The impact of family-friendly policies on the labor market: Evidence from Spain and Austria
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Evidence from Spain and Austria

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Abstract
The policies under analysis are set out in Spanish Law 39/99 and Austrian Law Nr. 38/2004. In essence both policies were directed at allowing parents to work part-time if they had children under 7 years old, with an equivalent wage reduction. Furthermore, those workers who decided to use the law were protected against being laid off. Our results indicate that the law helped mothers to combine childcare and work because there was an increase in the probability of working PT for targeted mothers (direct effect). Furthermore, there is clear evidence that the law increased the probability of dismissal of non-eligible mothers – i.e. mothers with children over 10 years old. Finally, the law also increased the probability of potential mothers being hired under fixed-term contracts, presumably to avoid the possibility of their availing themselves of the reduced working hours and the protection against dismissal. Therefore, the law had some positive effects but also some negative ones which were largely unexpected.

Keywords: Family friendly policies, policy evaluation, part-time work.
JEL codes: J21, J68, J78

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1. Introduction

During the past few decades, more and more women have joined the labor market and thus become second or even main family bread-winners. Given that the magnitude of this phenomenon is increasing, family-friendly policies are being widely introduced in many developed countries. Since the eighties, many governments have adopted policies with the objective of promoting gender equality and equity in the work place. One such policy is studied here.

The policy under analysis is that set out in Spanish Law 39/99 and Austrian Law Nr. 38/2004. In essence both policies were directed at allowing parents to work part-time if they had children under 7 years old, with an equivalent wage reduction. Furthermore, those workers who decided to use the law were protected against being laid off. This might entail some unintended effects for workers who are not covered by the law, which we analyze in this paper.

Other related family-friendly laws have been implemented elsewhere in Europe, e.g. in France, where 2004 saw the implementation of a “supplementary work choice benefit”¹. But no other policies like the one analyzed here were found in any other country in Europe since the nineties, which is the period for which we have harmonized individual data sets.

The spirit of these laws is that parents can more easily afford to stay in the labor market and take care of their children if they reduce their working hours and can hence combine the two activities more easily. In principle this policy can affect both fathers and mothers, but it is more likely to have a larger impact on mothers, as they are de facto mainly responsible for childcare within couples.

The main aim of the paper is to study the effects of these laws in the two countries. To that end, we look at two different types of effect: direct and indirect. The main question regarding direct effects is whether the laws have increased the proportion of parents with children under 7 who work part-time. However, in many instances, laws also have indirect and to some extent unexpected effects, and the paper also examines these. The first indirect effect checked for is the extent to which the law has reduced the probability of leaving their jobs (either voluntarily or involuntarily) for parents who in principle are eligible for the family policy. When we study the direct effect of the policy, we only observe workers who continue working when they have children and not those who no longer work, either because they decide to stop working or because they are dismissed once the law no longer protects them – i.e. parents with children over 7 years of age. In order to try to solve the possible sample bias of the analysis we examine the first indirect effect, which investigates the determinants of the probability of losing or quitting one’s job. In addition to this first indirect effect, the law might also have a second indirect, unexpected effect: potential strategic behavior on the part of employers when faced with a potential increase in the proportion of part-time work among those affected by the law. If the family policy – i.e. permission to switch to

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¹ Supplementary work choice benefit: this benefit can be paid out from the birth of the first child for a maximum of six months at a full or reduced rate, i.e. women can work part-time and receive the benefit. Before 2004, mothers of one child were entitled to take three years’ parental leave and could return to a guaranteed job with the same employer, but did not receive any compensation.
working part-time for parents with children under than 7 - is costly and hence undesirable for employers they might react by reducing indefinite hiring of potential users of the law and instead providing them with fixed-term contracts, given that workers with such contracts cannot avail themselves of the law. Hence, the question to be answered in this second indirect effect is whether these laws have increased the probability of being hired under fixed-term (rather than indefinite) contracts for those workers who might potentially be users of the law.

For this empirical analysis, we use the European Labor Force Survey (ELFS) for Spain and Austria and a Difference in Difference (henceforth DD) approach. Part-Time working hours are self-reported in the ELFS and essentially entail working 30 hours per week or less. The whole analysis is conducted by gender and type of contract because, as shown below, it is mainly women with indefinite contracts who make use of these family-friendly policies.

A drawback of the ELFS is that it is a cross-sectional database, which means that individuals cannot be followed over time. This means that we cannot observe differences in behavior on having a child before and after the enactment of the law. However, we compare groups of workers who are affected by the law (targeted workers) with others which are similar in as many demographic and job characteristics as possible but are not affected by the law (control group). Then, using a DD methodology, we can estimate outcome variable among the targeted group and compare it with the control group before and after the enactment of the law. We follow this method for the direct and indirect effects mentioned above.

Given that in Spain the law was enacted on 5th November 1999, the year 2000 is used as the reference year in the Spanish analysis. In Austria the law was passed on the 1st July 2004, so 2004 is used as the reference year in the Austrian analysis. We consider four years before and four years after the reference year, i.e. 1996-1999 and 2001-2004 in Spain and 2000-2003 and 2005-2008 in Austria.

Some related literature can be found in the following papers: Jaumotte (2003) studies the determinants of female labor force participation in OECD countries from 1985 to 1999, including some policy instruments such as childcare subsidies and parental leave. She distinguishes between women who work part-time and full-time. The analysis shows a positive impact on female participation when there are stronger tax incentives to share market work between spouses, childcare subsidies, paid maternity and parental leaves. Visser (2002) analyzes part-time work in the Netherlands and helps to explain the reasons behind its rapid spread there. The explanation links part-time work with married women and the scarcity of child-care provisions. For Austria, a purely statistical analysis of the consequences of the law is presented by Dörfler (2004). Our paper is very closely related to Rodriguez-Planas and Fernández-Kranz (2011), which focuses on Spain and particularly on one of the perverse effects of the Spanish Law 39/99, i.e. the increase in fixed-term jobs for potential female users of the policy.

The main results of this paper are the following: First, the law has proved effective in both countries in the sense that the likelihood of working part-time has increased significantly after the introduction of the law among eligible parents - i.e. parents with children under 7, compared to the figure among non-eligible parents - i.e. parents with children older than 7. Specifically, in Spain it has increased by 12.31% and in Austria by 18.5%. However, two issues must be pointed out: First,
the law only affects eligible mothers, not fathers in the two countries. Second, in Spain the law only affects eligible mothers with indefinite contracts. Eligible mothers with fixed-term contracts cannot avail themselves of this family-friendly policy, possibly because of the instability of their contracts.

Moreover, as affected parents are protected against being laid off, only control-group parents can be dismissed when necessary. The analysis finds that as a result of the law, control-group parents are more likely to be dismissed; this is the first unintended effect of the law.

Finally, the second indirect effect studied is the possibility that employers might behave strategically in the sense of anticipating the law. If the family-friendly policy is costly to firms they may, in order to prevent potential users of the law from using it, tend to hire potential users under fixed-term rather than indefinite contracts. Under fixed-term contracts, employers are not forced to renew the contracts when workers become eligible to use the law and hence switch to part-time working and obtain protection against dismissal. We find that since the enactment of the law potentially eligible mothers are more likely to be hired under fixed-term contracts than their male counterparts. As seen above, women are de facto the only users of the law, so this finding suggests that the passing of the law induced employers to resort to fixed-term contracts to prevent potentially eligible mothers from availing themselves of the law.

The rest of the paper is organized as follows. Section 2 describes Spanish law 39/1999 and Austrian law 38/2004. Section 3 presents the data and Section 4 the descriptive statistics. Section 5 analyzes the effects of the family-friendly policy on employment outcomes for the eligible population (direct effect) and the unintended effects on the population not targeted under the law (indirect effects). Section 7 sums up and concludes.

2. Family Friendly Policies – Spain and Austria

Here we describe the family-friendly laws which were implemented in Spain and Austria in 1999 and 2004 respectively. In the two cases, the aim was to promote the conciliation of work and family life. These laws introduce the right to reduce the working hours and switch to flexible hours for certain groups of workers. The laws are very similar, though there are some additional restrictions added in Austria.

2.1. Spanish Law 39/99

On November 5th, 1999 the Spanish government passed a law which gives working parents with children under 7 years old the right to reduce their hours and work part-time. These workers can ask for a reduction of one third to one half of the usual full-time working hours with an equivalent wage reduction (the right is also extended to workers who care for dependent family members suffering from physical or mental disabilities, although we do not analyze this here). Workers who decide to avail themselves of the policy also have the right to choose the time slot during the day when they want to work and the firm has to accept this or go to court.

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2 The eligible age for was extended to 9 in 2007.
Furthermore, and even more importantly, users of the law are protected against dismissal if they have asked for reduced working hours due to family responsibilities. The firm cannot dismiss such workers by any means.

An issue worth noting is that this law protects only workers who hold indefinite contracts. The law says nothing about the need to renew fixed-term contracts, and hence targeted workers with such contracts may use the policy to reduce their working hours but can be fired at the end of the contract period. Given the different effects of the law on the two types of worker, the whole analysis here is broken down by type of contract.

2.2. Austrian Law Nr. 38/2004

On 1st July, 2004 the Austrian government passed a family-friendly law to help reconcile family responsibilities (in this case childcare) and work. The law allows parents with children under 7 years old to work PT. However, the policy only affects firms with more than 20 employees. On the other hand, only workers with more than 3 years of tenure at the firm and children under 7 years old are eligible to use the reduced working hours. There is no fixed limit with regards to the size of the reduction in hours. Workers can even change working hours within the day. They also have the right to return to FT employment when they decide to do so. If the firm has less than 20 workers, employer and employees can an agreement on part-time work up to the child’s fourth birthday but there is no official legal enforcement.

In Austria workers who make use of the policy are also protected against dismissal until their child’s fourth birthday. When the child is between 4 and 7 years old, the law protects parents against dismissal without grounds.

In the ELFS age is reported in intervals of five years. Given this restriction, we only know whether children are between 0 and 4 years old, between 5 and 9 or between 10 and 14. Both laws affect parents of children under 7, but this prevents us from knowing whether a child is 6 or 8. To avoid measurement error, we do not include those individuals whose children are between 5 and 9 years old. Hence, the targeted group includes full-time working individuals with children under 4 whereas the control group, which includes non-targeted workers, includes working parents with children between 10 and 14. Remember that all workers in the targeted group are protected against dismissal.

As stated above, the objective of the policy was to help reconcile work and family life for families with children under 7. However, given the traditional values of both societies, this kind of family-friendly policy is likely to have different effects on mothers than on fathers. We therefore break down our whole analysis by gender.

3. The Data
We use data from the European Labor Force Survey (ELFS), which is a household survey which contains demographic and job characteristics for harmonized individual data for 27 countries, covering a very large number of years (updated annually since 1983). For our analysis we use information from four years before the law was implemented to four years after. In Spain the law was passed at the end of 1999. As the sample is recruited in the three first months of the year we denote as “before” the period 1996-1999 and as “after” the period 2001-2004. We drop the year 2000 because we consider it as a reference period, in order to guarantee a clear cut before and after. In Austria the law was implemented in the middle of 2004, so we take that year as our reference year and do not include it in the sample. Following the same system, we take 2000-2003 as the “before” sample and 2005-2008 as the “after” sample. In the case of Austria the sample is remarkably bigger in the “after” period.

The ELFS data is cross-sectional, and provides information on demographic characteristics (such as age, gender, years of education, marital status, members of the household, region of work and residence, etc.), employment characteristics (such as current status, type of contract, last work, tenure, number of hours worked in the current job, current PT status, labor status last year, etc.), and fertility information (such as number of children, demographic characteristics of the children, etc.).

For each analysis we focus on different eligible populations, depending on the points to be studied.

3.1. The Impact of the Policies on Part-Time Work (direct effect) – The Sample

Our first analysis looks at the effect of the law on part-time work for parents with children under 7 years old (the so-called “direct effect”). Our reference (targeted) group comprises parents with small children, and is compared with a control group of parents with older children. Then we estimate whether parents affected by the law – those with children under 5 – have increased their use of PT work more than non-targeted parents – those with children between 10 and 14 - since the law has been implemented. For this analysis we implicitly assume that all children under 14 need childcare but only parents with children under 7 benefit from the law.

Notice that for the first analysis we only include parents with children either under 4 (targeted group) or between 10 and 14 (control group). In addition, the analysis is restricted to parents aged between 25 and 45. Parents older than 45 with very small children may be outliers (they make up 3.8% of the whole sample of parents). Moreover we drop parents younger than 25 because they might include students, whom we want to avoid in the analysis (less than 1% of the sample of parents). Since we have information on the members of the family living in the same household we include only married people (because both parents can take care of the children) and exclude individuals sharing a household with grandparents (because sometimes grandparents may help with childcare or may themselves require care, which could bias our analysis). By definition we only include people in work, and exclude employers and the self-employed. Taking into account

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4 We cannot distinguish between parents of children aged 5-7 and 8-10 given a sample restriction in terms of age. Age in the ELFS is given in 5 year brackets.
all these constraints in a pooled cross-sectional data set we have 19596 women and 32517 men in Spain.

With regard to Austria, given that the potential users of the law face two additional constraints (only workers with more than 3 years of tenure and firms with more than 20 employees) the final sample of targeted and control group parents is smaller: 7377 women and 11871 men.

3.2. The impact of the laws on the probability of leaving one’s job (first indirect effect) – The Sample

In our first analysis we only look at working people and hence we do not take into consideration those workers who at some point stop working, either because they decide to do so for childcare purposes or because they have been dismissed.

In the second analysis our aim is to check whether the law helps young parents to combine work and childcare and hence whether parents are less likely to stop working since the law has been implemented. In addition, we want to check whether the law has any impact on those parents who are not protected against dismissal because their children are older than 7. We therefore compare the probability of losing/quitting one’s job for parents affected and not affected by the law before and after its enactment. More precisely, we estimate the probability of leaving one’s job in a particular year conditioned by being in work the year before.

An important issue is that those targeted parents who leave their jobs are voluntary leavers, as they are protected from dismissal, whereas within the control group parents may either be dismissed or leave voluntarily. Unfortunately from the data available we cannot disentangle the reason why parents in the control group leave their jobs.

For this second analysis, we focus on workers who report being in work in the previous year and who either work or do not work in the current year. As before, we restrict our analysis to married parents between 25 and 45 years old, with children under 4 (targeted group) or between 10 and 14 (control), not sharing a household with older people, who were salaried workers the year before. As before, for Austria in addition to being in work the year before parents are also subject to the constraint of having more than 3 years of tenure and working at firms with more than 20 employees.

The final sample comprises 23258 women and 41527 men in Spain and 4677 women and 8090 men in Austria.

3.3. The impact of the policy on fixed-term contracts (second indirect effect) – The Sample

In this case we study the extent to which the law might have pervasive effects for potential future users of it. This may affect in particular potential mothers, since results concerned with the
direct impact of the law indicate that it has produced a clear increase in the use of part-time work only among women.

Our reason for caring about potentially pervasive effects is as follows: Employers may consider that the change from full-time to part-time entails two different types of cost for the firm: On the one hand they might need to hire an additional worker or to make costly working hour rearrangements with the rest of their workers to cover the reduction in the hours worked by those who avail themselves of the law. On the other hand, given that women who resort to the law cannot be dismissed, employers may feel more restricted with respect with their flexibility to hire and fire. Employers may therefore be expected to behave strategically and seek to hire workers who are not potential users of the law. The first candidates that occur to us are men. However, a second type of strategic behavior on the part of employers can be envisaged: Given that the first analysis shows that in Spain the policy is only used by mothers with indefinite contracts, employers may be thought of as having incentives to hire those women who are potential users of the law under fixed-term rather than indefinite contracts.

For these two reasons, this analysis examines the probability of being hired under a fixed-term contract as opposed to an indefinite one for women versus men both of whom are potential users of the law. To that end we focus on childless employees who may have children in the near future (married and between 25 and 45 years old (fertile age)). We want to estimate the extent to which the law increases the probability of women who are potential users of the law being hired under fixed-term contracts when compared to men of similar characteristics who do not use the law.

Given that fixed-term contracts are very scarce in Austria this indirect effect only makes sense for Spain. Our final sample covers 87694 individuals.

4. Descriptive Analysis

This section presents the average annual growth rate for the main outcome variables for a period of four years before the implementation of the relevant laws (1996-1999 in Spain and 2000-2003 in Austria) and four years after (2001-2004 in Spain and 2005-2008 in Austria). We distinguish between four groups in the first two analyses and between two groups in the last one, as defined above.

4.1. Proportion of Part-Time Workers

For our first analysis – the impact of the policy on the proportion of part-time workers – we distinguish between four groups: mothers and fathers with children under 4 (targeted groups) and mothers and fathers with children between 10 and 14 (control groups). Given that the first analysis studies the effect of the law on the proportion of part-time workers among parents with children
under 7, Figure 1 presents the proportion of part-time workers in each different group under study before and after the enactment of the law.

Figure 1 reveals that in Spain the incidence of part-time work is much greater for mothers than for fathers, independently of the age of the children. Before the enactment of the law 17% of targeted-group mothers worked PT and, as expected, afterwards the percentage has increased to 21% - i.e. an increase of 25%. For control-group mothers there has been also an increase from 20% before enactment to 22% afterwards, but this figure is clearly smaller than that observed for targeted-group mothers (13%). For males, the proportion is lower than 1.5% in all cases, and after the enactment of the law it has actually decreased in both groups.

In Austria differences in the use of part-time work between mothers and fathers are even stronger: Approximately half of mothers work PT, compared to less than 2% of fathers. Comparing targeted-group and control-group women before and after the enactment of the law in Austria, we can observe that before the incidence of PT among targeted-group mothers was lower than among control-group mothers (47% versus 53%). However after enactment the situation has become reversed: 57% of targeted-group mothers work PT compared to 52% of the mothers in the control group. The change is observed mainly for the targeted-group mothers, for whom the incidence of PT work has increased by around 10 percentage points. Comparing the two countries, we observe that the incidence of PT among women is twice as high in Austria as in Spain, but in both countries it is women, not men, who basically use this type of work.

The second set of descriptives presented here is the incidence of fixed-term versus indefinite contracts for the targeted and control groups of mothers and fathers before and after the enactment of the laws. Figure 2 presents the incidence of fixed-term contracts for the four groups for Spain and Austria, respectively. In Spain, on average 25.71% of the sample work under fixed-term contracts. The incidence of such contracts is slightly higher among women than among men, and is similar before and after the enactment of the law. Before and after enactment approximately 27% of targeted-group women worked under fixed-term contract, while the figure among targeted-group men decreased from 26% to 23%. For the control group, the incidence among women increased from 28.50% to 30% and among men it decreased by 0.6 percentage points from 22.1%.

In Austria the situation with respect to fixed-term contracts is completely different – only 2.43% of the sample have such contracts. The incidence of fixed-term contracts has decreased since the implementation of the law for all four groups. Among targeted-group women it is down from 5.5% to 2.5% – i.e. a 55% decrease - and among control-group women from 3.2% to 2.2%. Among men fixed-term contracts are even scarcer: before the enactment of the law the figure was 3.2% and 1.3% for the targeted and control groups respectively, and afterwards it has dropped to 2.2% and 1.1%. Given that fixed-term hiring does not seem to be an issue for our sample of workers in Austria, no analysis by type of contracts is conducted for Austria, so the second unintended effect of the law is examined only for Spain.

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\[5\] Recall that in Austria all the individuals in this sample must have three or more years of tenure at the same firm, and hence fixed-term contracts can be expected to be the exception.
4.2. Job Leaving Rates

In the second analysis we want to check whether the family-friendly policy has resulted in the proportion of targeted parents leaving their jobs as a result of the beneficial effects of the law in reconciling work with family life. Given that targeted parents are protected from dismissal, we also want to see whether the law has had an impact on those parents who are not thus protected (control-group parents). But before we turn to the empirical analysis, we present Figure 3, which shows leaving rates for parents from both the targeted and control groups before and after the enactment of the law. To be precise, “leaving rates” refers to the measuring of the proportion of parents who, having been in work the previous year, are not in work in the current year. Remember that targeted parents stop working at their own choice, because they cannot be dismissed.

In Spain, more women than men tend to stop working. This situation has been accentuated with the implementation of the law. Notice that this was not the aim of the law. The proportion of targeted women who left work before its enactment was 2.5 times higher the proportion of targeted men and since enactment the ratio has increased to 3.85. Before enactment, control-group women were twice as likely to stop work as control-group men, while since enactment the difference has tripled (3.25 times). The leaving rate among targeted women has increased by 19% (from 11% to 13%), while for men in the same situation it has decreased by 23% (from 4% to 3%). A similar pattern emerges for the control group, as the leaving rate among women has increased by 15% (from 8% to 9.4%) and among men it has decreased by 25% (from 4% to 3%) since 2000.

In Austria the leaving rate remains fairly constant before and after the implementation of the law. The biggest change is found among women in the control group, where the rate increases from 8% to 10%, but it remains unchanged for the other three groups. The leaving rate among targeted mothers is 2.5 times higher than among targeted fathers.

Initially, a comparison of leaving rates among targeted mothers before and after the implementation of the law reveals no decrease, which would have been the expected effect of the law. Remember that the law was conceived to help reconcile work and family life and hence reduce the proportion of mothers who stop work for childcare reasons. It remains to be seen whether the same preliminary conclusion is reached when the impact of the law on the leaving rate is assessed in the Results section.

4.3. Fixed-term Contracts

The second indirect effect is only analyzed for the Spanish labor market because segmentation by type of contract is not an issue in Austria. We compare the impact of being hired under a fixed-term contract on potential users of the law (women) and non-potential users (men). These are the two groups shown in Figure 4.

Before 2000, the incidence of fixed-term contracts was approximately 45% for both men and women, and it has decreased since the enactment of the law for both groups, though more strongly for men. With the implementation of the law the proportion of women under fixed-term contracts is
4 percentage points higher than the equivalent proportion of men. For women it has dropped by 5% (from 45% to 42%), while for men it has dropped by 15% (from 45% to 38%).

5. Methodology

In all three of our analyses we use a difference-in-differences methodology. This approach works as follows:

\[ Y_{it} = \alpha + \beta D_t + \gamma D_i + \delta (D_t D_i) + X_{it}' \pi + \epsilon_{it} \]

where \( t \) indexes the year and \( i \) the individual; and where \( D_t = 1 \) if individual \( i \) avails him/herself of the law and zero otherwise, \( D_i = 1 \) if observation is after availing oneself of the law (in Spain after 2000 and in Austria after 2004) and zero if it is before. \( X_{it} \) is a vector of covariates where we include demographic, employment and family information such as age, age squared, year, a dummy indicating whether the individual is the family-head, number of children, years of tenure, level of education and unemployment rate by region of work. Finally, \( \epsilon_{it} \) is a zero mean disturbance.

The conditional means can be computed for all cases to help us interpret the coefficients.

- \( E(Y_{it} | D_i=0, D_t=0) = \alpha \) Control, before
- \( E(Y_{it} | D_i=1, D_t=0) = \alpha + \beta \) Targeted, before
- \( E(Y_{it} | D_i=0, D_t=1) = \alpha + \gamma \) Control, after
- \( E(Y_{it} | D_i=1, D_t=1) = \alpha + \beta + \gamma + \delta \) Targeted, after

A brief interpretation of the coefficients is the following:

- \( \beta \) is the non-targeting effect. It is understood as the difference in probability between the targeted and control groups before the implementation of the law. We would like this coefficient to be zero or statistically insignificant because that would mean that before implementation the two groups behaved in the same way. This is the assumption that we have made in using parents of children between 10 and 14 as our control group.
- \( \gamma \) captures other common trends affecting both the targeted and control groups. It is the difference in the probability of the dependent variable between after and before for the reference group, i.e. how the law indirectly affects “non-affected” parents.
- \( \delta \) is the treatment effect. This is the diff-in-diff estimator. It computes the difference in the mean outcome of the targeted parents before and after they avail themselves of the law minus the difference in the outcome of the control group before and after the process, as follows:
[E(\delta_{i|\text{t}} | D_{ij} = 1, D_{ij} = 1) - E(\delta_{i|\text{t}} | D_{ij} = 0, D_{ij} = 0)] - [E(\delta_{i|\text{t}} | D_{ij} = 0, D_{ij} = 1) - E(\delta_{i|\text{t}} | D_{ij} = 0, D_{ij} = 0)] = \theta

After all analyses we carry out a placebo test, i.e. we estimate the same differences-in-differences models for a period in which no change in family-friendly laws took place. We use a pre-reform period for this estimate, excluding post-1999 data in Spain and post-2004 data in Austria. The test consists of repeating the same analysis but changing the reference year. Accordingly, in Spain we consider 1996-1997 as the “before” period and 1988-1999 as the “after” period. In Austria the “before” period in the placebo test is 2000-2001 and the “after” period is 2002-2003. This enables us to check whether there is any effect when we simulate the process at another time (1st January of 1998 in Spain or 2000 in Austria). Given that we are simulating the implementation of a law that does not actually exist, there should be no observable effect: any other result would mean that we cannot conclude that the real effect was actually caused by the real law. The results of the placebo test are shown below.

6. Results

In this section we present the results of the estimations of each of the three analyses under consideration.


To analyze whether the law has been effective in terms of increasing PT work among parents of young children, we estimate whether targeted individuals are more likely to work PT after the enactment of the law than before, compared to the change observed in PT work among individuals under the same conditions not affected by the law, i.e., parents whose children need childcare but are older than 7 and younger than 14. As explained above, the analysis is conducted by gender and type of contract.

We compare the likelihood of working PT in each segment of the labor market among eligible mothers or fathers, that is, those whose youngest child is under 4 years old with that of mothers or fathers with children between 10 and 14. Accordingly, our sample is composed of mothers and fathers with children belonging to those two age brackets who, as explained above, must also be married, not sharing a household with older people, aged between 25 and 45, and in work.
Our empirical strategy consists of estimating the following linear probability equation for the likelihood of working PT in year t for both countries 6.

\[ PT_{it} = \alpha + \beta \cdot \text{treated} + \gamma \cdot \text{after} + \delta \cdot \{\text{treated} \cdot \text{after}\} + X_{it} \pi + \epsilon_{it} \]  

[1]

**Targeted** individuals are those in the sample who have children under 4 years old. We compare them with **control** individuals, who have children between 10 and 14. In Spain **after** refers to observations made between 2001 and 2004. These are compared with observations between 1996 and 1999. In Austria **after** means observations between 2005 and 2008 and the comparison is with those made between 2000 and 20003, which are referred to as **before**.

The first two tables present the main coefficients of interest from the estimation of equation [1], broken down by gender and by those working with indefinite and fixed-term contracts, respectively. The coefficient of interest is reported in the third row (**targeted*after**). It compares the effects of the policy on PT work among eligible and non-eligible parents. As anticipated above, it can clearly be seen that the law affects only women with indefinite contracts. Table 1.1. shows that the treatment effect is statistically significant at the 5% significance level in Spain. Before the enactment of the law, women with young children and women with older children were equally likely to work PT, as the variable **targeted** is not statistically significant. However, all else being equal, **after** the law, a woman with small children and an indefinite contract is **12.31% more likely to work PT than a woman with older children and an indefinite contract**. Furthermore, the table reveals that the likelihood of non-affected mothers working PT is the same before and after enactment, given that the **control** variable is not statistically significant. For all other groups we do not find any effect of the law, that is, this law has had no effect at all on men or workers with fixed-term contracts, as expected.

Table 1.2. shows the impact of the law on the probability of working PT among our selected workers in Austria. We focus on workers with indefinite contracts, as the number of observations for workers with fixed-term contracts is too small for precise results to be obtained. For workers with indefinite contracts we find that, as in Spain, the effect of the law is statistically significant only for women, and hence it can be said that the law has only affected mothers. But, unlike Spain, the law has also affected control-group mothers: after its enactment they are **36% more likely to work full-time than before**. We cannot give a clear interpretation of this result. The table also shows that since enactment targeted **mothers are 18.5% more likely to work PT than control-group mothers**. Note that targeted and control-group mothers were equally likely to work PT before the law was implemented. This table also shows that before the law targeted fathers were **23.5% more likely to work PT than control-group fathers**, and this result seems to remain unchanged given that the effect of the law is not significant.

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6 We estimate a probit model.
Robustness Check - Placebo analysis

Before drawing any definite conclusions, we must be certain that the effects estimated are indeed caused by the law and not by some spurious or unobservable effect. To do this, we conduct a placebo test. As explained in the Methodology section, for each country we simulate the impact of the law with the real date replaced by a date one. For Spain we take 1st January 1998, taking 1996-1997 as before and 1998-1999 as after. For Austria we take 1st January 2002 as the implementation date, with 2000-2001 as before and 2002-2003 as after. The procedure is the same as in the above analysis. We select the same four groups but we change the pre and post-enactment years to the fictitious ones. We estimate the same regression for both countries. The results are shown in Table 2.1, for Spain and in Table 2.2, for Austria.

Table 2.1 shows no statistically significant results. If the after variable is statistically insignificant then the probability of control-group parents working PT is the same before and after 1998; this is as expected given that nothing relevant to affect PT work happens in that period. The targeted*after variable is also statistically insignificant, which means that there is no targeting effect. This means that in the absence of the actual implementation of the law, no changes are observed in the incidence of Part-Time work versus Full-Time. This confirms that the results presented above are due to the implementation of the law and not to other spurious or unobservable factors.

Table 2.2 shows the results of the Placebo test for Austria. As in Spain, we find no significant values for the targeting effect because there is actually no such effect: targeted*after is not significant, as expected. However, some statistically significant results are obtained for a confidence level of 10% that may be due to some reason for which we do not control in our estimation. Targeted-group men are 26% more likely to work PT than control men, and control-group mothers are 29% more likely to work PT after 2002 than before. In any event the conclusion is the same as in Spain: when there is no actual law, no changes are observed in the probability of working PT.

Therefore, the main conclusion regarding this first, direct impact of the law is that its enactment enabled more eligible mothers to resort to part-time work to reconcile work with family life, which is the main aim of the law. In that regard, both family-friendly laws have been effective.

6.2. Indirect effects

6.2.1. First indirect effect: Probability of leaving one’s job

This second analysis examines the first unintended effect of the law. As shown in the first analysis, the law has only affected a subgroup of the population, i.e. mothers with indefinite contracts. It has had no effect on targeted fathers or targeted mothers with fixed-term contracts. Family-friendly policies may backfire if not all workers with access use them, as seems to be the case here. This could result in the policy having indirect and to some extent unexpected effects on the non-targeted population.
Accordingly, we first seek to check the effectiveness of the law in terms of helping young parents to combine work and childcare and hence to observe whether targeted parents are less likely to stop work after the enactment of the law than before. Furthermore, we seek to check whether the law has had any impact on non-eligible parents, i.e., those parents not protected against dismissal because their children are older than 7.

It is important to remark that those parents who reduce their working hours to take care of their children are protected against being laid off, and hence if they leave the labor market they do so voluntarily. However, control-group parent who leave their jobs may do so voluntarily or because they are dismissed. If the law has helped targeted parents to combine work and childcare, we would expect a decrease in the probability of stopping work among targeted parents after its enactment. Since we assume that every child under 14 needs childcare and the law can only be used by parents with children under 7, the probability of control-group parents stopping work may increase either because they cannot reconcile work and family or because they are more likely to be dismissed.  

Our empirical strategy consists again of estimating a linear probability equation; now the dependent variable is the probability of stopping work but the independent variables are the same. What has changed here is the sample, as explained.

\[
\text{Stop working}_{it} = \alpha + \beta \cdot \text{treated} + \gamma \cdot \text{after} + \delta \cdot (\text{treated} \cdot \text{after}) + X'_{it} \pi + \epsilon_{it} \tag{2}
\]

The results for Spain are shown in Table 3.1. We observe that this indirect effect of the law seems to affect control-group parents, as their probability of stopping work has increased since its implementation. The most likely interpretation of this result is that since control-group parents are not protected against dismissal they are the primary group affected when dismissals are required. Only the \textit{after} variable is statistically significant, which means that since the implementation of the law control-group parents (in this case both mothers and fathers seem to be affected) are \textbf{16\% more likely to leave their jobs} than before. Given the explanation above, the policy entails an increase in the probability of dismissal for parents with children between 10 and 14. It affects both genders but the effect is stronger among women. This difference could be due to mothers who have combined childcare and work who decide to stop work altogether when the law ceases to help them to do so.

In the case of Austria, as shown in Table 3.2., the indirect effects of the law are different. Men are not affected at all, and only control-group women seem to be affected. \textbf{Mothers with children between 10 and 14 are 63\% more likely to leave their jobs after the implementation of the law than before}. The explanation could be the same as for Spain: when dismissals are required, control-group mothers are the first to go, because targeted mothers are protected. One possible explanation is that firms may dismiss only mothers and not fathers because targeted mothers work PT and, given that it is mostly women who work PT, the firm dismisses those control-group mothers who work PT. Again, the \textit{targeted*after} variable is not significant, which seems to suggest that in Austria

\footnote{Our second analysis is not conducted by type of contract given that we calculate the probability of stopping work.}

\footnote{We estimate a probit model}
the law has not changed the behavior of treated mothers with respect to staying in or leaving their jobs.

6.2.2. Second indirect effect: Probability of working with a fixed-term contract (Spain)

Thus far, we have seen that only a subgroup of the population with access to the policy actually uses it, some because they may not consider it necessary to resort to PT work (men) and others because they fear reprisals such as the non renewal of their contracts (women with fixed-term contracts). In this section we analyze the effect of the law on the population at risk of becoming eligible, in particular on potential mothers. It is possible that employers may tend to hire potential users of the law under fixed-term contracts rather than under indefinite ones because they are thus not obliged to renew those contracts when workers become eligible to use the law. If this is the case we should see an increase in fixed-term contract work and a decrease in indefinite contract work among potential mothers in comparison to their counterparts, given that women are the only potential users of the law.

What we do here is compare the probability of being hired under fixed-term contracts with for potential mothers and potential fathers. Actually, the control group could be not only potential fathers but all men in general, but we believe that “all men” would be a very heterogeneous group and hence rather different from potential mothers. To present a neater analysis we select men without children (potential fathers) as the control group.

The regression is the same as in the previous analysis but here the dependent variable is the probability of being hired under a fixed-term contract. In addition, the sample has changed. As mentioned in Section 3, this analysis includes workers without children, with characteristics similar to those listed previously: aged between 25 and 45, married, not sharing a household with older people and in salaried work. Our targeted group is the women in this sample and our control group is the men.

\[
\text{Prob. temporary contract}_{it} = \alpha + \beta \cdot \text{treated} + \gamma \cdot \text{after} + \delta \cdot (\text{treated} \cdot \text{after}) + X'_{it} \pi + \tau_{it} \quad [3]
\]

As mentioned before, this analysis is conducted only for Spain. The results are shown in Table 4. They reveal that that there is strategic behavior on the part of employers: All else being equal, since the enactment of the law potential mothers are 11% more likely to be hired under a fixed-term contract than potential fathers, which means that an unintended and unexpected effect of this law has been to increase the fixed-term hiring of potential mothers so as to prevent their availing themselves of the right to reduce their working hours and the protection against dismissal.

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9 This analysis is conducted in Rodriguez-Planas et al (2011) paper but here we have changed the control group in order to obtain more homogeneous, comparable groups: here the control group comprises potential fathers while they use actual fathers.

10 The analysis was also conducted in this way and the targeted variable was high and statistically significant.
7. Conclusions

When a government adopts a family-friendly policy that offers all parents of young children (up to a certain age) the right to reduce their working hours so as to combine work and childcare, and the relevant law also protects those parents that avail themselves of it against dismissal, some patterns change in the labor market. Furthermore if, for social and cultural reasons, it is mainly women who make use of that right, those patterns seem to change in a specific direction.

Once such laws are on the statute books, if a firm needs to downsize and some workers are protected against dismissal, those workers who are not protected are more exposed to dismissal. Furthermore, employers soon realize that offering indefinite contracts to women of childbearing age shields them from dismissal once they become mothers and avail themselves of the right to reduce their working hours (until their youngest child reaches the threshold age set under the law). The policy only protects mothers with indefinite contracts because if a mother who has a fixed-term contract accesses the policy employers need only wait for that contract to expire in order to terminate the employment relationship. Thus, the unintended effects of this policy include making it more likely for non-protected parents to be dismissed than childbearing-age parents and a preference on the part of employers for hiring men under indefinite contracts, with childbearing-aged women being offered mainly fixed-term contracts.

In this paper we analyze the direct and the abovementioned indirect effects of the laws passed in Spain and Austria in 1999 and 2004 respectively. These laws allow workers to ask for reduced working hours for childcare, with a corresponding wage reduction. Furthermore, such workers are protected against dismissal while they are availing themselves of that reduction in working hours. In our analysis we use the European Labor Force Survey (ELFS) from 1996 to 2004 in Spain and from 2000 to 2008 in Austria and a differences-in-differences approach.

We find that for eligible mothers with indefinite contracts the law has increased the incidence of part-time work compared to full-time work. In other words, it has only been effective among eligible mothers with stable contracts. The law has had no effect on eligible fathers or on eligible mothers working with fixed-term contracts. To be more precise on the direct effect of the laws, mothers with small children in Spain (Austria) are 12.31% (18.5%) more likely than mothers with older children to work PT since the enactment of the law.

With regard to the indirect and unexpected effects, we find that parents who are not protected against dismissal are more likely to be dismissed since the enactment of the law, but this effect differs somewhat from one country to the other: In Spain both fathers and mothers of older children are 16% more likely to be dismissed than targeted fathers and mothers since the enactment of the law. In Austria, this indirect effect seems to extend only to mothers and not to fathers: The probability of non-targeted mothers being dismissed is 63% greater than that of targeted mothers since enactment.
With respect to the second potential indirect effect of the law, we find that in Spain the probability of potential mothers being hired under fixed-term contracts rather than indefinite ones has increased by 11.27% more than that of potential fathers since the enactment of the law.

From these results we can conclude that the law has helped mothers to combine childcare and work because there has been an increase in the probability of working PT among targeted mothers (direct effect). However, we must highlight that the law has only helped a particular group of mothers – those with stable contracts. Women with fixed-term contracts have not made use of this family-friendly policy. Furthermore, there is clear evidence that the law has increased the probability of dismissal of non-targeted mothers – i.e. mothers with children over 10 years old. Finally, the law has also increased the probability of potential mothers being hired under fixed-term contracts, presumably to avoid the possibility of their availing themselves of the reduced working hours and the protection against dismissal. Therefore, the law has had some positive effects but also some negative ones which are largely unexpected.

References


Graph 1: Incidence of Part-time Work
The first graph correspond to Spain and the second one to Austria.
Graph 2: Incidence of Fixed-term Contracts


SPAIN

AUSTRIA
Graph 3: Proportion of Individuals who Lose/Quit their Jobs.

SPAIN

AUSTRIA
Graph 4: Incidence of Fixed-term Contracts
Table 1.1. **(Spain)** Effect of part-time employment due to the family-friendly law on the eligible population. Targeted group: Parents with younger children. Control group: Parents with older children. ELFS 1996-2004

<table>
<thead>
<tr>
<th></th>
<th>Indefinite contract</th>
<th>Fixed-term contract</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Women</td>
<td>Men</td>
</tr>
<tr>
<td>Targeted</td>
<td>0.0152</td>
<td>-0.0536</td>
</tr>
<tr>
<td></td>
<td>(0.0491)</td>
<td>(0.0103)</td>
</tr>
<tr>
<td>After</td>
<td>-0.0591</td>
<td>0.1741</td>
</tr>
<tr>
<td></td>
<td>(0.0764)</td>
<td>(0.1646)</td>
</tr>
<tr>
<td>Targeted*After</td>
<td>0.1231**</td>
<td>-0.1421</td>
</tr>
<tr>
<td></td>
<td>(0.0596)</td>
<td>(0.1329)</td>
</tr>
<tr>
<td>N. Observations</td>
<td>14158</td>
<td>24793</td>
</tr>
</tbody>
</table>

Note: Additional controls include year, age, age square, number of children, a dummy indicating whether the individual is the household head, level of education, tenure, unemployment rate by region of work. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 1.2. **(Austria)** Effect of part-time employment due to the family-friendly law on the eligible population. Targeted group: Parents with younger children. Control group: Parents with older children. ELFS 2000-2008

<table>
<thead>
<tr>
<th></th>
<th>Indefinite contract</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Women</td>
<td>Men</td>
</tr>
<tr>
<td>Targeted</td>
<td>-0.0141</td>
<td>0.2351**</td>
</tr>
<tr>
<td></td>
<td>(0.0609)</td>
<td>(0.1074)</td>
</tr>
<tr>
<td>After</td>
<td>-0.3598***</td>
<td>-0.1012</td>
</tr>
<tr>
<td></td>
<td>(0.0999)</td>
<td>(0.1797)</td>
</tr>
<tr>
<td>Targeted*After</td>
<td>0.1848**</td>
<td>-0.0288</td>
</tr>
<tr>
<td></td>
<td>(0.0694)</td>
<td>(0.1354)</td>
</tr>
<tr>
<td>N. Observations</td>
<td>7155</td>
<td>11688</td>
</tr>
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</table>

Note: Same controls as in Table 1.1. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1
Table 2.1. (Spain) Placebo test.
Effect of part-time employment due to the family-friendly law on the eligible population. **Targeted group:** Parents with younger children. **Control group:** Parents with older children. **ELFS 1996-1999**

<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td></td>
<td>Women</td>
<td>Men</td>
</tr>
<tr>
<td><strong>Targeted</strong></td>
<td>0.0585</td>
<td>-0.0260</td>
</tr>
<tr>
<td></td>
<td>(0.7687)</td>
<td>(0.1392)</td>
</tr>
<tr>
<td><strong>After</strong></td>
<td>-0.1280</td>
<td>-0.1393</td>
</tr>
<tr>
<td></td>
<td>(0.1192)</td>
<td>(0.2298)</td>
</tr>
<tr>
<td><strong>Targeted*After</strong></td>
<td>0.0006</td>
<td>0.0224</td>
</tr>
<tr>
<td></td>
<td>(0.0963)</td>
<td>(0.1914)</td>
</tr>
<tr>
<td><strong>N. Observations</strong></td>
<td>6174</td>
<td>11481</td>
</tr>
</tbody>
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Note: Additional controls include year, age, age square, number of children, a dummy indicating whether the individual is the household head, level of education, tenure, unemployment rate by region of work. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 2.2. (Austria) Placebo test.
Effect of part-time employment due to the family-friendly law on the eligible population. **Targeted group:** Parents with younger children. **Control group:** Parents with older children. **ELFS 2000-2003**

<table>
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<tbody>
<tr>
<td></td>
<td>Women</td>
<td>Men</td>
</tr>
<tr>
<td><strong>Targeted</strong></td>
<td>0.0046</td>
<td>0.2653*</td>
</tr>
<tr>
<td></td>
<td>(0.0860)</td>
<td>(0.1510)</td>
</tr>
<tr>
<td><strong>After</strong></td>
<td>0.2909*</td>
<td>0.3992</td>
</tr>
<tr>
<td></td>
<td>(0.1584)</td>
<td>(0.2702)</td>
</tr>
<tr>
<td><strong>Targeted*After</strong></td>
<td>-0.1615</td>
<td>-0.1272</td>
</tr>
<tr>
<td></td>
<td>(0.1107)</td>
<td>(0.2017)</td>
</tr>
<tr>
<td><strong>N. Observations</strong></td>
<td>2244</td>
<td>3860</td>
</tr>
</tbody>
</table>

Note: Same controls as in Table 2.1. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1
Table 3.1. (Spain) Effect of Losing/quitting jobs on workers who were in work the previous year.  

<table>
<thead>
<tr>
<th></th>
<th>Women</th>
<th>Men</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Targeted</strong></td>
<td>0.0424</td>
<td>0.009</td>
</tr>
<tr>
<td></td>
<td>(0.0411)</td>
<td>(0.0415)</td>
</tr>
<tr>
<td><strong>After</strong></td>
<td>0.1663**</td>
<td>0.1601**</td>
</tr>
<tr>
<td></td>
<td>(0.0651)</td>
<td>(0.0691)</td>
</tr>
<tr>
<td><strong>Targeted*After</strong></td>
<td>0.0229</td>
<td>0.0401</td>
</tr>
<tr>
<td></td>
<td>(0.0504)</td>
<td>(0.0541)</td>
</tr>
<tr>
<td><strong>Observations</strong></td>
<td>23258</td>
<td>41527</td>
</tr>
</tbody>
</table>

Note: Additional controls include year, age, age square, number of children, a dummy indicating whether the individual is the household head, level of education, tenure, unemployment rate by region of work. Robust standard errors in parentheses.  *** p<0.01, ** p<0.05, * p<0.1

Table 3.2. (Austria) Effect of losing/quitting jobs on workers who were in work the previous year.  

<table>
<thead>
<tr>
<th></th>
<th>Women</th>
<th>Men</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Targeted</strong></td>
<td>0.1345</td>
<td>-0.0188</td>
</tr>
<tr>
<td></td>
<td>(0.1035)</td>
<td>(0.1142)</td>
</tr>
<tr>
<td><strong>After</strong></td>
<td>0.6301***</td>
<td>-0.2160</td>
</tr>
<tr>
<td></td>
<td>(0.1688)</td>
<td>(0.1839)</td>
</tr>
<tr>
<td><strong>Targeted*After</strong></td>
<td>0.0252</td>
<td>0.0988</td>
</tr>
<tr>
<td></td>
<td>(0.1151)</td>
<td>(0.1286)</td>
</tr>
<tr>
<td><strong>Observations</strong></td>
<td>4677</td>
<td>8090</td>
</tr>
</tbody>
</table>

Note: Same controls as in Table 3.1. Robust standard errors in parentheses.  *** p<0.01, ** p<0.05, * p<0.1
Table 4. (Spain) Effect of family-friendly law on being hired under a fixed-term contract.  
**Targeted group:** Potential mothers.  **Control group:** Potential fathers.  ELFS 1996-2004

<table>
<thead>
<tr>
<th></th>
<th>All</th>
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<tbody>
<tr>
<td>Targeted</td>
<td>-0.0157</td>
</tr>
<tr>
<td></td>
<td>(0.0138)</td>
</tr>
<tr>
<td>After</td>
<td>-0.0009</td>
</tr>
<tr>
<td></td>
<td>(0.02213)</td>
</tr>
<tr>
<td>Targeted*After</td>
<td>0.1127***</td>
</tr>
<tr>
<td></td>
<td>(0.1787)</td>
</tr>
<tr>
<td>Observations</td>
<td>87694</td>
</tr>
</tbody>
</table>

Note: Additional controls include year, age, age square, number of children, a dummy indicating whether the individual is the household head, level of education, tenure, unemployment rate by region of work.  
Robust standard errors in parentheses.  *** p<0.01, ** p<0.05, * p<0.1
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