/+24	-12/+24	-12/+24	0/+24	-12/+24	-12/+24
Controls	N	N	N	N	N	N	N	N
Eligibility cohort	1995	1995	1995	1995	1996	1996	1996	1996
Sample	Full	Full	Restricted: Full-time contract (1 quarter before birth event)	Restricted: Permanent contract (1 quarter before birth event)	Full	Full	Restricted: Full-time contract (1 quarter before birth event)	Restricted: Permanent contract (1 quarter before birth event)

Notes: This table shows the estimates of the DiD specification using alternative eligibility definitions: The 1995 (resp. 1996) cohort comprises mothers whose reference child was born between Nov. 1994 and Oct. 1995 (resp. Nov. 1995 - Oct. 1996). These results are obtained by regressing the main outcome - number of days worked part-time when the child is 0 to 6- on: 1- Indicators for each quarter from 3 years before to 6 years after the childbirth; 2- an indicator of eligibility; and 3- the interaction of eligibility and post, which is our coefficient of interest. Post refers to the quarters in which eligible mothers actually benefitted from the policy (i.e. it takes value 1 for the quarters 16 to 24 for the 1995 cohort and quarters 12 to 24 for the 1996 cohort; and 0 otherwise). The analysis uses a balanced panel of mothers who had a child between Nov. 1992 and Oct. 1997 and two different sample restrictions (columns 3 and 4, respectively): mothers working under a full-time contract or a permanent contract one month before giving birth to their child. Additionally, we replicate the analysis by discarding pre-birth quarters. Heterokedasticity-robust standard errors are displayed in parentheses. Significance levels: *** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$.