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ABSTRACT

Fertility Decisions and Employment Protection: The Unintended Consequences of the Italian Jobs Act*

We study the effect of a reduction in employment protection on fertility decisions. Using data from the Italian Labor Force Survey for the years 2013-2018, we analyze how the propensity to have a child has been affected by the 2015 Labor Market Reform, the so-called "Jobs Act", which has essentially reduced the employment protection for large-firm employees and leaved largely unchanged that for small-firm ones. We employ a Difference-in-Differences identification strategy and compare the average change over time in fertility decisions of women employed in large firms with the average change experienced by women employed in small firms. We find that women exposed to the reduction in employment protection have a 1.4 percentage point lower probability of having a child than unexposed women. A battery of robustness checks confirms this finding. We document large heterogeneous effects by marital status, parity, geographic areas as well as by the level of education and wage. Our findings help understand the potential unintended consequences that reforms introducing more labor market flexibility have on fertility decisions by increasing insecurity on career prospects.

JEL Classification: J13, J65, J41, M51, C31

Keywords: fertility, employment protection legislation, labor market reform, difference-in-differences

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1. Introduction

Fertility rates have become a matter of concern in many advanced countries. The current total fertility rate is below the population replacement rate of 2.1 in almost all OECD countries (except for Israel, Mexico and Turkey).[1] This is the result of a long-term decline occurring since the 1970s. After reaching a low peak in the early 2000s (values had fallen below 1.3 in many European countries), some countries have experienced a recovery – though the increase has generally been moderate – while most Southern European countries are still plagued by very low fertility rates (values in 2016 are still below 1.4 for Greece, Italy, Portugal and Spain).

One of the causes of the observed decline in total fertility rates has been a tendency by women to postpone their decisions to have children until a later age. The mean age of women at first childbirth has increased dramatically in most OECD countries: from 24.1 years in 1970 to 30 years in 2015. The postponement of childbearing affects completed fertility because of the limited time interval left for second or higher order births. In addition, also because of health-related problems associated to age, delaying entry into motherhood can also lead to involuntary childlessness (Beaujouan and Berghammer, 2019; te Velde et al., 2012).

The reduction of fertility rates and the postponement of fertility have been analyzed by economists typically relying on the "rational choice" approach proposed by Becker (1981), which considers individual's decision to have a child as the result of a utility maximization process that takes into account costs and benefits of children, subject to income constraints and individual's preferences. In this framework, the decline in fertility may be the consequence of different factors such as higher relative price of children, lower family incomes, and changes in preferences for children, among others.[2]

Great attention has been devoted to the improved job opportunities that drive more women into employment and lead to an increase in income. On the one side, better employment opportunities, by increasing opportunity costs, reduce fertility.[3] On the other side, fertility rates may rise due to income effects. The ambiguity of this relationship (depending on whether the income effect prevails over the substitution effect) is confirmed by the fact that the correlation between female labor market participation and fertility, which has been negative for several years across countries, has recently turned out to be positive at least for Northern European countries and some Continental countries (Ahn and Mira, 2002).

Increased labor market insecurity might also have contributed to the decline in fertility (Kreyenfeld and Andersson, 2014; Goldstein et al., 2013; Sobotka et al., 2011; McDonald, 2006). Contemporary labor

[1] The total fertility rate in each year is defined as the mean number of children that would be born alive to a woman during her lifetime if she were to pass through her childbearing years conforming to the age-specific fertility rates of a given year.

[2] The economic literature has long investigated the factors that determine fertility and how they change across countries and over time: the effect of the division of work within households (Del Boca et al., 2003; Ichino and Sanz de Galdeano, 2003), of the availability of childcare services (Marenzi and Pagani, 2008; Del Boca, 2002; Chiuri, 2000), of the cultural variables (Hacker and Roberts, 2017; Kohler, 2000; Friedlander et al. 1991).

[3] Women's reproductive and employment decisions interact as they are the solution of a common constrained maximization problem (Del Boca and Sauer, 2009; Francesconi, 2002; Cigno, 1991; Hotz and Miller, 1988; Moffitt, 1984; Rosenzweig and Wolpin, 1980).

markets are often characterized by employment instability that intensifies the difficulties experienced by the young in their transition to adulthood. Since individuals are typically risk-averse, an increase in the uncertainty about future economic conditions might push them to defer family formation until full integration into the labor market or to decrease the number of children in order to reduce risks (Ranjan, 1999).

The empirical evidence on how economic uncertainty affects fertility is still very limited. Some studies have analyzed the impact of aggregate unemployment on fertility showing a negative association (Currie and Schwandt, 2014; Adsera, 2005).[4] However, these studies do not provide evidence of a causal effect. Other works have tried to identify a causal relationship looking at individual unemployment and exploiting firm closure as a source of exogenous variation in unemployment. They document a strong negative effect which seems to be mainly related to the career shock[5] rather than to the income shock induced by unemployment (Huttunen and Kellokumpu, 2016; Del Bono et al., 2015, 2012; Lindo, 2010).

Some other studies have examined the impact of job instability focusing on temporary contracts. While most of these find that fixed term contracts delay entry in motherhood and reduce fertility (Modena et al., 2013; Modena and Sabatini, 2012; Vignoli et al., 2012; De La Rica and Iza, 2005; Ahn and Mira, 2001), Santarelli (2011) finds no effect for the type of employment contract. Nevertheless, also in these studies the identification of causal effects is hampered by endogeneity and reverse causality issues. For instance, women planning to have a child in the near future might be more likely to accept a temporary job as they seek less demanding jobs and careers.[6]

This paper addresses how job instability affects fertility decisions by examining an exogenous change in Employment Protection Legislation (EPL). We exploit the Italian "Jobs Act" Reform of 2015, which has substantially reduced firing costs for new hires with open-ended contract in large firms by phasing out the compulsory reinstatement of wrongfully discharged employees and mandating that firms have to compensate unfair dismissals exclusively by disbursing an amount of money predetermined by law and proportional to job tenure. The Reform has essentially reduced EPL for large firms' employees hired on a permanent contract basis after March 7th, 2015, while it has left largely unchanged EPL for small firms' employees, for whom the reinstatement clause did not exist. The fact that the Jobs Act has mainly increased flexibility in large firms has been documented by Boeri and Garibaldi (2019), who also show that right after the reform total firings from open ended contracts increased by more than 50 percent in large firms while remaining relatively stable in small ones.

This unique feature of the Reform allows us to employ a Difference-in-Differences approach and estimate the causal effect of EPL exploiting the structure of our data and comparing the difference in the likelihood to have a child between women who have been affected by the reform – new hires with open-ended contract in large firms – and women employed in large firms and hired before the reform who have

[4] See also Inanc (2015), Adsera and Menendez (2011), Adsera (2010) and Meron and Widmer (2002).
[5] De Paola, Nisticò and Scoppa (2019) show that improved career prospects increase fertility among Italian university professors.
[6] It could also be that women who plan to start a family might seek more stable careers and job security.

not been affected by it; this difference is then compared with the analogous difference in fertility between women newly hired in small firms and women hired in small firms before the reform.

In our empirical analysis we use data from the Italian Labor Force Survey that provides quarterly information for the period 2013-2018 on a large sample of the Italian population. Our results show that a reduction in job security significantly lowers a women's propensity to have a child. More specifically, we document that women hired in large firms after the approval of the "Jobs Act" face a 1.4 percentage point lower probability of having a child compared to the change experienced by women employed in small firms. The estimated effect is larger for younger women, for unmarried ones, and for those with no kids, consistent with the prediction that younger women, by facing lower time pressure to make a family, have greater incentives to postpone childbearing in the interest of pursuing a professional career. Moreover, we find the effect to be larger for women working in the South of Italy, for women with lower education, and for women earning lower wages, therefore suggesting that the impact of job insecurity is likely mediated by income uncertainty and, more generally, by the expectations on future career prospects.

It should be noted that, besides the abolition of the reinstatement clause for large firms, the Jobs Act has also introduced two other important changes for all firms (both small and large): a subsidy for new hirings with open ended contract and a new labor contract based on graded security for all new open ended jobs. While there is evidence that firms have reacted to the subsidy by substantially increasing open ended hirings and transforming fixed term into permanent contracts (see Boeri and Garibaldi, 2019 and Sestito and Viviano, 2018), both changes could positively affect fertility. Therefore, it is important to note that the negative effect on fertility that we find is an average effect on employees with different working histories, and it could well be that the reform led to an increase in fertility for some specific populations of workers, such as those previously employed through fixed term contracts or those previously unemployed.

This paper contributes to the existing research on economic insecurity and fertility decisions in that it focuses on the impact of EPL, which has been overlooked up to date. There are just a few studies examining the relationship between EPL and fertility and their results are mixed. Indeed, while Bratti et al. (2005) find a positive association, Adsera (2004) finds a negative correlation. Moreover, Fahlen and Olah (2018) find that macro-level changes in EPL influences first childbearing intentions only for men and not for women. Our work is closely related to that in Prifti and Vuri (2013), who find that reduced economic insecurity following a strengthening of the EPL regime has a positive and sizable effect on fertility decisions of Italian working women. In contrast to Prifti and Vuri (2013), we focus on a reform that has reduced job security, that from a theoretical viewpoint might generate a different reaction under loss aversion. In addition, the way individuals respond to variations in employment protection might have changed over time. Since the reform considered by Prifti and Vuri was implemented in 1991, our analysis also allows to investigate whether individuals have become accustomed to the increased uncertainty that has started to characterize the Italian labor market since the beginning of the new millennium.

Furthermore, this paper complements the large literature on the impact of employment protection on either side of the labor market. On the labor demand side, previous studies have examined the impact of EPL

on labor and total factor productivity (Bjuggren, 2018; Cingano et al., 2016, 2010; Bassanini et al., 2009; Autor et al., 2007), job flow dynamics (Boeri and Garibaldi, 2019, 2007; Sestito and Viviano, 2018; Messina and Vallanti, 2007), innovation and firm creation (Griffith and Macartney, 2014; Schivardi and Torrini, 2008), investment on training (Bratti et al., 2019), use of temporary contracts (Hijzen et al., 2017), and wage (Leonardi and Pica, 2013; Bertola, 1990). On the labor supply side, prior contributions have investigated the effect of EPL on workers' probability of being dismissed (Boeri and Jimeno, 2005), workers' effort (Ichino and Riphahn, 2005), workers' welfare (Belot et al., 2007), and workers' initial mortgage conditions (Mistrulli et al., 2020). Our paper contributes to this strand of research by looking at the impact of EPL on workers' fertility.

Finally, our paper extends the literature on the economic effects of a specific aspect of EPL: wrongful discharge protection. Prior studies have investigated the economic effects of wrongful discharge laws on employment and wages (MacLeod and Nakavachara, 2007; Autor, Donohue and Schwab, 2006, 2004) as well as on firms' capital market structure (Serfling, 2016), innovation (Acharya et al., 2014) and profitability (Bird and Knopf, 2009). This paper instead looks at the unintended consequences that changes in wrongful discharge laws may have on fertility.

The results of the present analysis have important policy implications in that they shed light on the potential unintended consequences that labor market reforms, aimed at dealing with high levels of unemployment by means of more flexibility, may have on fertility decisions by increasing insecurity on career prospects. On this regard, our analysis might be relevant for the policy-making of most Southern European countries that have both fertility rates and labor markets similar to the Italian ones.

The paper proceeds as follows. Section 2 presents an overview of the institutional setting. Section 3 describes the data used and provides some descriptive statistics. In Section 4 we illustrate the econometric methodologies implemented in the empirical analysis, present the main results and the robustness checks. Section 5 investigates possible heterogeneity in responses to the Reform. In Section 6 we provide some evidence to support the common trend assumption. Section 7 offers some concluding remarks.

2. The Institutional Setting

The Italian labor market has traditionally been characterized by a strict regime of EPL. Hiring and firing procedures, minimum wages, workplace safety and many other aspects of the employer-employee relationship were regulated by the Charter of workers' rights adopted in 1970.

According to article 18 of this charter, dismissals of workers were allowed only in case of "just cause" (worker misbehavior or firms' need to reduce or reorganize its workforce). In contrast, in case of unfair dismissals the costs for firms could be rather high. More precisely, firms with more than 15 employees in case of dismissal were required to give to the employee a term of notice whose length is related to tenure. In addition, in case a judge finds that the dismissal was not motivated by a just cause the worker has the possibility to choose between reinstatement in the old job, plus a severance package equal to foregone

earnings between the date of the dismissal and the date of the sentence, or a severance package consisting of 15 months of salary and the foregone earnings. Since the existence of a "just cause" was deemed by judges, the most critical aspect of this regime was the uncertainty in both the timing and contents of the judges' decisions, which have varied greatly across cases, labor markets and over time (Ichino, Polo and Rettore, 2003).

These rules were applied to firms with at least 15 employees, while firms with less than 15 employees were not mentioned by the Charter and were initially exempted from the EPL. Firing costs for small firms' employees were changed by the Law No. 108 that in May 1990 established a number of dismissal restrictions also for workers holding jobs in firms with less than 15 employees. Small firms have to respect a term of notice and if a judge finds the dismissal unfair the firm can choose to either pay the worker a severance package between 2.5 and 6 months of salary or reinstate him/her in the old job (see Scoppa, 2010). In stark contrast with the provision for large firms, the firm chooses its preferred option and a maximum amount is established ex-ante as severance pay.

At the end of the Nineties, to increase labor market flexibility and face the high unemployment rate, governments progressively introduced different types of fixed-term contracts (Malgarini et al. 2013). These policy interventions have led to a heavily segmented labor market, contraposing over-protected and under-protected categories, permanent and fixed-term workers, the former enjoying full employment protection and the latter facing high job instability. Not surprisingly, in response to the Global Financial Crisis, firms adjusted their labor force mainly by firing fixed-term workers who ended up by suffering a very high cost.

An attempt to reduce firing cost was made by the Fornero Reform, adopted in 2012 (Law No. 92/2012), which has weakened workers' protection in case of layoffs deemed as "unfair" by the court. However, in many situations the obligation of workers' reinstatement in case of unjust layoff has been preserved. For this reason, in 2015 the Renzi government made a second attempt to reduce labor market segmentation by reducing firing costs for permanent workers with the so called "Jobs Act", that further limited the possibility of reinstatement, allowing it for discriminatory dismissals and for a few specific cases of disciplinary dismissals, and mandating, as a general rule, that unfair dismissals be compensated by disbursing an amount of money predetermined by law and proportional to job tenure (from a minimum of 4 times the monthly pay to a maximum of 24 times, i.e. 2-months' pay for every year of seniority).[7]

These rules apply to all new hires in firms with more than 15 employees with a permanent contract signed after March, 7th, 2015, when the new law came into force, while they do not apply to previous hired workers in firms above the 15-employee threshold, who are still covered by the reinstatement clause. Nonetheless, firms with a workforce below the threshold did not face significant changes, since, as explained, the reinstatement clause was not applied before the Job Acts. All in all, the new regime reduces both the expected firing costs and, most significantly, the uncertainty surrounding them for firms over the 15-employee threshold, with no substantial changes for those below the threshold.

[7] This monetary compensation may be halved if the worker agrees to end any pending litigation about the nature of the dismissal, and the worker is exempted from paying taxes on the compensation received.

Our hypothesis relating job security and fertility is that when firing costs are reduced, job security declines, and this could affect fertility decisions in two different ways. On the one hand, this could discourage women to have (more) children because their income flow becomes more uncertain. On the other side, firms could prefer women without children because they are more flexible and devote more time to work. If firms can (more) easily replace workers, women could feel threatened and, as a result, postpone fertility. The results we find in our empirical analysis lend support to this hypothesis.

It is important to note that, together with the new rules concerning the reinstatement clause, in January 2015, the government introduced a sizeable hiring subsidy for new hires with open ended contracts, which was applied uniformly in large and small firms. Arguably, this subsidy, by increasing individual employment opportunities or stability, has a positive influence on fertility. Thus, while we cannot exclude that the reform might have induced an increase in fertility for some specific groups of workers, e.g., those newly hired with permanent contracts who were previously employed through fixed term contracts or those previously unemployed, it is worth emphasizing that the negative effect of the Jobs Act on fertility we document in this empirical investigation captures an average effect on employees with different working histories.

3. Data and Descriptive Statistics

The Italian Labor Force Survey (LFS) is a dataset provided by ISTAT, the Italian National Institute of Statistics, providing quarterly information on the labor market status and other socio-economic characteristics of a representative sample of the Italian population (about 95,000 observations per quarter).[8] We use data from the first quarter of 2013 to the fourth quarter of 2018 for a total of almost 2 million obs.

As the Jobs Act rules apply to open-ended contract workers in large firms, we exclude from our sample self-employed, part-time and non-permanent employees. This also allows us to avoid self-selection problems: women planning to have a child might be more likely to accept these types of contracts since they might prefer less demanding jobs and careers. In addition, as the number of new hires in the public sector in recent years has been very small due to public finance limitations, we do not consider these workers.

Due to the features of our data set that only provides information on maternity leaves, we focus exclusively on employed women aged 16-46. Finally, since for maternity episodes taking place from April 2015 to December 2015 for women hired under the Jobs Act, we cannot be sure if the fertility decision has been effectively taken before or after the Jobs Act, we exclude these observations from our sample. Using all these sample selection criteria, we are left with about 54,629 observations.

In order to build our dependent variable, we use two questions included in the LFS and inquiring participants about the reasons that have led to no working time or reduced working time during the reference week. More precisely, the first and the second question, proposed respectively to employees declaring no and

[8] To be more precise, the LFS is a short panel in which individuals are interviewed in two subsequent quarters and re-interviewed again after one year in the same quarters, for a total of four times.

reduced working time respectively, were formulated as follows: "What is the main reason why you did not work last week?"; "What is the main reason why you worked less than usual?". For both questions, among the possible answers there was one pointing to "Compulsory Maternity Leave",[9] which in Italy typically covers the two months before the date of childbirth and the three months following the birth.[10] According the Italian legislation during the period of compulsory abstention from work, the pregnant woman is entitled to retain her job and to receive a maternity allowance.[11] Using this information, we build the dependent variable *Maternity Leave* equal to one for women declaring as a reason for not working or working a reduced amount of time during the week before the interview "Compulsory maternity leave" (and zero otherwise).

We distinguish between small and large firms using the threshold of 15 employees. We build a variable *Large Firm* that is equal to one if the number of employees is greater than 15 (16-49 employees; 20-49; 50-249; >250) and equal to zero if the number of employees is equal or below 15.[12]

In constructing our data set we had to deal with the fact that while information provided by the LFS refers to a reference week (the week before the interview), the exact period covered by this week is not released by ISTAT. The information that instead is made publically available is the quarter of the interview, and then we impute the reference week in the middle of the quarter, for example, mid-February for the first quarter or mid-May for the second quarter, etc. As we calculate the date of beginning of the current job as the difference between the reference week and the number of months of *Tenure* (the number of months since the interviewed person has started the current job), this potentially introduces a measurement error in identifying among individuals hired around the threshold of 7th March 2015 those affected by the Jobs Act reform.[13]

We define the dummy variable *Jobs Act* equal to one if a worker has been hired after the Jobs Act Reform, that is, after March, 7, 2015 (and zero otherwise) and calculate the variable *Time* (in days) as the difference between the date of hiring and March, 7, 2015.

In our dataset we have available the following variables: age, educational attainments (10 levels), number of children aged 2 or more, 20 regions of residence or 5 geographical areas, married, immigrant (no

[9] The other possible answers for both questions were: "Under Earning Integration Fund (Cassa Integrazione Guadagni); Reduced activity for economic or technical reasons; Work disputes; Bad weather; Sickness, Holidays; Bank holidays, Flexible time schedule; Part-time; Study and training activity; Compulsory maternity leave; Voluntary parental leave; Leave for family reasons (excluding compulsory and maternity leave); Lack of work opportunities; New job or job change during the week; Work contract just expired; Occasional or seasonal job; Other".

[10] The worker has the possibility to put off her maternity leave until one month before the expected date of confinement and then continue it up to four months after the birth of her child.

[11] The Italian Law also allows women to apply for an early maternity leave (Astensione anticipata per gravidanza a rischio) for reasons related to health and safety during pregnancy. A medical certificate that certifies pregnancy at risk is required. Unfortunately, the LFS does not include a specific item for this condition.

[12] We impute a missing value to *Large Firm* if the employee declares that "she does not know the exact number of employees, but this number is greater than 10", as in this case we are not able to understand whether the number of workers employed in the firm reaches the cutoff of 15 employees. Conversely, we impute 0 to *Large Firm* if the employee declares that "she does not know the exact number of employees, but this number is smaller than 10".

[13] We try to deal with this problem in a robustness check (see Table 5).

Italian citizenship), tenure (in years), 10 industry dummies,[14] job position,[15] quarter dummies and year dummies.

As shown in Table 1, 3.7% of women in our sample are on *Maternity Leave*. The percentage of women employed in large firms is 48% while in our sample women hired after the Jobs Act is equal to 7%. Women are relatively young (about 36 years old), with a medium level of education (about 12.7 years), 9.1 years of tenure and an average monthly wage of about 1,278 euros. About 56% of them are married, while on average they have 0.9 children aged 2 or older. 57% are white-collars, 39% are blue-collars and 4% have a managerial position. About 64% live in the Northern regions, 21% in the Center and about 15% in the South.

Table 1. Descriptive Statistics

Variable	Mean	Std. Dev.	Min	Max	Obs.
Maternity Leave	0.037	0.189	0	1	54,629
Large Firm	0.480	0.500	0	1	54,629
Jobs Act	0.070	0.255	0	1	54,629
Jobs Act*Large Firm	0.025	0.156	0	1	54,629
Age	36.648	6.523	16	46	54,629
Education (yrs.)	12.669	3.356	3	18	54,629
# Children (Age≥2)	0.904	0.903	0	10	54,629
Tenure	9.132	6.470	0	33	54,629
Immigrant	0.146	0.353	0	1	54,629
Married	0.560	0.496	0	1	54,629
Wage	1278.26	394.47	250	3000	54,629
Blue collar	0.387	0.487	0	1	54,629
White collar	0.569	0.495	0	1	54,629
Manager	0.043	0.203	0	1	54,629
North Est	0.356	0.479	0	1	54,629
North West	0.284	0.451	0	1	54,629
Center	0.215	0.410	0	1	54,629
South	0.094	0.292	0	1	54,629
Islands	0.052	0.222	0	1	54,629

Dataset: Italian Labor Force Survey (2013-2018), ISTAT. Sample: women employee (not self-employed), aged 16-46, with permanent job (no part-time), in private sector.

Preliminarily, in Table 2, we look at simple descriptive statistics and consider whether large- and small-firm employees have differentially reacted to the introduction of the Jobs Act reform changing fertility decisions. For women hired before the introduction of the Jobs Act, Maternity Leave is on average 4.2% for employees of large firms and 3.4% for small firm employees. In contrast, for women hired after the Jobs Act, the probability of being on Maternity Leave is equal to about 2% both in large and small firms. Our evidence shows that the fertility rate has declined following the Jobs Act Reform, and that in the subsequent period the significant difference between large and small-firm employees has completely disappeared.

[14] Agriculture; Manufacturing; Building; Commerce; Hotel & Restaurants; Transports; Communications; Finance and Insurance; Housing and professional activities; Education, Health, Social Services.
[15] Manager, Cadre/Junior manager, White-Collar; Blue-Collar.

Table 2. Maternity Leave Rates in Small and Large Firms Before and After the Jobs Act

	Hired Before Jobs Act	Hired After Jobs Act	After-Before Difference
Small Firms	0.034	0.021	-0.014***
	(0.001)	(0.003)	(0.003)
Large Firms	0.042	0.020	-0.022***
	(0.001)	(0.004)	(0.004)
Large-Small Difference	0.008***	-0.001	-0.008*
	(0.002)	(0.005)	(0.005)

Notes: Standard errors are reported in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

4. Results from a Difference-in-Differences Approach

To provide evidence on the impact produced by the Jobs Act on fertility, we use a Difference in Differences approach considering employees of large firms as treated and small firms' employees as controls. We compare fertility rates of workers hired in small and large firms before and after March 2015, when the Jobs Act was introduced.

Following most of the papers in the literature, we use a linear estimator to estimate several specifications of the following model:

[1] $$Maternity\ Leave_{it} = \alpha + \beta Large_{it} + \gamma Jobs\ Act_{it} + \delta Large_{it} * Jobs\ Act_{it} + \lambda X_{it} + \mu_t + \varepsilon_{it}$$

The dependent variable *Maternity Leave*$_{it}$ represents our measure of fertility and takes value equal to one if woman *i* at time *t* was on Compulsory Maternity Leave during the reference week; *Large*$_{it}$ is a dummy for employees working in large firms (with more than 15 employees) and the coefficient β measures the difference in fertility rates between large and small firms' employees hired before the introduction of Jobs Act; *Jobs Act*$_{it}$ is a dummy taking the value of 1 for employees hired after 7 March 2015 and zero otherwise: γ represents the difference in fertility rates between small firms employees if hired before and after the Jobs Act; *Large*$_{it}$**Jobs Act*$_{it}$ is the interaction term whose coefficient δ measures the treatment effect of our interest; X_{it} is a vector of individual characteristics that could affect fertility decisions (age, age squared, education, marital status, immigrant, # children, tenure, region of residence, etc.), μ_t are year-quarter dummies, ε_{it} is an error term.

Estimates using an OLS estimator are presented in Table 3. In all specifications, standard errors are clustered at Large Firm*Year-quarter level to take into account within Treatment*Time level correlation of the error terms (Bertrand, Duflo, and Mullainathan, 2004).[16]

In the first column of Table 3 we report the results of a very basic regression in which we only use as regressors *Large*$_{it}$ and *Jobs Act*$_{it}$ and the interaction term *Large*$_{it}$**Jobs Act*$_{it}$ without other controls. We find that women employed in large firms used to have a higher fertility rate of about 0.8 percentage points with respect to small firms' employees; women hired in small firms after the introduction of the Jobs Act reduced

[16] We obtain very similar results if we only correct standard errors for heteroskedasticity (estimates not reported).

their fertility rates of 1.4 percentage points; more importantly, the introduction of the Jobs Act has reduced fertility for women hired in large firms by 0.8 percentage points with respect to small-firm employees (with the effect being statistically significant at the 5 percent level).

In column (2) we control for some important individual characteristics to avoid unbalanced comparisons between treated and control individuals. We control for *Age*, *Age Squared*, years of *Education*, *Married* and *Immigrant*. We find that women in large firms hired under the Jobs Act regime have significantly reduced their propensity to have a child by 1.2 percentage points (the coefficient is significant at 1 percent level). As regards controls variables, our findings are consistent with the previous literature: age and fertility are related by a concave relationship (with a maximum at age 29.7), education has a positive impact on fertility (+0.7 percentage points for 5 years of education), married women are 5.2 percentage points more likely to have a child while female immigrants are less likely to have a child.

Table 3. The Effect of the Jobs Act on Fertility. Difference-in-Differences Estimates

	(1)	(2)	(3)	(4)	(5)
Large Firm	0.008***	0.003**	0.003**	0.004**	0.004**
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Jobs Act	-0.014***	-0.012***	-0.010***	-0.010***	-0.010***
	(0.002)	(0.003)	(0.002)	(0.002)	(0.002)
Large Firm*Jobs Act	-0.008**	-0.012***	-0.014***	-0.014***	-0.014***
	(0.004)	(0.004)	(0.003)	(0.003)	(0.003)
Age		0.018***	0.012***	0.012***	0.012***
		(0.001)	(0.001)	(0.001)	(0.001)
Age Sq.		-0.000***	-0.000***	-0.000***	-0.000***
		(0.000)	(0.000)	(0.000)	(0.000)
Education, years		0.001***	0.001***	0.001***	0.001***
		(0.000)	(0.000)	(0.000)	(0.000)
Married		0.052***	0.054***	0.054***	0.054***
		(0.002)	(0.002)	(0.002)	(0.002)
Immigrant		-0.002	-0.008***	-0.008***	-0.008***
		(0.003)	(0.003)	(0.003)	(0.003)
# Children			-0.020***	-0.021***	-0.021***
			(0.001)	(0.001)	(0.001)
Tenure			-0.000	-0.000	-0.000
			(0.000)	(0.000)	(0.000)
Regional Dummies	NO	NO	NO	YES	YES
Year-quarter Dummies	NO	NO	NO	NO	YES
Observations	54629	54629	54629	54629	54629
Adjusted R^2	0.001	0.036	0.045	0.045	0.045

Notes: Each column reports estimates from OLS regression. The dependent variable is *Maternity Leave*. Standard errors clustered at Large Firm*Year-quarter level are reported in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

In column (3) we control in addition for the number of children aged 2 or more[17] and the years of tenure. We find that the number of children tends to reduce the probability to have a child by 2.1 percentage points while tenure (controlling for age) has not impact on fertility. When controlling for these new variables, the impact of *Jobs Act* is slightly larger (-1.4 percentage points) and remains strongly significant.

[17] The LFS dataset reports age of children only in categories.

In columns (4) and (5) we progressively add region and year-quarter dummies to control for time-invariant unobserved heterogeneity at the geographic level and for time fixed effects, respectively. Reassuringly, we find almost identical results.

In Table 4, we check the sensitivity of our results by including additional controls to our main specification. In column (1) we control for job position dummies (5 categories), while in column (2) we include sector of activity dummies (10 categories) and results are unchanged with respect to those reported in column (5) of Table 3. Next, in column (3) we also control for the monthly (log) wage.[18] The estimated coefficient remains significant at the 1 percent level and slightly reduces in magnitude. Finally, in columns (4) we add region-specific time (linear) trends and we find again very similar results.[19]

Table 4. Difference-in-Differences Estimates. Additional Controls

	(1)	(2)	(3)	(4)
Large Firm	0.004***	0.004***	0.006***	0.006***
	(0.001)	(0.001)	(0.002)	(0.002)
Jobs Act	-0.010***	-0.010***	-0.011***	-0.011***
	(0.002)	(0.002)	(0.002)	(0.002)
Large Firm*Jobs Act	-0.014***	-0.014***	-0.013***	-0.011***
	(0.003)	(0.003)	(0.003)	(0.003)
Job position dummies	YES	YES	YES	YES
Sector of activity dummies	NO	YES	YES	YES
Wage (in log)	NO	NO	YES	YES
Region-specific trends	NO	NO	NO	YES
Observations	54629	54629	54629	54629
Adjusted R^2	0.045	0.045	0.047	0.047

Notes: Each column reports estimates from OLS regression. The dependent variable is *Maternity Leave*. Standard errors clustered at Large Firm*Year-quarter level are reported in parentheses. Baseline controls (as in Table 3, column 5) are included in all specifications. *** p<0.01, ** p<0.05, * p<0.1.

In Table 5 we report estimation results when using alternative time windows as regards the date of hiring of our sample women. We report results using the controls in specification (5) of Table 3. In column (1) we deal with the measurement error deriving from the fact that we have imputed the date of the interview of the respondent (to the mid-quarter) and the real interview could have taken place 45 days before or later. This implies that we could have erroneously calculated the time of hiring and so the *Jobs Act* dummy. To be on the safe side, we exclude from our sample individuals (564 obs., i.e., about 1% of the sample) who have been hired very near the threshold (that is we exclude $-45 \leq Time \leq 45$), a so-called "donut window". We find a slightly larger impact to that found above (-1.6 percentage points), consistent with a measurement error biasing towards zero the coefficient ("attenuation bias") in our previous estimates.

In column (2) of Table 5 we restrict our sample to individuals who were hired close to the Jobs Act reform choosing a symmetric window of 1350 days[20] around the threshold (difference between the date of

[18] We find a strong negative effect of wages on fertility, but this has to be taken with care since a reverse causality problem could seriously bias the estimations.

[19] All our findings are confirmed if – instead of a Linear Probability Estimator – we use a Probit estimator (estimates not reported).

[20] 1350 days is the highest tenure we observe in our dataset for individuals hired after the introduction of the Jobs Act.

hiring and March 7th, 2015). In this way we exclude women hired much before the cutoff date, that is, those hired before July 2011, focusing on a sample of about 14,000 obs. Also in this case our results remain qualitatively the same. This is reassuring as one possible concern in our estimates is that women hired after the Jobs Act are very different from women hired before the Jobs Act, in particular, in terms of tenure. In fact, tenure is on average 9.7 years for women hired pre-reform vs. 1.37 years for those hired post-reform.

Table 5. Difference-in-Differences Estimates. Alternative Time Windows

	(1) Donut Window	(2) Symmetric Window	(3) Symmetric with Donut	(4) 2 years Window with Donut
Large Firm	0.004***	0.005	0.006*	0.003
	(0.001)	(0.003)	(0.003)	(0.004)
Jobs Act	-0.010***	0.013**	0.017**	0.009
	(0.003)	(0.006)	(0.006)	(0.009)
Large Firm*Jobs Act	-0.016***	-0.012**	-0.015***	-0.011**
	(0.004)	(0.005)	(0.005)	(0.006)
Observations	54091	14345	13807	7418
Adjusted R^2	0.045	0.046	0.046	0.035

Notes: Each column reports estimates from OLS regression. The dependent variable is *Maternity Leave*. Standard errors clustered at Large Firm*Year-quarter level are reported in parentheses. Baseline controls (as in Table 3, column 5) are included in all specifications. *** p<0.01, ** p<0.05, * p<0.1.

In column (3) we jointly apply the two restrictions used in columns (1) and (2), obtaining findings that are similar with those presented above (-1.5 percentage points). Finally, in column (4) we focus on a symmetric window of two years from hiring before and after the threshold and we exclude individuals hired very near the threshold (-45<=Time<=45). Results are virtually unchanged.[21]

As we have assigned employees to treatment and control groups on the base of their answers to the question regarding the total number of employees in the firm, a possible concern is that employees do not know (or do not remember) the exact number. To tackle this issue and to take into account that the number of firms passing the 15 threshold has increased after the Jobs Act (Boeri and Garibaldi, 2019), we estimate our main specification on alternative samples that exclude some firm size categories that could originate miscalculations. Results are reported in Table 6. More precisely, in column (1) we first exclude observations in which the worker does not know the exact number of employees, but s\he believes that such number is below 10 or above 10. In column (2), starting from the sample used in column (1), we classify as "Small Firms" only firms with 10 employees or less and as "Large Firms" only firms with 20 or more employees, hence excluding the categories of 11-15 employees and 16-19 employees. In column (3) we additionally exclude the category 20-49 and therefore we re-classify as "Large Firms" only firms with a number of employees greater or equal 50. Notably, results in Table 6 indicate that the effect of the Jobs Act on fertility is very similar to that estimated in our main analysis.

[21] We obtain similar results considering a three years' symmetric window.

Table 6. Difference-in-Differences Estimates. Excluding some Firm Size Categories.

	(1) Excluding Not sure but <10 or >10	(2) Excluding also 11-15 & 16-19	(3) Excluding also 20-49
Large Firm	0.004***	0.004***	0.002
	(0.001)	(0.001)	(0.002)
Jobs Act	-0.011***	-0.009***	-0.009***
	(0.002)	(0.003)	(0.003)
Large Firm*Jobs Act	-0.013***	-0.016***	-0.016***
	(0.003)	(0.004)	(0.005)
Observations	53080	44625	36372
Adjusted R^2	0.045	0.046	0.042

Notes: Each column reports estimates from OLS regression. The dependent variable is *Maternity Leave*. Standard errors clustered at Large Firm*Year-quarter level are reported in parentheses. Baseline controls (as in Table 3, column 5) are included in all specifications. *** p<0.01, ** p<0.05, * p<0.1.

As a further robustness check, in Table 7 we exploit the fact that in our particular setting we are able to consider the behavior of women employed in large firms observed in the same period but hired both before and after the Jobs Act Reform, for whom different dismissal rules apply. Therefore, we use only the sample of large firms' employees in the years 2016-2018 and verify if women hired under the Jobs Act have lower fertility rates. Using as control variables those in the specifications (1) to (5) of Table 3, we show that women hired under the new EPL regime are about 2.4 percentage point less likely to have a child.

Table 7. Time-Differences Estimates. Only Large-Firm Employees

	(1)	(2)	(3)	(4)	(5)
Jobs Act	-0.021***	-0.024***	-0.022***	-0.022***	-0.024***
	(0.003)	(0.003)	(0.004)	(0.004)	(0.004)
Observations	11496	11496	11496	11496	11496
Adjusted R^2	0.001	0.035	0.043	0.043	0.043

Notes: Each column reports estimates from OLS regression. The dependent variable is *Maternity Leave*. Standard errors clustered at Large Firm*Year-quarter level are reported in parentheses. Baseline controls (as in Table 3, column 5) are included in all specifications. *** p<0.01, ** p<0.05, * p<0.1.

5. Heterogeneous Responses

In this section we investigate whether the response of fertility to the reduction in EPL differs in relation to a number of individual characteristics.

We first focus on age and split our sample in two different groups, that is below and above the median age. As shown in Table 8, the labor market reform we are examining has an impact on fertility for both age groups, but this is larger for the younger one (-1.7 percentage points). This result is consistent with the hypothesis that younger women face lower time pressure in the family formation decision-making, and thus have potentially greater incentives to postpone childbearing until professional integration or to reduce the number of children to lower child-penalty risks.

Table 8. Heterogeneity by Age (below/above median)

	(1) Age≤38	(2) Age>38
Large Firm	0.007***	0.000
	(0.002)	(0.001)
Jobs Act	-0.008*	-0.004
	(0.004)	(0.003)
Large Firm*Jobs Act	-0.017***	-0.011***
	(0.004)	(0.004)
Observations	30163	24466
Adjusted R^2	0.045	0.018

Notes: Each column reports estimates from OLS regression. The dependent variable is *Maternity Leave*. Standard errors clustered at Large Firm*Year-quarter level are reported in parentheses. Baseline controls (as in Table 3, column 5) are included in all specifications. *** p<0.01, ** p<0.05, * p<0.1.

In Table 9 we look at heterogeneous effects according to marital status, employment status of the partner and parity. In column (1) and (2) we find that the reduction in EPL has affected both married and unmarried women, though the coefficient is statistically significant for unmarried women only. For the subsample of married women, we have built a variable *Husband Employed*, if the husband has a job or not. Interestingly, in column (3) we find that the effect of Jobs Act on a woman's fertility is smaller (0.8 percentage points) and not significant if her husband is employed - perhaps because the increased job insecurity is less problematic in this case - whereas the negative effect is much larger (-4.2 percentage points), although imprecisely estimated (*p*-value=0.14), when the husband is unemployed. This seems to suggest that the increased job insecurity is overwhelming if the household earns only one source of income.

Table 9. Heterogeneity by Marital Status, Husband's Employment Status and Parity

	(1) Unmarried	(2) Married	(3) Husband employed	(4) Husband not employed	(5) Parity 0	(6) Parity 1	(7) Parity 2
Large Firm	0.002*	0.005**	0.004*	0.020***	0.006**	0.002	0.000
	(0.001)	(0.002)	(0.002)	(0.007)	(0.003)	(0.002)	(0.001)
Jobs Act	0.001	-0.024***	-0.026***	0.001	-0.010	-0.020***	0.002
	(0.002)	(0.007)	(0.007)	(0.024)	(0.007)	(0.004)	(0.003)
Large Firm*Jobs Act	-0.010***	-0.012	-0.008	-0.042	-0.029***	-0.003	-0.003
	(0.002)	(0.008)	(0.008)	(0.029)	(0.007)	(0.008)	(0.006)
Observations	24011	30618	27500	2463	22078	18236	14315
Adjusted R^2	0.006	0.044	0.045	0.043	0.044	0.032	0.005

Notes: Each column reports estimates from OLS regression. The dependent variable is *Maternity Leave*. Standard errors clustered at Large Firm*Year-quarter level are reported in parentheses. Baseline controls (as in Table 3, column 5) are included in all specifications. *** p<0.01, ** p<0.05, * p<0.1.

As regards parity, we find a strong effect for women without children - column (5) - and almost no effect for women with one or more children - columns (6) and (7). Given the decline in fertility rate observed in Italy in the last decade, this could derive from the fact that after the first child the probability of having additional children is extremely low and not particularly affected by economic conditions. Importantly, this finding lends further support to the hypothesis that younger women have greater incentives to defer family formation to pursue a professional career.

We also investigate whether there are statistically significant differences between women with different levels of education and between the North and the South part of the country. In the first two columns of Table 10 we run separate regressions for women without and with a College Degree, respectively. We find that the effect is mainly concentrated on women with no tertiary education while there is no effect for women with a College Degree. This could be due to the fact that individuals who have acquired tertiary education are typically from wealthy families and then less affected by job insecurity.[22]

Table 10. Heterogeneity by Education and Geographic Area

	(1)	(2)	(3)	(4)	(5)
	No Tertiary	Tertiary	North	Center	South
Large Firm	0.005***	-0.005	0.004**	-0.001	0.010**
	(0.002)	(0.004)	(0.002)	(0.002)	(0.004)
Jobs Act	-0.003	-0.036***	-0.017***	-0.012	0.003
	(0.003)	(0.007)	(0.004)	(0.008)	(0.008)
Large Firm*Jobs Act	-0.013*	0.004	-0.009*	-0.002	-0.031**
	(0.007)	(0.008)	(0.005)	(0.013)	(0.013)
Observations	42738	11891	34924	11719	7986
Adjusted R^2	0.042	0.052	0.046	0.041	0.053

Notes: Each column reports estimates from OLS regression. The dependent variable is *Maternity Leave*. Standard errors clustered at Large Firm*Year-quarter level are reported in parentheses. Baseline controls (as in Table 3, column 5) are included in all specifications. *** p<0.01, ** p<0.05, * p<0.1.

In columns (3) to (5) of Table 10 we run separate regressions for individuals living in the northern, center and southern regions, respectively. We find that the negative effect of the Jobs Act on fertility is mainly driven by women living in the South (3.1 percentage points). The effect for those living in the North is lower in magnitude (-0.9 percentage points) and significant at the 10% level. This result might be interpreted as evidence in support of the hypothesis that job instability could affect fertility through different expectations on future career prospects: as women working in the South have, *ceteris paribus*, lower employment opportunity than their counterparts in the Center-North and these prospects did not change much in response to the Jobs Act reform, they might have lower expectations about their future protection, and as a result, feel more discouraged to have children by an increase in job insecurity.

Another interesting issue is whether women at different levels of the wage distribution reacted differently to the introduction of the Jobs Act. To this purpose in columns (1) and (2) of Table 11 we run separate regressions for women with wage below and above the median, respectively. Results show that the reduction in fertility rates in concentrated among women with wage lower than the median (-1.7 percentage points), while a statistically insignificant effect is found for women receiving wages above the median. Results are qualitatively similar when we distinguish according to job position (Blue collar, White collar and Manager). As shown in columns (3) and (4) of Table 11, fertility of treated women in blue- and white-collar positions has reduced following the introduction of the Jobs Act,[23] while the estimates in column (5) show that there is no impact for women in managerial positions (only 2,349 observations). Taken together, these

[22] The strong impact that family background produces on the probability of acquiring a College Degree in Italy is documented by several papers, see for instance Checchi et al. (2012) and Pronzato (2012).
[23] Nowadays, many low-income workers are employed in white-collar jobs.

results indicate that the salience of the effect of job insecurity on fertility crucially hinges upon the income level, therefore suggesting that income uncertainty is an important channel whereby employment protection affects fertility.

Table 11. Heterogeneity by Wage Level and Job Position

	(1) Wage<Median	(2) Wage≥Median	(3) Blue-Collar	(4) White-Collar	(5) Manager
Large Firm	0.009***	0.001	0.010***	0.000	-0.000
	(0.002)	(0.002)	(0.002)	(0.002)	(0.008)
Jobs Act	-0.010***	-0.017***	-0.009**	-0.012***	-0.040***
	(0.003)	(0.004)	(0.004)	(0.004)	(0.014)
Large Firm*Jobs Act	-0.017**	-0.006	-0.014	-0.013**	0.016
	(0.008)	(0.005)	(0.011)	(0.005)	(0.020)
Observations	27361	27268	21139	31102	2349
Adjusted R^2	0.051	0.041	0.041	0.047	0.039

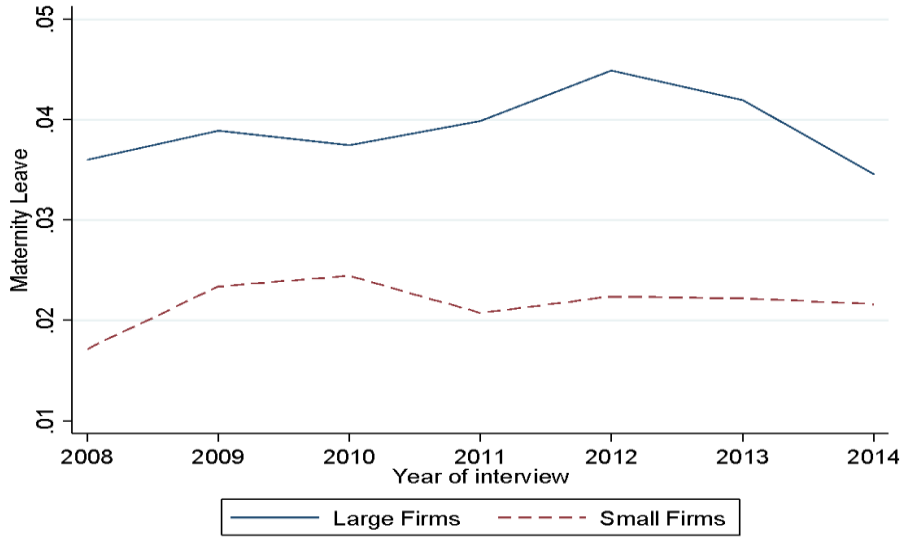
Notes: Each column reports estimates from OLS regression. The dependent variable is *Maternity Leave*. Standard errors clustered at Large Firm*Year-quarter level are reported in parentheses. Baseline controls (as in Table 3, column 5) are included in all specifications. *** p<0.01, ** p<0.05, * p<0.1.

6. Common Trend Assumption and Placebo Tests

A crucial assumption in the Difference-in-Differences estimation strategy is the hypothesis of common trend, that is, treated and control subjects – in the absence of the treatment – would have followed similar trends. While we cannot directly test this assumption since the counterfactual is not observable, in this Section we can verify if before the introduction of the Jobs Act large and small firms' employees were following similar trends in fertility. To do so, in Figure 1, we use data before the introduction of the Jobs Act and plot the percentage of workers on compulsory maternity leave from 2008 to 2014. As shown in the figure, despite the fertility rate being higher for women employed in large firms, the trend followed by large-firm employees (blue solid line) is very similar to that emerging for small-firm ones (red dashed line).

Moreover, to formally test whether treated and control individuals were following similar trends, using the data over the period 2008-2014, we regress our measure of fertility on the dummy *Large Firm* and with a set of interactions between *Large Firm* and all the year dummies. We report the results of this test in Table 12. Intuitively, if some of the interaction terms were statistically significant, this would imply that, before treatment, fertility decisions of treated women followed a different pattern compared to controls and this would cast some doubts on our conclusions.

Figure 1. Common Trend: Fertility Rates for Large and Small Firms' Employees before the Jobs Act



Notes: Percentage of women on compulsory maternity leave from 2008 to the end of 2014 in large (blue solid line) and small firms (red dashed line).

The estimates in Table 12 indicate that large-firm employees have a higher fertility rate of about 2 percentage points in 2008, but along time there is no evidence of different trends for women employed in large and in small firms since the interactions between *Large Firm* and the year dummies are typically not significant. More precisely, we test with an F-test for the joint significance of all the interaction terms and we are not able to reject the null of no differential effect (p-value around 0.20). These results reassure us that the assumption of parallel trends between workers in treated and control group is appropriate for our analysis.

Table 12. Parallel Trends for Large and Small Firms' Employees in the Pre-Jobs Act Period

	(1)	(2)	(3)	(4)
Large Firm	0.022***	0.019***	0.017***	0.017***
	(0.003)	(0.003)	(0.003)	(0.003)
Large Firm*y2009	-0.002	-0.002	-0.002	-0.002
	(0.004)	(0.004)	(0.004)	(0.004)
Large Firm*y2010	-0.007*	-0.007*	-0.007*	-0.007*
	(0.004)	(0.004)	(0.004)	(0.004)
Large Firm*y2011	0.001	0.001	0.001	0.001
	(0.004)	(0.004)	(0.004)	(0.004)
Large Firm*y2012	0.002	0.003	0.002	0.002
	(0.004)	(0.004)	(0.004)	(0.004)
Large Firm*y2013	-0.001	-0.001	-0.001	-0.001
	(0.004)	(0.004)	(0.004)	(0.004)
Large Firm*y2014	-0.008*	-0.006	-0.006	-0.006
	(0.004)	(0.004)	(0.004)	(0.004)
Observations	187319	187319	187319	187319
Adjusted R^2	0.003	0.022	0.023	0.023
F-test	0.213	0.213	0.209	0.207

Notes: Each column reports estimates from OLS regression. The sample is from 2008Q1 to 2014Q4. The dependent variable is *Maternity Leave*. Robust standard errors are reported in parentheses. Baseline controls (as in Table 3, column 5) are included in all specifications. *** p<0.01, ** p<0.05, * p<0.1.

Finally, as a further robustness check, considering data for the period before the introduction of the Jobs Act, we run three placebo tests, and assume that a fictitious reform was introduced in January 2010 or January 2012 or January 2014. We build three dummy variables, *Fake Jobs Act 2010*, *Fake Jobs Act 2012*, *Fake Jobs Act 2014* and the respective interactions with *Large Firm*. In Table 13 we run three regressions for the three fictitious reforms, respectively. Results in columns (1) to (3) show that the interaction terms are not far from zero and are never statistically significant. This again confirms that our estimated effect of the Jobs Act Reform on fertility is not a spurious correlation.

Table 13. Placebo Tests. Verifying the Impact of Three Fictitious Reforms

	(1)	(2)	(3)
Large Firm	0.016***	0.015***	0.016***
	(0.002)	(0.001)	(0.001)
Fake Jobs Act 2010	0.008**		
	(0.004)		
Large*Fake Jobs Act 2010	-0.001		
	(0.002)		
Fake Jobs Act 2012		0.007*	
		(0.004)	
Large*Fake Jobs Act 2012		0.001	
		(0.002)	
Fake Jobs Act 2014			0.010**
			(0.004)
Large*Fake Jobs Act 2014			-0.005
			(0.004)
Observations	179899	179899	179899
Adjusted R^2	0.024	0.024	0.024

Notes: Each column reports estimates from OLS regression. The sample is from 2008Q1 to 2014Q4. The dependent variable is *Maternity Leave*. Robust standard errors are reported in parentheses. Baseline controls (as in Table 3, column 5) are included in all specifications. *** p<0.01, ** p<0.05, * p<0.1.

7. Concluding remarks

In many advanced countries the fertility rates have declined over time and are now dramatically low. In Italy, the fertility rate is around 1.4, well below the population replacement rate of 2.1. The decline in fertility rates could be associated with increased participation rates of women in the labor market coupled with a growing instability of jobs and a marked decline of job security.

In this paper we have investigated a specific aspect of this tendency, that is, we have explored the consequences of a reduction in the degree of Employment Protection Legislation on the fertility decisions of women. To this aim, we have exploited a natural experiment represented by a recent reform in the Italian Labor Market ("Jobs Act") that has substantially reduced the employment protection enjoyed by new hires in large firms (abolishing the reinstatement clause for unfair dismissals) but has left largely unchanged the protection for small firms' employees.

We employ a Difference-in-Differences estimation strategy and compare the variations over time in fertility rates of women employed in large firms with the analogous variations for small firms' employees.

We document that the fertility rate of treated women has reduced of about 1.4 percentage points more than that of women hired in small firms.

This result remains robust when in our regressions we control for a large set of predetermined individual characteristics and when we restrict the sample to compare women with more similar characteristics in terms of tenure. Furthermore, the result holds true when we focus on different symmetric windows, in terms of employees' hiring date, around the time of introduction of the Reform.

We also document large heterogeneous effects by marital status, parity and geographic residence, as well as by the level of education and wage. All in all, this evidence shows stronger effects for more vulnerable individuals, i.e., for women employed in low paying jobs and with a low level of education. Larger effects are instead found for women whose husbands are unemployed.

Finally, in order to reassure about the internal validity of our estimation strategy we carry out an analysis of the common trend assumption considering the fertility decisions of women in small and large firms in the recent past (2008-2014) and conduct some placebo tests.

One potential caveat of our analysis is that, since we do not observe individuals' working histories, we are not able to disentangle the overall impact of the reform on some specific sub-groups of workers (such as those previously employed through fixed term contracts or unemployed) who might have instead benefited from other changes that have been simultaneously introduced by the Jobs Act, namely the subsidy for new hirings with open ended contract and the new labor contract with graded security. Nevertheless, our difference-in-differences estimates provide an average effect of the reform on workers' fertility.

Our results are in line with the findings of Modena et al. (2013) that show that most of the Italian couples were discouraged to have (more) children because of employment instability and the related income insecurity.

Overall, these results shed light on the unintended consequences that labor market reforms introducing more flexibility may have on fertility by increasing insecurity on career prospects and suggest that policies aimed at increasing fertility should be coupled with adequate labor market policies. Clearly, our findings are relevant especially for Southern European countries that have both fertility rates and labor markets similar to the Italian ones.

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