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MOM'S OUT: EMPLOYMENT AFTER CHILDBIRTH
AND FIRM-LEVEL RESPONSES

by Francesca Carta*, Alessandra Casarico†, Marta De Philippis‡ and Salvatore Lattanzio§

Abstract

This paper explores how firms respond to women leaving work after childbirth. As a shifter in mothers' quits, we use a reform that extended the duration of the unemployment benefits for which Italian mothers are eligible if they resign within 12 months of giving birth. We find that, over a three-year term, mothers have higher quit and non-employment probabilities, whereas layoffs decrease slightly. Firms employing women who are more likely to leave work after childbirth display significantly higher net hiring and turnover rates, especially of young women. The growth in female hiring mainly involves temporary contracts, indicating potential statistical discrimination impacting job quality for women.

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1 Introduction[1]

Despite the progress made in recent decades in women's labour market participation and career prospects, significant gender gaps remain. Motherhood has always been recognised as a key experience influencing women's labour market participation (Becker, 1991, 1985). The literature documents that women still face significant child penalties, mainly due to fewer hours worked and higher exit rates from the labour force after childbirth (Kleven et al., 2019a,b). Less is known about how firms adjust their hiring strategies when a mother quits or whether some form of statistical discrimination against women of childbearing age emerges in response to their higher probability of leaving employment after childbirth.

This paper investigates how firms respond to the exit of mothers from the labour market after childbirth. Specifically, we evaluate whether an increase in the likelihood of women leaving the firm after maternity induces employers to change their hiring strategy and to statistically discriminate against women of childbearing age, for instance changing wages or the quality of jobs offered. To address these questions, we build upon a feature of the Italian welfare system that allows women to access unemployment benefits in case of voluntary resignation within 12 months after giving birth, and not only in case of dismissal. By exploiting a policy that increased the potential duration of unemployment benefits (UB), we obtain an exogenous shifter in the incentives of new mothers to quit their jobs.[2]

From a theoretical standpoint, the extension of UB duration can yield different effects for mothers and firms in both the short and medium terms. In the short term, the increased income support during periods of unemployment may incentivise mothers to voluntarily resign, consequently reducing maternal employment rates. For firms, higher turnover among mothers may increase labour costs owing to hiring and training expenditures. Over the medium term, the repercussions on mothers' attachment to the labour market may endure, potentially impeding their human capital accumulation and

[2] Italy is a relevant case to study as the child penalty borne by mothers is large and it primarily stems from changes in the labour supply of mothers after childbirth on both the extensive margin, through higher exit rates from employment, and the intensive margin, through lower number of hours and weeks worked while employed (Casarico and Lattanzio, 2023; De Philippis and Lo Bello, 2022).

diminishing their future employment prospects. Nevertheless, the prolonged duration of benefits might prompt mothers to extend their job search, potentially leading to positive outcomes such as better worker-employer matching. This could foster positive effects at the firm level in terms of productivity and match stability. Determining which effects prevail is an empirical question.

We investigate the impacts of changes in the incentives to quit at the individual and the firm level up to three years after childbirth, using monthly matched employer-employee administrative data from the Italian National Social Security Institute (INPS) on the universe of employees in the private non-agricultural sector.

Our study focuses on mothers who gave birth between January 2013 and December 2015, and on the firms that employed them at the time of childbirth. To identify causal effects, we exploit a reform of the Italian UB system, that took place in May 2015 and changed the method of calculating the benefit duration. Before the reform, all workers under the age of 50 were entitled to an 8-month benefit duration. Post-reform, this duration became contingent upon the number of weeks of contributions made within the last four years before job separation. We therefore estimate, in an event study around childbirth, a difference-in-differences model, which compares the outcomes of more or less treated firms (i.e., those that employ a larger/smaller share of new mothers who quit because of the policy), before and after the reform. We study the effects of the policy on both mothers' employment outcomes (i.e., probability of quit, layoff, non-employment) and firms' margins (i.e., hires, separations, average employees' wages and types of contract by age and gender).

To identify firms with the largest increase in mothers' quit rates it is crucial to figure out the group of mothers who experience the largest response to the policy change. The size of the response will depend on the magnitude of the shock to the potential UB duration and on the elasticity of labour supply, which are negatively correlated in our setting. Indeed, shifts in potential UB duration are larger the more continuous mothers' work history is. At the same time, a strong attachment to the labour market — associated with low labour supply elasticity — limits the response to the policy. For example, mothers experiencing the largest reform-induced increase in UB duration may have a low probability of leaving employment after childbirth, even under more generous unemployment benefits, due to their stronger attachment to the labour market. On the contrary, mothers with very discontinuous work histories might be very responsive to the policy but are scarcely impacted by the reform. Thus, we expect the labour supply response to be concentrated on mothers in the middle of the distribution of the reform-induced increase in potential UB duration. Mothers at the bottom and the top of the distribution might be, instead, a suitable control group. Note however that firms employing mothers with very little increase in the UB duration have very different characteristics — they are smaller and employ a higher proportion of part-time and temporary workers — and are

on different pre-birth trends compared to other firms. Consequently, we exclude mothers in the first quartile, and firms employing them at the time of childbirth, from the analysis, and we use mothers in the fourth quartile, and firms employing them, as control group. We conduct robustness checks to validate this sample selection.

We find that the reform induced an increase in mothers' quit rates from the end of mandatory maternity leave (around three months after birth) until the child reaches one year of age, when the mother loses access to unemployment benefits following a voluntary resignation. We detect an impact on layoffs, which decline in the medium term, underscoring the presence of substitution effects between quits and layoffs. However, the decline in the layoff probability amounts to approximately one-third of the increase in the quit rate of mothers, indicating that firms employing mothers more responsive to the reform experience heightened turnover and are not entirely substituting voluntary quits with layoffs. Overall, the non-employment probability increases among treated mothers, remaining roughly 14 percent higher 36 months post-childbirth. Resignations imply therefore a permanent departure from employment rather than simple transitions between jobs.[3]

In response to the heightened turnover among new mothers, we observe a corresponding increase in the net hiring of both female and male workers in treated firms, though the increase is statistically significant only for women after three years. Specifically, we find that treated firms increase the cumulative net hiring rate of new female workers by approximately 6 percent and that of new male workers by less than 3 percent. The effects are particularly concentrated among young female workers, who are more likely to be substitutes for new mothers due to their gender and age proximity. Looking at the adjustment margins, our analysis reveals that more exposed firms significantly increase both hires and separations of young female workers. The surge in hires for women is primarily driven by temporary contracts. Notably, the increase in the proportion of temporary female workers within firms persists over the observed time frame, indicating that these temporary positions do not transition into permanent jobs, but instead result in more separations and higher turnover rates among women. Conversely, we do not detect any effect on coworkers' average wages or days worked.

Our findings suggest limited substitutability between young men and women, as firms respond to the higher quit rate of mothers by hiring more women than men. Since this surge in female hires pertains to temporary positions that are not converted into permanent ones, we interpret our findings as indicative of statistical discrimination against

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[3]The effects refer mostly to mothers with permanent contracts, who are the majority in our sample. Indeed, the reform changed very little the incentives for workers with temporary contracts, who cannot voluntarily quit their jobs (unless in special cases justified by specific reasons) and, having more discontinuous working lives, experience smaller increases in potential UB duration. Moreover, mothers are more likely to have a permanent contract, as the literature indicates a positive correlation between permanent employment, job security in general, and fertility (see, for instance, Clark and Lepinteur, 2022; Lopes, 2020; Nieto, 2022; Prifti and Vuri, 2013)

women of childbearing age, resulting in lower job quality. The adjustment along the contract duration margin — rather than along the wage dimension, for instance — is consistent with the UB reform acting as a shock to the turnover rate: firms anticipate maintaining employment relationships with mothers for a specific duration, which may be shortened by the reform. Consequently, employers adjust by modifying the duration of contracts and re-optimising their production function to accommodate the employment of women with high turnover rates.

Our paper contributes to several strands of the literature. First, the policy that we study can be seen as a significant extension of leave rights without job protection, but with a high replacement rate (75 percent of previous earnings). Thus, we speak to the literature that examines the effects of parental leave characteristics (e.g., duration, replacement rate and degree of job protection) on mothers' employment, wages and careers (see, among others, Corekcioglu et al. (2022); Kluve and Tamm (2013); Lalive and Zweimüller (2009); Schönberg and Ludsteck (2014)). We focus on the same reform as Zurla (2022), but use a different identification strategy and zoom in on firms' responses rather than the long-term outcomes of mothers, thus distinguishing our analysis from hers. The literature focusing on the impact of leave policies on firms and coworkers is more limited, with contrasting results on the presence and the size of costs for firms due to mothers' absence. Huebener et al. (2024) look at an extension of parental leave that took place in Germany and focus on firms with up to 50 employees. They find small and short-term negative effects on firms' employment and total wage bill. Also Brenøe et al. (2024) find little evidence of a negative impact of female employees giving birth and taking leave on coworkers' and firms' outcomes. Minimal effects on firms and coworkers of a Danish parental leave extension reform are also found by Gallen (2019). On the contrary, Ginja et al. (2023) show that firms bear adjustment costs to cope with the absence of employees. Exploiting a three-month extension of parental leave in Sweden, they find that firms incur additional wage costs, the magnitude of which depends on the availability of workers' substitutes. This evidence is also consistent with Schmutte and Skira (2023), who — using administrative data for Brazil — show that hiring replacement workers is costly. These contrasting effects on the magnitude of the costs at the firm level may depend on different labour markets and welfare state institutions, or on different social and gender norms. While these papers focus on the effect of parental leaves, which usually leads to a temporary absence of mothers from their jobs, the policy that we study provides incentives for mothers to quit, implying permanent job separations. The effects we estimate at the firm level may therefore be different from the previous literature, and more similar to what happens when mothers actually decide to exit the labour market after childbirth (not just to take more leave). In addition, we look separately at the impacts on different margins of employment adjustment by gender, which is not the main focus of most of the above-mentioned papers.

Second, we contribute to the small literature estimating how public policies can have unintended consequences and increase rather than decrease statistical discrimination against women.[4] Statistical discrimination is usually difficult to detect because the expectations of all firms are affected equally by a policy change and causal research designs may be difficult to implement. Fernández-Kranz and Rodríguez-Planas (2021) analyse the impact of a policy aimed at protecting jobs and providing more flexibility for parents (the right to work part-time), and show that the policy backfired, given the gendered take-up.[5] Thomas (2021) finds that mandated maternity leave increases the likelihood of mothers remaining employed, but reduces their likelihood of being promoted. Although we focus on a policy that supports income but does not protect mothers' jobs, we are equally interested in exploring the link between the policy and statistical discrimination in the data.

Finally, we speak to a growing literature that examines employers' ability to replace workers when they leave the firm. Sauvagnat and Schivardi (2023) focus on the substitution of managers; Jäger and Heining (2022) look more broadly at workers. Both papers exploit sudden deaths to measure productivity and substitutability. We look at mothers' quits associated with childbirth. Although they cause a permanent separation from the employer (like deaths), birth-related absences/quits can be anticipated by firms, allowing them to plan and react earlier at a lower cost. We show that substitutability between men and women is limited, with mothers being replaced by other young women, albeit on temporary contracts.

The rest of the paper is organized as follows. In Section 2 we describe the policies intended to support new mothers, the UB system and the reform used in the empirical analysis. Sections 3 and 4 describe the data and explain our empirical strategy, respectively. Section 5 reports our individual and firm-level results. Finally, Section 6 concludes.

2 The Institutional Setting

2.1 The Parental Leave and Childcare Systems

In Italy, mothers are entitled to five months' compulsory maternity leave, which can be taken two (one) months before the birth and three (four) months after.[6] Compulsory maternity leave is paid by the National Social Security Institute (INPS) at 80 percent of

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[4]Bjerk and Han (2007) and Casarico et al. (2023) develop theoretical models showing how cash transfers to families and maternity leaves, respectively, can reinforce statistical discrimination.

[5]Machado et al. (2023) analyse a voluntary government-funded program increasing the duration of paid maternity leave in Brazil, and show that firms and workers strategically defer job separations to extract rents from the government.

[6]In the most recent years, not included in our empirical analysis, there is also the option of taking all the 5-month entitlement after childbirth.

the last earnings and many collective agreements require employers to pay the remaining 20 percent.

At the end of the mandatory maternity leave, parents are entitled to a voluntary parental leave of 10 months, 6 of which are paid at 30 percent of the last earnings and the rest at zero percent.[7] Each parent can take a maximum of 6 months of leave.[8] According to data provided by OECD (2023), the use of parental leave is rather low in Italy in comparison with other developed countries; moreover, approximately 80 percent of users are women. The low replacement rate helps explain both the low take-up and the fact that women are the main users of the leave. Indeed, it is more convenient to forgo the lower wage in the family, usually that of women, as they are more likely to be secondary earners.

A compulsory paternity leave was introduced in 2012: it was just 1 day in 2013, and it increased to 4 days in 2018 (currently it is 10 days). The length of the leave is much lower compared to those in other developed countries (OECD, 2023).

Finally, the supply of childcare facilities for 0-2-year-olds is rather limited in Italy. According to Istat (2022), the average coverage rate — the number of (both public and private) childcare places for 100 0-2-year-olds — is 27.2 percent, which is still below the target of 33 percent set by the European Council in 2002. Moreover, there is great geographical heterogeneity in the provision of childcare services: the coverage rate in northern and central regions is more than double that in the southern regions. It ranges from 40.8 percent in Emilia-Romagna to 11.0 percent in Campania.[9]

2.2 The Unemployment Benefit System

Access to UB is usually only granted in case of dismissal. However, in some countries (e.g., Germany, Sweden and Denmark), unemployment benefits are granted also to workers who quit for family reasons, without any reduction or penalty in the amount or duration of the benefit (Langenbucher, 2015; Venn, 2012). Similarly, in Italy, since 1971, there has been a specific provision for mothers that allows them to access UB also in the case of resignation within the first year of a child's life.

The Italian UB system has undergone major reforms in the last decade. The main objectives of these reforms were to guarantee universal access to UB based on contribution

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[7]These are the rules that applied to parents of children under 3 years of age between 2013 and 2018, the period we analyse. In August 2022, the number of months of paid leave increased to 9: 3 months for each parent that cannot be transferred to the other, and 3 months that can be shared between parents.

[8]Fathers that take at least 3 months of leave are entitled to get maximum 7 months of leave rather than 6 — for a total of 11 months considering both parents.

[9]Fees are also rather high. According to some recent estimates, in Italy an average family composed of two working adults and one child under 3 pays 303 euros per month for a full-time place in a public nursery (Cittadinanzattiva, 2018); the cost in private nurseries is higher, on average approximately 500 euros per month. Private places represent around 50 percent of the overall supply of childcare services. Also for tariffs, there is a large geographical heterogeneity, which reflects the North-South divide.

criteria and to increase their generosity. The option for mothers to resign and access UB has not been changed by the reforms that have taken place, but the economic convenience of using it depends on the generosity of the UB transfer.

The reform we exploit in the empirical strategy introduced a new UB system called NASpI (*Nuova Assicurazione Sociale per l'Impiego*). It was enacted by Legislative Decree no. 22 of 4 March 2015 (the so-called *Jobs Act*). While the reform did not change the replacement rate, which remained at 75 percent of the average wage in the last 2 years with a cap, it changed several other features of the previous UB system (which relied on two instruments, called ASpI and Mini-ASpI). First, the new system eliminated the previous fragmentation and provided for only one instrument to address unemployment. Second, the eligibility criteria were slightly relaxed to require 13 weeks of work in the last 4 years and 30 days of work in the last 12 months before the contract was terminated. Before it was required either *i)* to have contributed for at least 2 years and to have worked at least 12 months in the 2 years before the layoff (ASpI) or *ii)* to have worked for at least 13 weeks in the last 12 months before unemployment (Mini-ASpI). Third, the main change concerned the duration of the benefit, which was set at 50 percent of the contribution weeks in the last 4 years before the job termination, up to a maximum of 24 months. With the previous system, the duration was set to 8 months for individuals younger than 50 and to 12 months for older individuals (for individuals under ASpI) or to 50 percent of the weeks of contribution in the previous 12 months (for individuals under Mini-ASpI). This significant extension of the duration of UB increases the expected value of unemployment for mothers, thus augmenting the incentives to quit. This could have an impact on firm turnover and related costs.

3   The Data

We leverage monthly administrative data provided by INPS on the universe of employees in the private non-agricultural sector, for the period 2013-2018. We merge different data sources: *i)* monthly contribution records on workers' histories (containing information on wages, weeks worked, occupation, type of contract, its start and end dates, and the reason for termination),[10] and demographic characteristics (gender, age, region of birth); *ii)* monthly records on firms (containing information on sector and location); *iii)* information on childbirth episodes for working mothers.

We select a sample of women who gave birth to their first child between January 2013 and December 2015, and follow them 6 months before and 36 months after childbirth.

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[10]The availability of the reason for contract termination is crucial for our purposes, as it allows us to distinguish voluntary quits from layoffs. However, we also exploit the panel structure of the data and identify non-employment spells as months in which the worker is not employed by any firm. A dummy for workers who quit their job and for those in non-employment are the main outcomes of the worker-level analysis, together with a dummy for whether the worker is laid off.

We keep a balanced sample of mothers (and firms employing them), including periods of employment and non-employment. In the firm-level analysis, we consider firms in which the selected mothers — those who gave birth between January 2013 and December 2015 — worked 4 months before childbirth. We focus on firms with less than 35 employees, which represent around 97 percent of firms and employ 48 percent of workers in the Italian private sector. The restriction to small firms is not uncommon in the literature that investigates the effects of employees turnover on firm outcomes (e.g., Brenøe et al., 2024; Jäger and Heining, 2022). There are two main reasons for focusing on firms with less than 35 employees. First, most mothers' quits in any given year happen in small firms.[11] Second, the effect of an employee's separation on firm-level outcomes decreases with firm size, so it would be difficult to detect it in larger employers.

4 Empirical Strategy

4.1 Reform Induced Variation in the Duration of UB

Our main objective is to examine how firms react to mothers quitting their jobs after giving birth. To accomplish this, we exploit the 2015 reform, which significantly extended the duration of UB, as an exogenous shifter of mothers' exit. Specifically, for each mother with a child under one year of age (new mother) in the sample, we compute the change in the potential duration of the UB due to the reform, based on the information on their work history. We measure the exposure to the reform with the time-invariant variable Z_i, i.e.:

$$Z_i = Z_i^{Post} - Z_i^{Pre}, \tag{1}$$

where Z_i^{Post} and Z_i^{Pre} are the UB potential benefit durations for mother i 4 months before childbirth, computed according to the post and pre-reform rules, respectively.[12] We fix the variable at event time -4 months to childbirth, before mothers leave work for the compulsory maternity leave.[13]

The response of mothers to the extended potential duration of UB hinges not only on the magnitude of the increase in Z_i but also on the elasticity of their labour supply — that is, how they react to shifts in monetary incentives to work. Given that the increase in Z_i depends heavily on the number of contribution weeks paid in the last four years,

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[11] As an example, the report for the year 2016 by the Italian Labour Inspectorate on voluntary resignations after childbirth shows that almost 72 percent of resignations happen in firms with less than 50 employees (and 55 percent in firms with less than 15 employees).

[12] Specifically, $Z_i^{Pre} = 208$ days (8 months considering a working month of 26 days). $Z_i^{Post} = 0.5 \times \widetilde{L}_i$, where $\widetilde{L}_i$ is the number of days worked in the previous 4 years.

[13] Figure A.1 reports the distribution of Z_i. For most mothers, the reform results in a large and heterogeneous expansion in the duration of the UB.

the mothers most affected — those with less fragmented working lives and better jobs — are also the ones whose labour supply is least likely to respond to changes in monetary incentives to work. Conversely, women with more fragmented work histories, whose labour supply is presumably more responsive to changes in monetary incentives, experienced smaller increments in the potential duration of UB. Consequently, we anticipate an inverted U-shaped response to the policy change, with a more pronounced effect among women with intermediate levels of labour market attachment. These women experience a substantial change in the duration of UB after the reform and have a sufficiently high labour supply elasticity. Given our primary aim to study firms' reactions, pinpointing mothers with the most significant impact in terms of increases in voluntary separations enables us to identify firms with the most substantial change in their workforce turnover.

Table 1 reports descriptive statistics on mothers belonging to different quartiles of the reform-induced change in UB duration (Z_i of equation 1). The table reveals differences among women in each group both in the pre-reform (columns 1-4) and post-reform (columns 5-8) periods. Specifically, women in the fourth quartile are more likely to hold permanent positions and work full-time, whereas those in the first quartile tend to have more fragmented work histories, and are more likely to work part-time and in temporary jobs. Women in the intermediate quartiles exhibit characteristics more akin to those in the fourth quartile.

Figure 1, panel (a), displays the difference in the cumulative quit probability of mothers around childbirth before and after the 2015 reform across the four quartiles. This simple descriptive evidence indicates that the reform led to an increase in the likelihood of mothers quitting after giving birth. Specifically, the upward trend in cumulative quits starts approximately three months after giving birth, coinciding with the end of mandatory maternity leave. This trend then escalates, stabilizing around twelve months after childbirth, as mothers cease to be eligible for UB when quitting as soon as their child reaches one year of age. Importantly, the increase in the probability of quitting is heterogeneous: as expected, it is more pronounced for mothers situated in the middle quartiles of the reform-induced extension in the duration of UB, while less pronounced for women at the extreme quartiles of the distribution. As previously discussed, women in the first quartile undergo minimal changes in their UB duration, while the response observed for mothers in the top quartile is consistent with the fact that they exhibit low labour supply elasticity.

Mothers in Q1 and Q4 may both serve as suitable control groups for our analysis. However, since our primary focus is on firm response, selecting the most appropriate control group entails examining the characteristics of firms employing mothers from different quartiles of Z_i. Table 2 presents descriptive statistics on these firms, revealing differences between groups in both the pre-reform (columns 1-4) and post-reform (columns 5-8) periods. Specifically, firms in the first quartile have a smaller male workforce and markedly

Table 1: Summary statistics of new mothers

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| | | Pre-reform | | | | Post-reform | | |
	Q1	Q2 and Q3	Q4	Total	Q1	Q2 and Q3	Q4	Total
Age	30.36	32.20	32.65	31.84	30.50	32.48	32.97	32.12
Centre-North	0.70	0.84	0.91	0.82	0.66	0.80	0.89	0.79
South	0.30	0.16	0.09	0.18	0.34	0.20	0.11	0.21
Industry	0.27	0.32	0.28	0.30	0.26	0.29	0.27	0.28
Services	0.73	0.68	0.72	0.70	0.74	0.71	0.73	0.72
Experience	8.55	11.45	11.89	10.83	8.66	11.70	12.38	11.12
Full-time	0.57	0.72	0.83	0.71	0.52	0.69	0.81	0.68
Permanent	0.87	0.97	0.99	0.95	0.85	0.97	1.00	0.95
White-collar	0.42	0.59	0.85	0.61	0.39	0.54	0.84	0.58
Manager	0.00	0.01	0.02	0.01	0.00	0.01	0.01	0.01
Monthly wage	867.72	1173.69	2033.89	1296.38	812.51	964.20	1860.42	1164.54
Daily wage	75.26	90.59	80.00	84.17	65.87	82.12	73.10	75.47
Days worked	15.66	17.40	25.67	18.88	16.45	16.27	25.56	18.78
Quit rate	0.31	0.20	0.13	0.21	0.34	0.26	0.15	0.25
Layoff rate	0.14	0.09	0.05	0.09	0.13	0.07	0.04	0.08
Separation rate	0.56	0.33	0.20	0.36	0.59	0.37	0.21	0.38
N mothers	9275	19129	8573	36977	4209	8197	4489	16895

Notes: Observables measured 4 months before childbirth. Quit rates, firing rates and separation rates are computed as the quit/layoff/separation probability over the entire period between 6 months before and 36 months after childbirth. Q1 refers to women in the lowest quartile of the distribution of change in UB potential duration; Q2 and Q3 refer to women in the second and third quartiles of the same distribution; Q4 refers to those in the highest quartile.

higher proportions of part-time and temporary workers among both men and women. Conversely, firms in the remaining three quartiles display greater similarity in these characteristics. Additionally, Figure 1, panel (b), illustrates divergent pre-childbirth trends among firms in the first quartile compared to those in the other quartiles, in one of our primary outcomes of interest: cumulative female net hires. The figure depicts differences in the firm-level cumulative net hires of female workers around childbirth before and after the 2015 reform for each quartile. It reveals that while firms in the last three quartiles exhibit similar behaviour before childbirth, those in the first quartile deviate significantly.

For these reasons, in our analysis, we designate mothers in the second and third quartiles of the change in UB duration, along with the firms employing them, as our treated group. Conversely, we use mothers in the fourth quartile, and firms employing them, as our control group. We exclude women belonging to the first quartile of the Z_i distribution from our primary analysis. Section 5 addresses the robustness of our findings concerning this selection.[14]

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[14]In our selected firms, there are, on average, 1.1 maternity episodes occurring in the considered period. Childbirths by different mothers occurring in the same firm are treated as different maternity episodes. Results are robust to the exclusion of firms with multiple childbirth events.

Figure 1: Individual and firm-level outcomes by quartile of predicted change in UB duration

(a) Cumulative mothers' quit rate

(b) Cumulative firms' female net hires
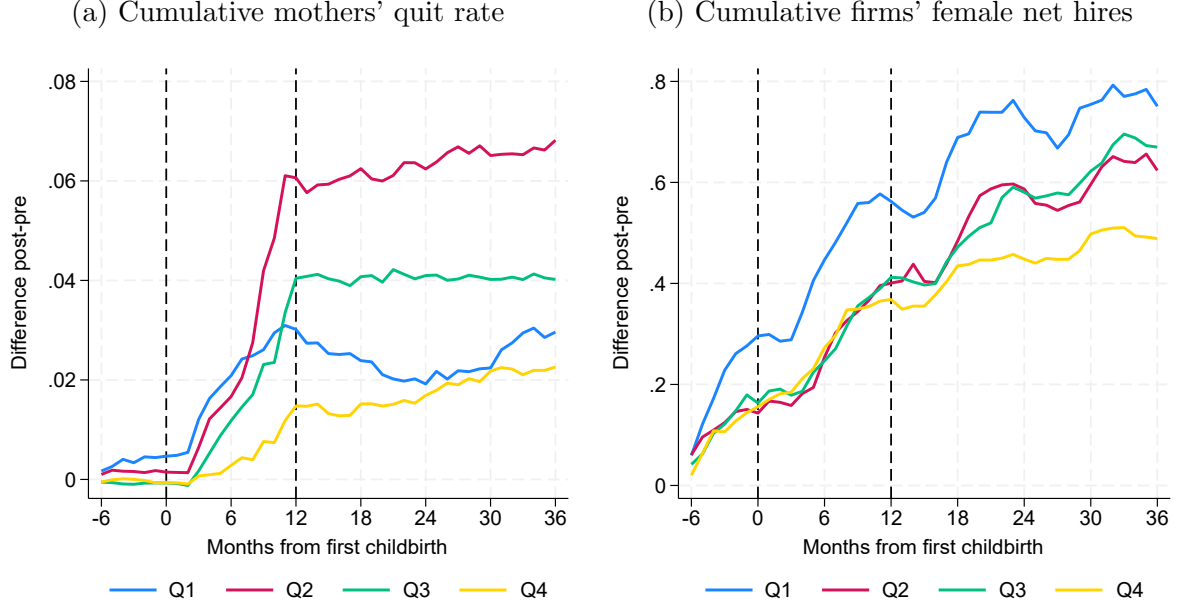
Notes: Panel (a) reports the change in the cumulative probability of quitting among new mothers who gave birth after the UB reform relative to the period before, between 6 months before until 36 months after childbirth, by quartile of the distribution of the reform-induced change in UB duration. Panel (b) reports the change in cumulative female net hires of firms employing new mothers who gave birth after the UB reform relative to those employing mothers giving birth in the period before, between 6 months before and 36 months after childbirth, by quartile of the distribution of the reform-induced change in UB duration.

4.2 Empirical Model

We estimate our effects of interest in an event-study specification around childbirth. Specifically, we analyze the difference in the evolution of outcomes for mothers with different increases in the UB duration before and after the reform, and for firms employing them (therefore, we estimate a dynamic triple difference model).

The reduced-form specification we estimate is as follows:

$$
\begin{aligned}
y_{ist} =& \boldsymbol{\beta} \boldsymbol{D}_{ist}^{Event} \cdot Post_t \cdot T_i + \boldsymbol{\alpha}^P \boldsymbol{D}_{ist}^{Event} \cdot Post_t + \boldsymbol{\alpha}^Z \boldsymbol{D}_{ist}^{Event} \cdot T_i \\
& + \boldsymbol{\alpha} \boldsymbol{D}_{ist}^{Event} + \boldsymbol{\eta} Post_t \cdot T_i + \boldsymbol{\gamma} \boldsymbol{D}_{ist}^{Ind} + \boldsymbol{\delta} \boldsymbol{D}_{ist}^{Time} + \omega_{ist},
\end{aligned}
\tag{2}
$$

where y_{ist} is a dummy variable equal to 1 for all the calendar months t after mother i quits/is laid-off or when mother i is non-employed at time-to-childbirth s; $Post_t$ indicates whether time t is after the introduction of the NASpI (May 2015); T_i is an indicator for whether women belong to the second and third quartile of the change in UB duration (Z_i); $\boldsymbol{D}_{ist}^{Event}$ is a full set of event time dummies from month $s = -6$ to $s = 36$ relative to childbirth, excluding period $s = -1$; $\boldsymbol{D}_{ist}^{Ind}$ and $\boldsymbol{D}_{ist}^{Time}$ are full sets of individual and calendar time dummies; ω_{ist} is an error term clustered at the individual level.

Table 2: Summary statistics of firms employing new mothers

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| | | Pre-reform | | | | Post-reform | | |
	Q1	Q2 and Q3	Q4	Total	Q1	Q2 and Q3	Q4	Total
				Panel A: Male workers				
Employment	4.60	5.31	5.92	5.27	4.67	5.07	6.02	5.22
Cumulative hires	0.47	0.32	0.26	0.35	0.70	0.44	0.34	0.48
Cumulative separations	0.39	0.28	0.22	0.30	0.43	0.30	0.25	0.32
Avg. log monthly wages	7.35	7.56	7.71	7.55	7.25	7.46	7.64	7.46
Avg. days worked	20.95	22.97	24.10	22.73	20.01	22.44	23.78	22.19
Share part-time	0.23	0.13	0.08	0.15	0.31	0.18	0.11	0.19
Share white-collar	0.28	0.35	0.42	0.35	0.28	0.33	0.43	0.34
Share temporary	0.14	0.10	0.07	0.10	0.14	0.11	0.08	0.11
Observations	8832	17712	8216	32952	4120	7891	4384	16016
				Panel B: Female workers				
Employment	5.54	5.59	4.75	5.38	5.14	5.60	4.80	5.27
Cumulative hires	0.68	0.49	0.30	0.49	0.86	0.62	0.41	0.63
Cumulative separations	0.54	0.37	0.23	0.38	0.55	0.39	0.24	0.39
Avg. log monthly wages	7.14	7.33	7.46	7.31	7.03	7.24	7.41	7.23
Avg. days worked	17.99	19.71	20.53	19.47	17.31	19.38	20.38	19.13
Share part-time	0.46	0.39	0.37	0.40	0.53	0.43	0.38	0.44
Share white-collar	0.42	0.54	0.72	0.55	0.41	0.50	0.71	0.54
Share temporary	0.17	0.13	0.09	0.13	0.18	0.14	0.11	0.14
Observations	8832	17712	8216	32952	4120	7891	4384	16016

Notes: Observables measured for all coworkers of mothers in the pre- and post-reform periods, 4 months before childbirth. Cumulative hires and separations refer to the average total hires and separations across firms between 6 and 4 months before childbirth. Q1 refers to women in the lowest quartile of the distribution of change in UB potential duration; Q2 and Q3 refer to women in the second and third quartiles of the same distribution; Q4 refers to those in the highest quartile.

Our coefficients of interest are in the vector $\boldsymbol{\beta}$, and estimate the difference in quit (lay-off/non-employment) rates between mothers at each event time around childbirth, after the reform relative to the period before the reform, comparing those who belong to the two intermediate quartiles of the distribution of the reform-induced increase in unemployment benefit duration with those belonging to the highest quartile. We are primarily interested in the effects on mothers' voluntary quits. We also examine the impact on the probability of layoffs to investigate whether voluntary quits are a replacement for layoffs in the absence of the reform. Finally, we study the effect on non-employment probability to understand whether quits are associated with the exit from employment or with transitions to a different job.

When analysing firm responses, we consider the same estimating equation (2) but for different outcome variables computed at the firm level, which we denote by $y_{j(i)st}$. In the

firm-level analysis the "event" is employing a woman who gave birth in the period January 2013-December 2015. Consistently with the individual-level analysis, treated firms are those employing mothers that belong to the second and third quartiles of the distribution of the change in unemployment benefit duration; control firms are those employing mothers in the fourth quartile. Firm-level outcomes $y_{j(i)st}$ are the cumulative number of hires, separations, net hires and the share of permanent and temporary contracts in firm j where the new mother i worked 4 months before childbirth, in calendar month t at the time-to-childbirth s. To compute firm-level variables, we consider all workers in the firm where the new mother is employed, excluding the new mother i (we refer to them as coworkers). The coefficients of interest $\boldsymbol{\beta}$ estimate the difference in the outcomes between firms employing new mothers in the treatment and in the control group, before and after childbirth, and before and after the reform.

5 Results

5.1 Maternal Outcomes

Quit, layoff, non-employment Figure 2 illustrates the estimated coefficients of the triple difference around childbirth. The likelihood of treated mothers quitting gradually rises between 3 and 12 months after childbirth, corresponding to the period roughly between the conclusion of compulsory maternity leave and the cessation of access to UB when quitting. This increased likelihood lasts up to 36 months after giving birth. Three years after childbirth, the cumulative probability of quitting increases by 2.9 percentage points or by 14.3 percent relative to the pre-reform average quit rate among treated mothers (0.029/0.20, see Table A.1 in the Appendix). We observe a negative effect on cumulative layoffs,[15] which decrease by 0.98 percentage points three years after childbirth, underscoring the presence of substitution effects with quits. However, the reduction in the layoff probability is roughly one-third of the increase in the quit rate among treated mothers, indicating that firms employing treated mothers experience heightened turnover and do not entirely offset layoffs with voluntary quits. Furthermore, the probability of non-employment rises, and is still 1.9 percentage points higher 36 months after childbirth, implying that quits predominantly reflect permanent exit from employment rather than job-to-job transitions. The effects we identify are concentrated among new mothers with permanent contracts, who constitute over 97 percent of the sample, as shown in Table 1.

Notice moreover that all pre-childbirth coefficients of the results displayed in Figure 2 are not statistically different from the omitted category (1 month before childbirth). This confirms the validity of our estimates, which – for identification – rely on the standard

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[15]This effect emerges after the child reaches 1 year of age, as Italian Law prohibits the dismissal of women with children under the age of 1 (Legislative Decree No. 151/2001).

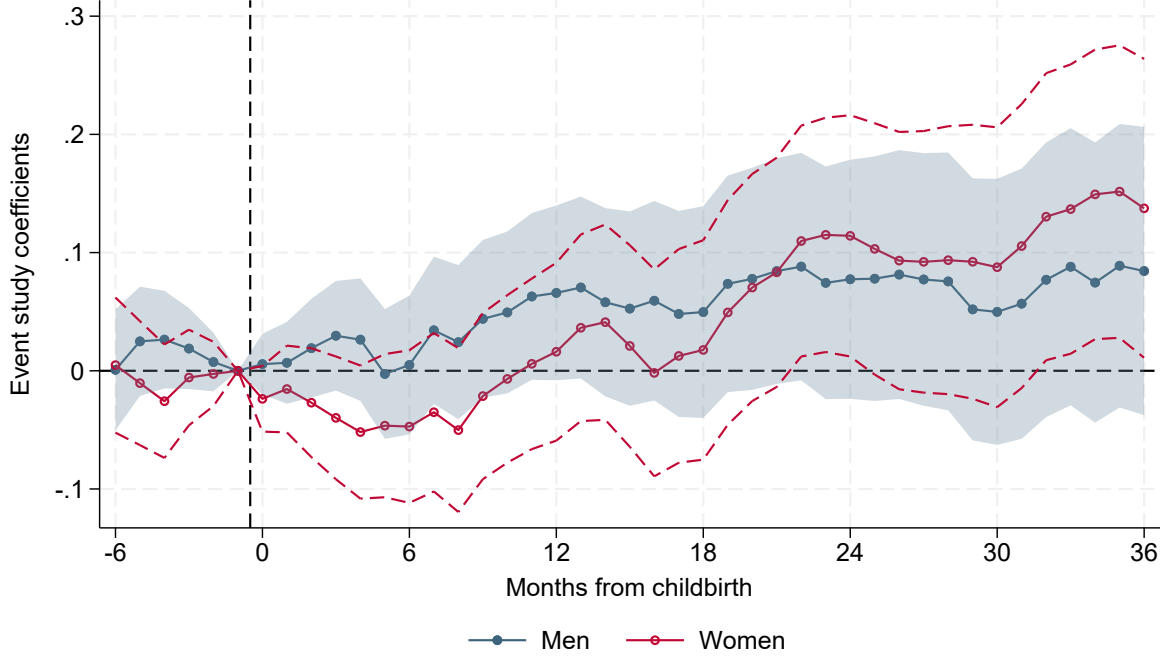Figure 2: Maternal employment outcomes: quit, layoff and non-employment rates
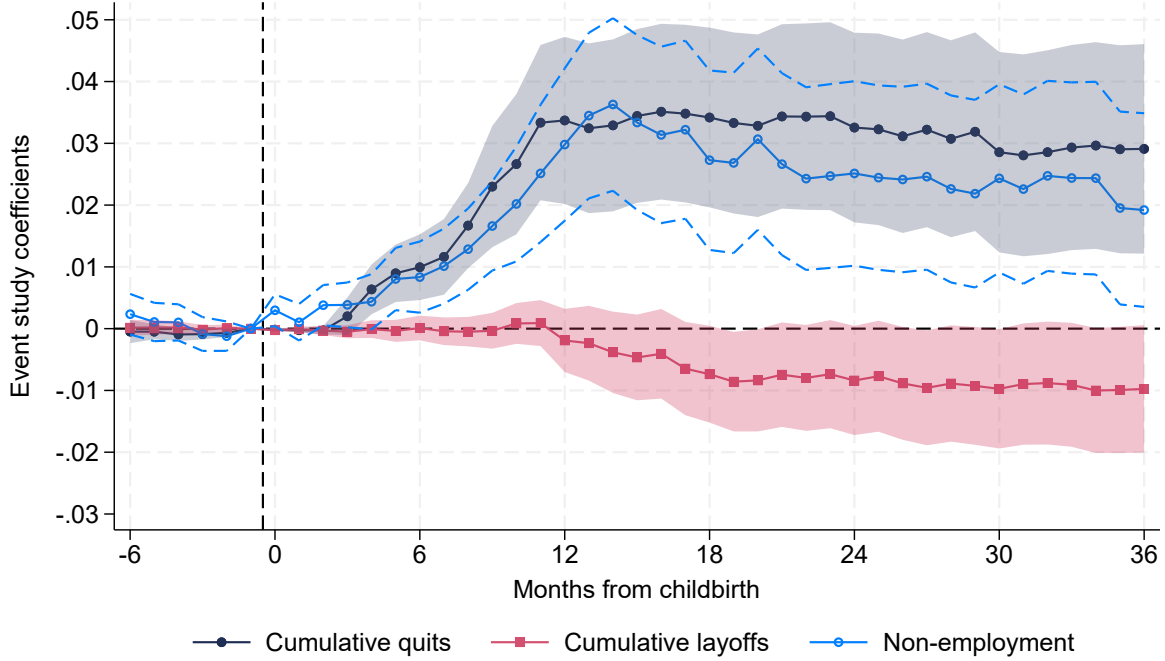
Notes: The figure reports the event-study coefficients β from equation (2), alongside 95 percent confidence intervals. Each dot represents the difference in the quit/layoff/non-employment rates between mothers at each event time around childbirth (between -6 and 36), after the reform relative to the period before the reform, comparing those who belong to the two intermediate quartiles of the distribution of the reform-induced increase in unemployment benefit duration with those belonging to the highest quartile (event time -1 is the excluded dummy). The confidence intervals are obtained from cluster-robust standard errors at the individual level.

parallel trends assumption (Olden and Moen, 2022).

Heterogeneity Over the initial three years following childbirth, the impacts of the reform on quits are slightly larger among mothers with part-time contracts and limited job experience (Figure A.2 in panels a and b, respectively), who are less constrained by the caps imposed on UB payments,[16] though there is wide overlap in confidence intervals. Moreover, there are positive and statistically significant effects solely among mothers employed in white-collar jobs (as shown in panel d of Figure A.2). Nonetheless, drawing comparisons with blue-collar mothers proves difficult due to their smaller sample size and broad confidence intervals around the estimates. We do not find any heterogeneity based on the sector of employment, geographical region, or firm size (as demonstrated in panels c, e and f of Figure A.2, respectively).

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[16]The UB payment, calculated as 75 percent of the average monthly earnings over the previous four years, divided by the number of weeks of paid contribution and multiplied by 4.33, is subject to a minimum threshold. If this payment exceeds the minimum, it equals 75 percent of average monthly earnings plus 25 percent of the difference between average monthly earnings and the minimum amount. The UB payment cannot exceed the maximum amount set annually by INPS.

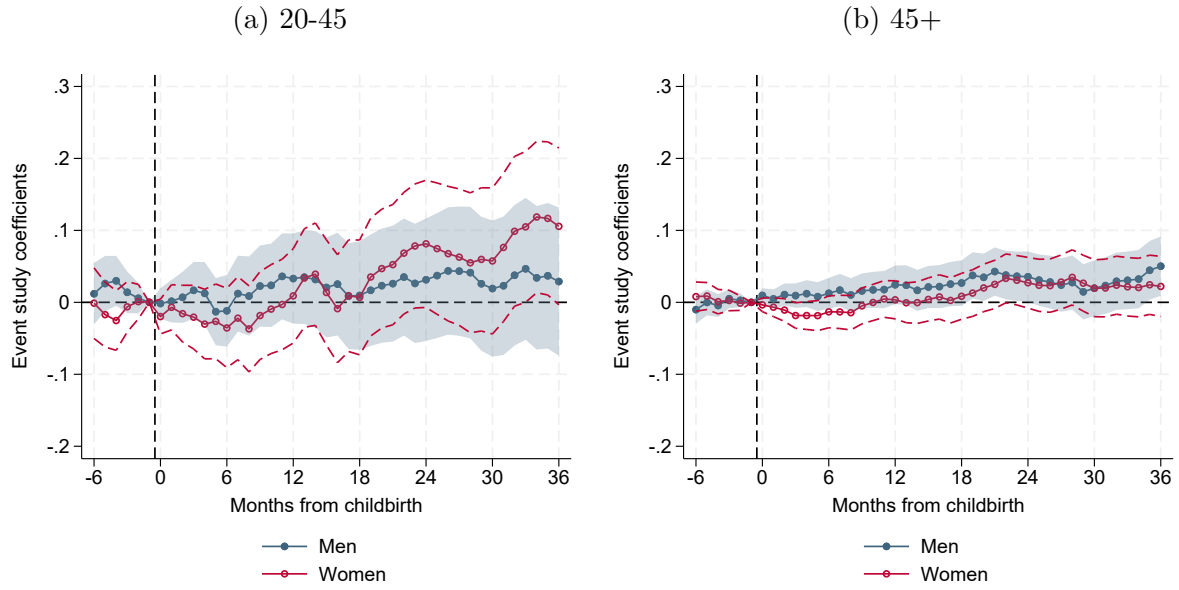Figure 3: Firm-level outcomes: cumulative net hires

Notes: The figure reports the event-study coefficients $\boldsymbol{\beta}$ from equation (2), alongside 95 percent confidence intervals. Each dot represents the change in the number of cumulative net hires among male and female coworkers between firms employing new mothers who belong to the two intermediate quartiles of the distribution of the reform-induced increase in unemployment benefit duration and those employing mothers belonging to the highest quartile, at each event time around childbirth (between -6 and 36), after the reform relative to the period before the reform (event time -1 is the excluded dummy). The confidence intervals are obtained from cluster-robust standard errors at the firm level.

Robustness We conduct a robustness check by incorporating in our sample mothers from the first quartile of the reform-induced increase in UB duration. Figure A.3 presents the changes in the cumulative probability of quitting (panel a), being laid-off (panel b), and being non-employed (panel c) for mothers in the first and in the two intermediate quartiles relative to those in the fourth quartile. Consistent with the descriptive findings in panel (a) of Figure 1, the response among mothers in the first quartile is minimal and diminishes within 12-18 months post-childbirth. This is due both to their limited labour market attachment even before the reform, which implies that they tend to quit after childbirth regardless of the reform, and to the fact that the reform did not significantly alter the potential duration of unemployment benefits for this group of mothers.

5.2 Firm-level Responses

Aggregate effects on net hires Figure 3 illustrates the estimated coefficients of the triple interaction for cumulative net hires, calculated as the difference between the number of new hires and separations within the firm (excluding those related to the mother under

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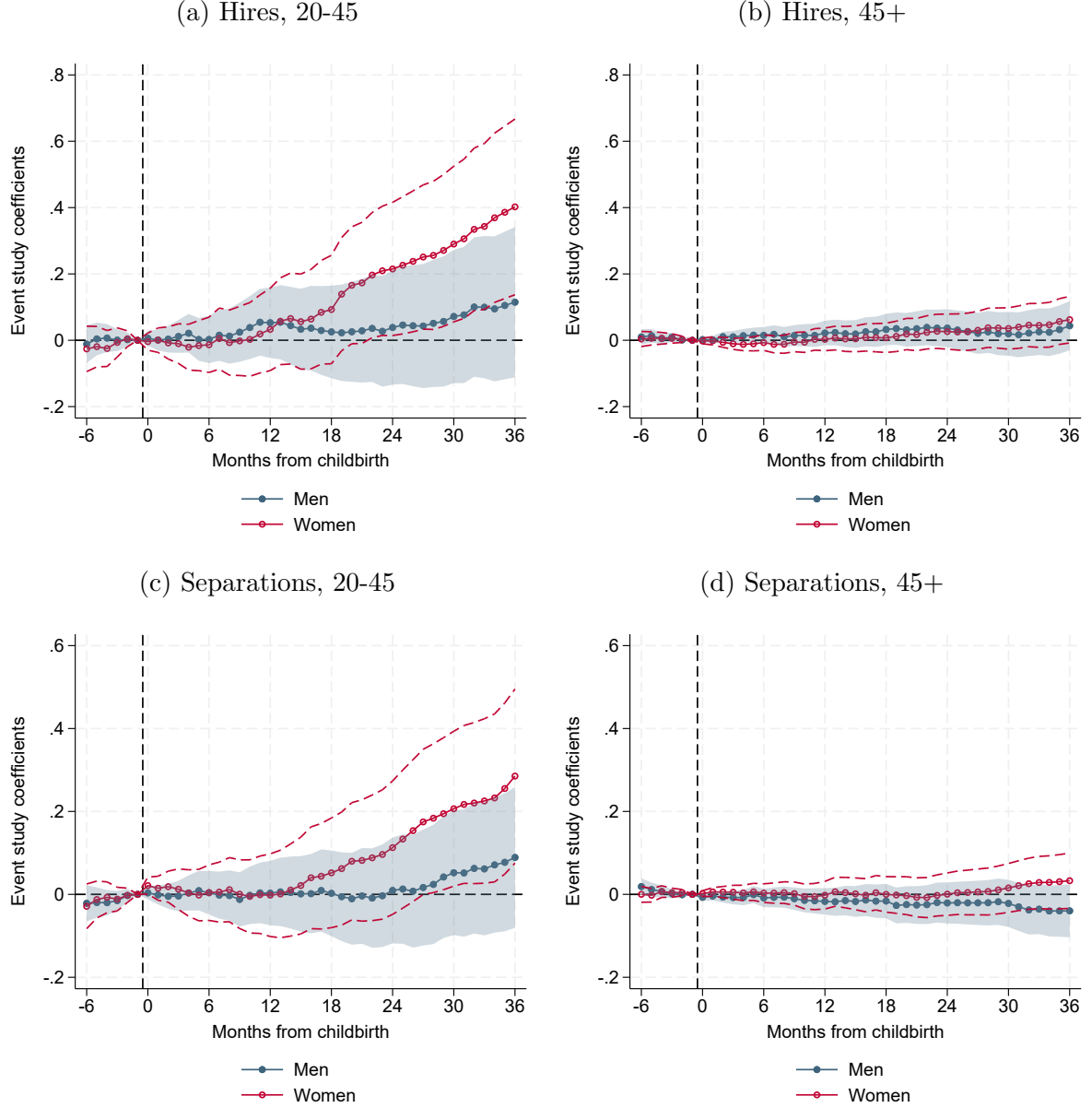Figure 4: Firm-level outcomes: cumulative net hires by age

(a) 20-45   (b) 45+

Notes: The figure reports the event-study coefficients $\boldsymbol{\beta}$ from equation (2), alongside 95 percent confidence intervals. Each dot represents the change in the number of cumulative net hires by age group (20-45 in panel a, and 45+ in panel b) among male and female coworkers between firms employing new mothers who belong to the two intermediate quartiles of the distribution of the reform-induced increase in unemployment benefit duration and those employing mothers belonging to the highest quartile, at each event time around childbirth (between -6 and 36), after the reform relative to the period before the reform (event time -1 is the excluded dummy). The confidence intervals are obtained from cluster-robust standard errors at the firm level.

examination). These coefficients show how firms employing a mother who is more likely to resign after childbirth adjust their recruitment and termination decisions. Notably, these firms exhibit a significant rise of 0.14 female employees 36 months post-childbirth (which implies an increase of 1.3 percentage points in the female net hiring rate, or 6.1 percent relative to the average pre-reform rate, as shown in Table A.1). Although there is also an increase of 0.08 male employees, the coefficient does not attain conventional levels of statistical significance.

Effects by age Figure 4 shows that the effects are primarily concentrated on female employees of childbearing age (20-45 years old), who are more likely to serve as substitutes for new mothers, whereas there is almost no effect on older workers of either gender.

Hires and separations We find that the reform induced a substantial increase in turnover among young women, defined as the sum of hires and separations. Specifically, more exposed firms increase both hires and separations of young women (panels a and c of Figure 5). In contrast, the response of young men's flows is more muted (panels b and d of Figure 5). The turnover rate among women in the firm increases by 4.7 percent relative

Figure 5: Firm-level outcomes: cumulative hires and separations by age

(a) Hires, 20-45

(b) Hires, 45+

(c) Separations, 20-45

(d) Separations, 45+

Notes: The figure reports the event-study coefficients $\boldsymbol{\beta}$ from equation (2), alongside 95 percent confidence intervals. Each dot represents the change in the number of cumulative hires (top panels) or separations (bottom panels) by age group (20-45 in panels a and c, and 45+ in panels b and d) among male and female coworkers between firms employing new mothers who belong to the two intermediate quartiles of the distribution of the reform-induced increase in unemployment benefit duration and those employing mothers belonging to the highest quartile, at each event time around childbirth (between -6 and 36), after the reform relative to the period before the reform (event time -1 is the excluded dummy). The confidence intervals are obtained from cluster-robust standard errors at the firm level.

Figure 6: Firm-level outcomes: share of permanent contracts by age
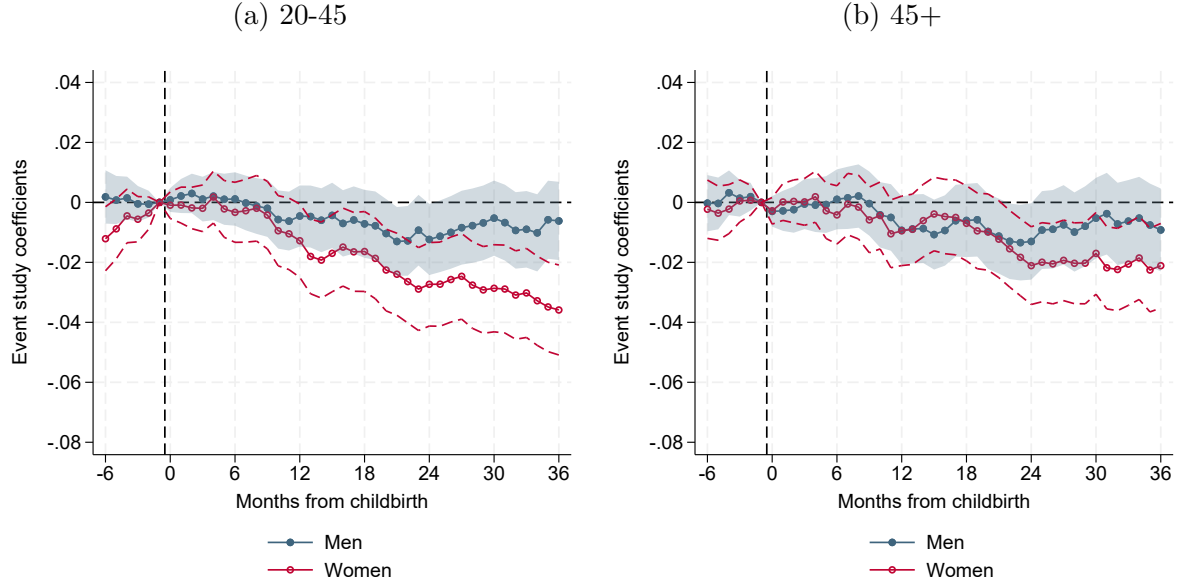
(a) 20-45

(b) 45+

Notes: The figure reports the event-study coefficients $\boldsymbol{\beta}$ from equation (2), alongside 95 percent confidence intervals. Each dot represents the change in the share of permanent contracts by age group (20-45 in panel a, and 45+ in panel b) among male and female coworkers between firms employing new mothers who belong to the two intermediate quartiles of the distribution of the reform-induced increase in unemployment benefit duration and those employing mothers belonging to the highest quartile, at each event time around childbirth (between -6 and 36), after the reform relative to the period before the reform (event time -1 is the excluded dummy). The confidence intervals are obtained from cluster-robust standard errors at the firm level.

to pre-reform levels (by 1.3 percent for men, as indicated in Table A.1). Overall, the surge in hires outweighs that in separations quantitatively, as evidenced by the positive impact on net hires in Figure 4. Consequently, we conclude that more exposed firms rely on the external labour market to hire more women in response to the increase in the quit rate of new mothers, rather than restricting separations of existing employees.

Effects by type of contract Figure 6 indicates a significant decline in the share of permanent contracts for women within treated firms. This implies that the recruitment of women to fill vacancies left by departing mothers is predominantly in temporary positions (consistent with the observed rise in turnover). On the one hand, hiring new employees on temporary contracts is common since firms tend to use temporary contracts to screen potential permanent employees, leading to an association between increased turnover and a higher prevalence of temporary jobs. However, in this case, the rise in both turnover and the share of fixed-term jobs is sustained over the long term. This indicates that women are being hired on temporary contracts that often fail to transition into permanent positions. Consequently, the quality of their employment opportunities deteriorates.

Other margins   We do not find any significant effect of the policy on the average daily wages of coworkers or on their intensive margin, as measured by the number of days worked per month (Figures A.4 and A.5).

Robustness   Similar to Section 5.1, Figure A.6 presents the outcomes for net hires of female (panel a) and male (panel b) coworkers when incorporating firms employing mothers from the first quartile of the reform-induced increase in UB duration. For both genders, statistically significant pre-trends are evident, which, if considered, would result in a subdued response in the first quartile. This aligns with the lack of effect on mothers' quit rates within this group.

Quantification of the effects   We assess the magnitude of the effects by combining the individual and firm-level findings in Table A.1. The policy resulted in a 14.3 percent surge in the quit rate of mothers by the end of the observation period, at $s = 36$. As an illustration, using female net hiring, we calculate that firms increase the cumulative net hiring rate of female coworkers by 1.3 percentage points at $s = 36$, or by 6.1 percent relative to the average pre-reform female net hiring rate. Consequently, we estimate that a 1 percent increase in the quit rate of mothers prompted a 0.42 percent (6.1/14.3) uptick in the net hiring rate of other female workers in the firm. We estimate a lower effect among males (0.26 percent). Regarding the turnover rate, we show that a 1 percent increase in the quit rate of mothers led to a rise of 0.33 percent in turnover rate among female coworkers and 0.09 percent among male ones.

Discussion   The reform we analyse resulted in an increase in the quit rate among mothers. In response, firms replaced them by relying on the external labour market and recruiting young women, indicating a limited substitution with older or male workers. The policy indeed amplified the expected costs for firms when hiring to-be-mothers but not to-be-fathers, underscoring the importance of asymmetric information between firms and female workers regarding their level of attachment to the labour market. Moreover, the reform served as a shock to the duration of contracts: firms anticipated that mothers would remain employed for a certain number of years, but instead, after the reform the duration was shortened. Consequently, in order to regain control over the timing of separations or the duration of employment relationships, firms reoptimize their production function and increase the share of temporary contracts for young women. The heightened use of fixed-term contracts may therefore be interpreted as evidence of statistical discrimination in terms of job quality. Faced with the prospect of shorter expected durations of employment for women of childbearing age, firms predominantly hire young women on temporary contracts. This dynamic may create a detrimental cycle wherein women encounter fewer opportunities for permanent employment, potentially exacerbating their

dropout rate after childbirth.

Overall, while the reform has incentivised mothers to leave the workforce after childbirth, it has not directly diminished the number of young women hired, but rather the nature of available job opportunities for them. Women of childbearing age are disadvantaged in their job search due to their decreased likelihood of securing permanent positions, leading to adverse effects on female workers' career trajectories and wages.

6   Conclusions

This paper examines the repercussions on firms resulting from mothers exiting the labour market after childbirth. We leverage a reform that differentially extended the duration of Italian unemployment benefits as a shifter in maternal labour supply. Our analysis reveals that the reform increased quit rates around childbirth for specific groups of mothers. Furthermore, the policy failed to assist new mothers in finding better employment due to prolonged search periods, evidenced by persistently high rates of non-employment even three years post-childbirth.

Firms most impacted by the reform respond by increasing net hiring, particularly of young women, but also by increasing turnover among women of childbearing age. Conversely, there are no significant shifts for older and male workers. The surge in hiring of young women is concentrated in temporary jobs, leading to a decline in the quality of female employment and implying a deterioration of statistical discrimination against women of childbearing age.

The provision allowing mothers to receive unemployment benefits upon voluntary resignation, coupled with more generous benefit packages, may initially safeguard mothers' incomes. However, this approach backfires by diminishing the quality of their job prospects, as it increases the likelihood of firms hiring women solely on temporary contracts.

The availability of unemployment benefits for voluntary resignation is not unique to Italy; other countries offer similar benefits to workers who quit for family-related reasons, without imposing reductions or penalties on the benefit amount or duration. This reinforces the external validity of our analysis. Additionally, the findings of our study can contribute to discussions regarding limitations on eligibility for unemployment benefits in cases of voluntary quits. Furthermore, they can inform assessments of policies that may undermine women's labour market attachment, such as subsidies for home care, child-related transfers that decrease with family income, or increases in childcare costs.

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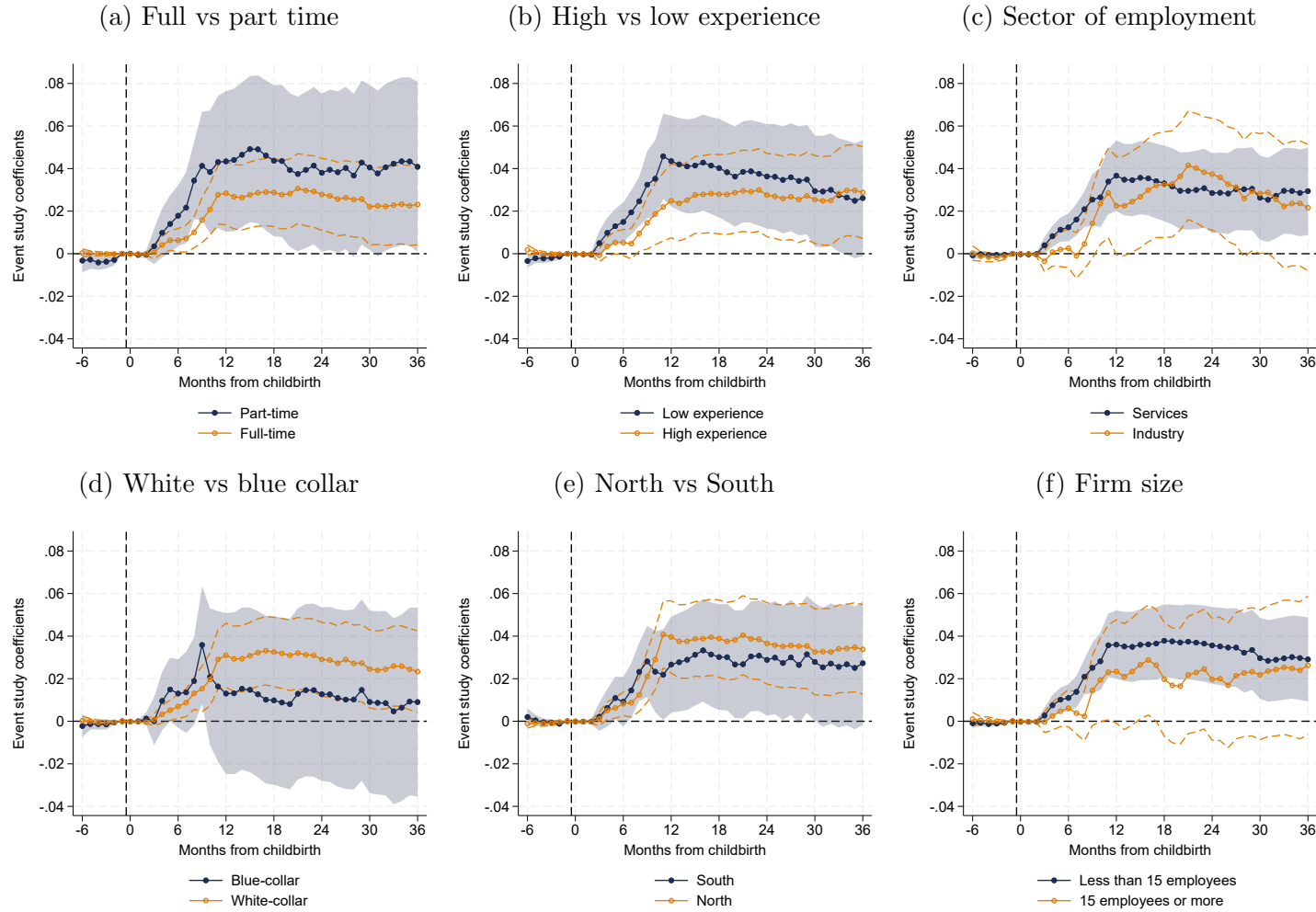
7 Additional Figures and Tables

Figure A.1: Distribution of the shock in the duration of UB according to post and pre-2015 reform rules
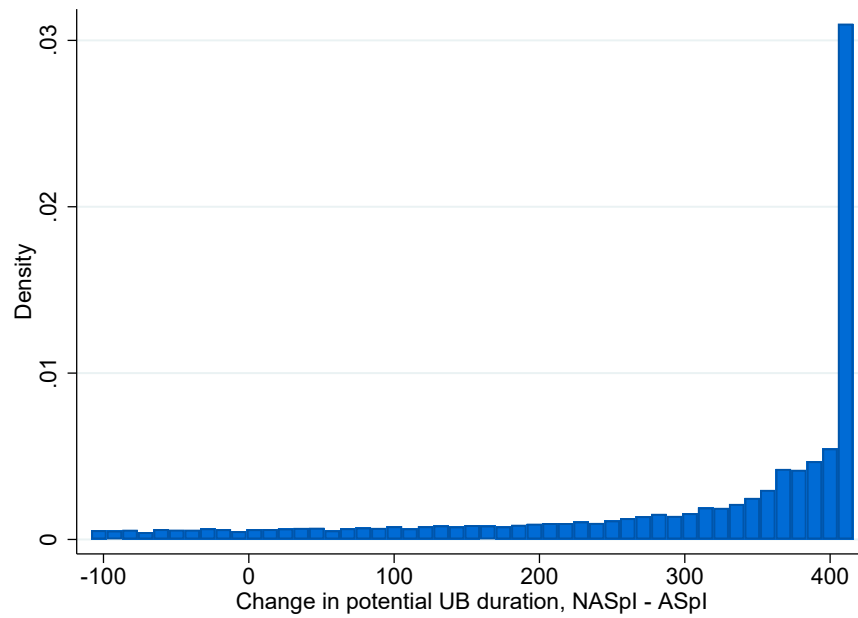

Notes: Social security data, mothers who gave birth between January 2013 and December 2015.

Figure A.2: Maternal employment outcomes: quitting probability by job and individual characteristics

(a) Full vs part time

(b) High vs low experience

(c) Sector of employment

(d) White vs blue collar

(e) North vs South

(f) Firm size

Notes: The figure reports the event-study coefficients β from equation (2), alongside 95 percent confidence intervals, splitting the sample in the groups reported in each panel. Each dot represents the difference in the quit/layoff/non-employment rates between mothers at each event time around childbirth (between -6 and 36), after the reform relative to the period before the reform, comparing those who belong to the two intermediate quartiles of the distribution of the reform-induced increase in unemployment benefit duration with those belonging to the highest quartile (event time -1 is the excluded dummy). The confidence intervals are obtained from cluster-robust standard errors at the individual level.

Figure A.3: Maternal employment outcomes: quit, layoff and non-employment probabilities (full sample)
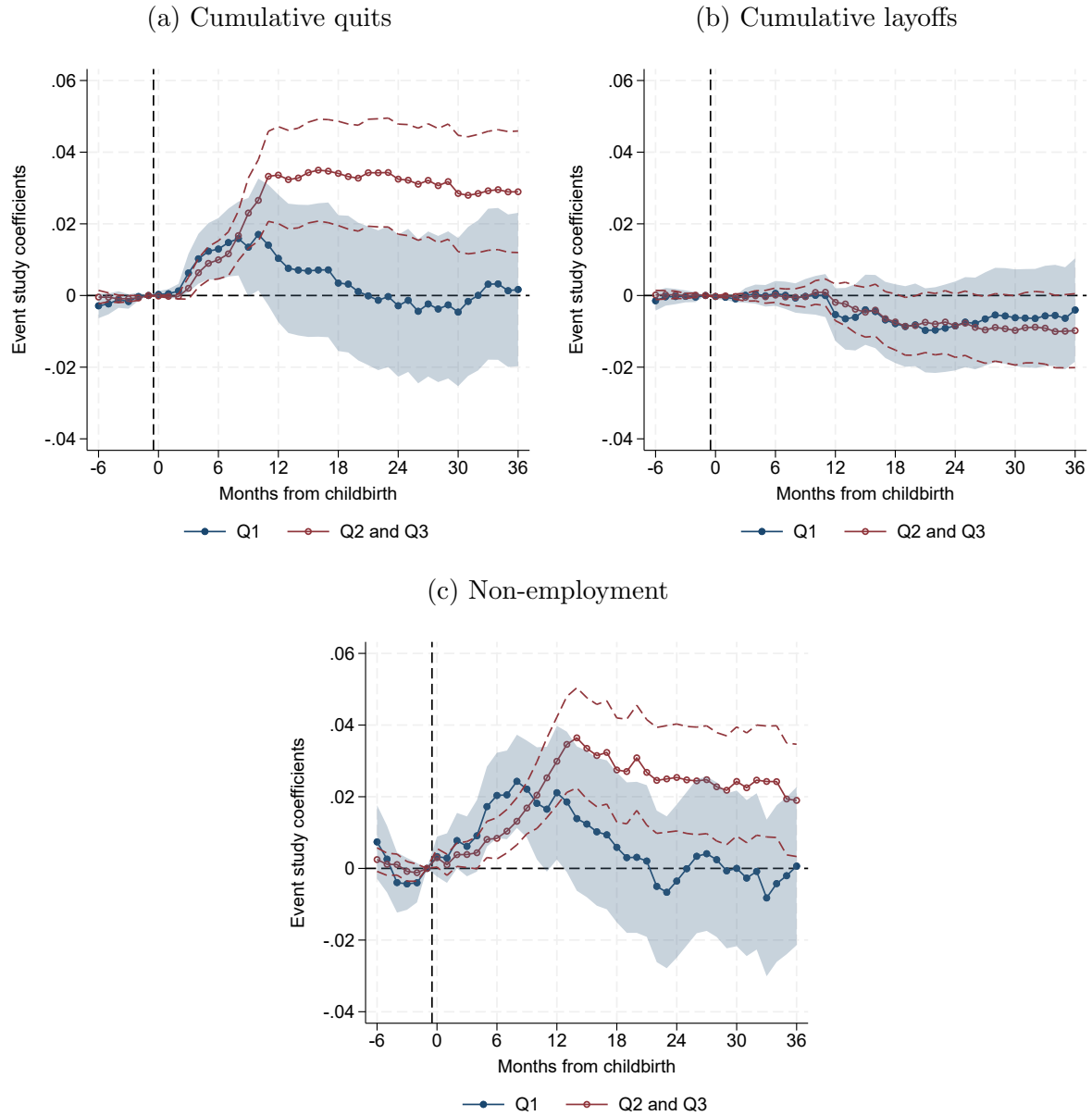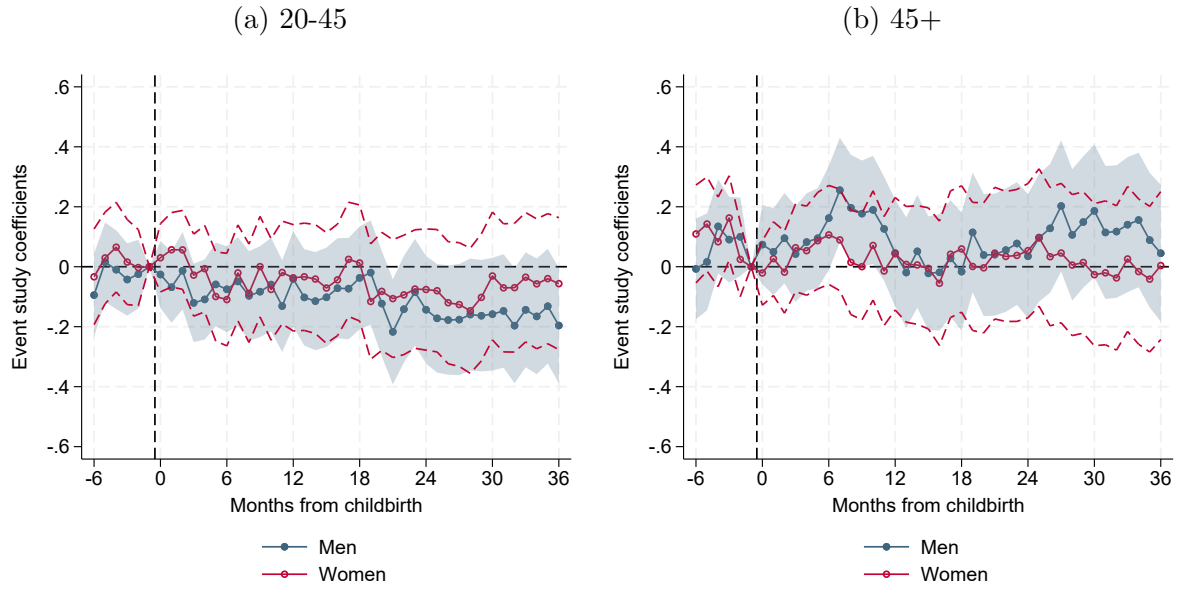
(a) Cumulative quits

(b) Cumulative layoffs

(c) Non-employment

Notes: The figure reports the event-study coefficients β from equation (2), alongside 95 percent confidence intervals, including in the sample of analysis new mothers belonging to the first quartile of the reform-induced increase in unemployment benefit duration. Each dot represents the difference in the quit/layoff/non-employment rates between mothers at each event time around childbirth (between -6 and 36), after the reform relative to the period before the reform, comparing those who belong to the first or two intermediate quartiles of the distribution of the reform-induced increase in unemployment benefit duration with those belonging to the highest quartile (event time -1 is the excluded dummy). The confidence intervals are obtained from cluster-robust standard errors at the individual level.
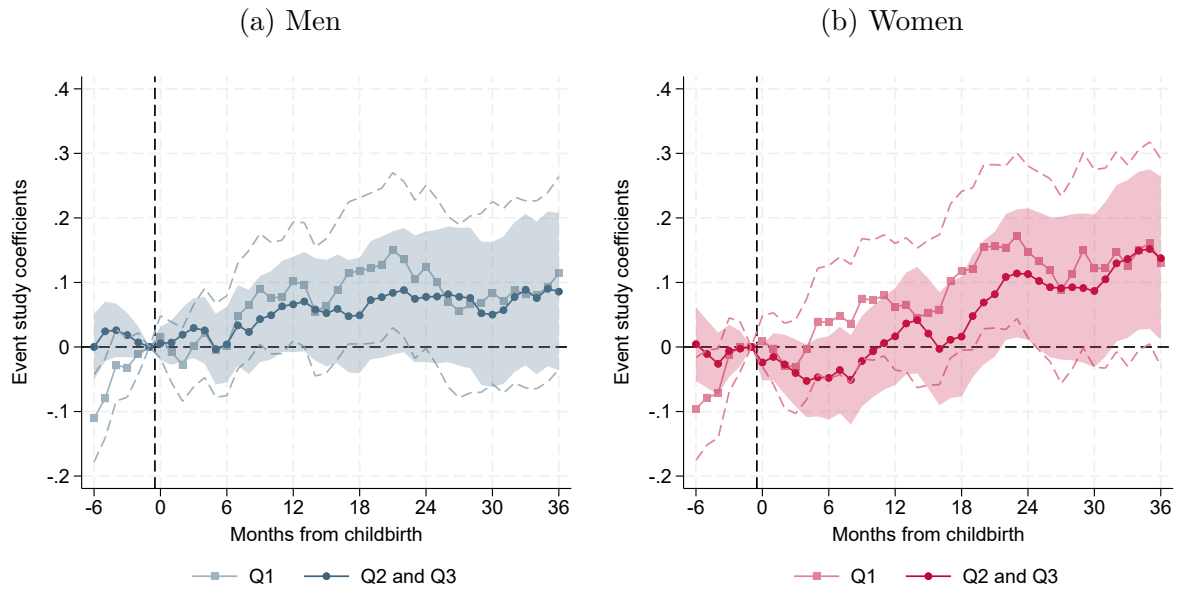
Figure A.4: Firm-level outcomes: daily wages
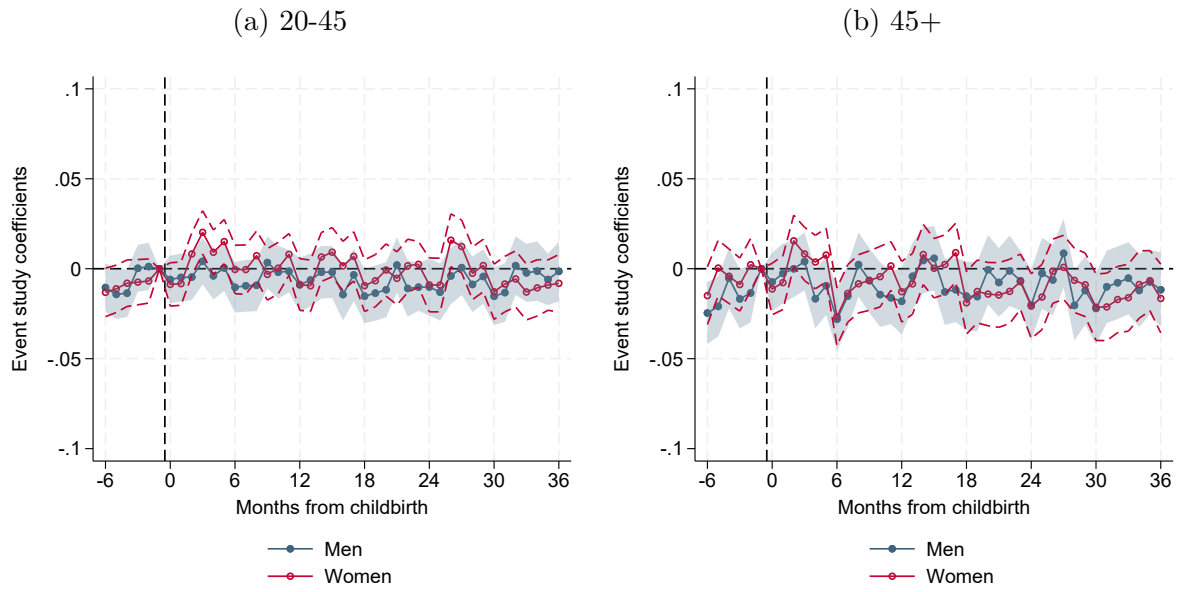
(a) 20-45

(b) 45+

Notes: The figure reports the event-study coefficients $\boldsymbol{\beta}$ from equation (2), alongside 95 percent confidence intervals. Each dot represents the change in log daily wages by age group (20-45 in panel a, and 45+ in panel b) among male and female coworkers between firms employing new mothers who belong to the two intermediate quartiles of the distribution of the reform-induced increase in unemployment benefit duration and those employing mothers belonging to the highest quartile, at each event time around childbirth (between -6 and 36), after the reform relative to the period before the reform (event time -1 is the excluded dummy). The confidence intervals are obtained from cluster-robust standard errors at the firm level.

Figure A.5: Firm-level outcomes: average number of days worked per month

(a) 20-45

(b) 45+

Notes: The figure reports the event-study coefficients β from equation (2), alongside 95 percent confidence intervals. Each dot represents the change in average monthly days worked by age group (20-45 in panel a, and 45+ in panel b) among male and female coworkers between firms employing new mothers who belong to the two intermediate quartiles of the distribution of the reform-induced increase in unemployment benefit duration and those employing mothers belonging to the highest quartile, at each event time around childbirth (between -6 and 36), after the reform relative to the period before the reform (event time -1 is the excluded dummy). The confidence intervals are obtained from cluster-robust standard errors at the firm level.

Figure A.6: Firm-level outcomes: cumulative net hires (full sample)

(a) Men

(b) Women

Notes: The figure reports the event-study coefficients $\boldsymbol{\beta}$ from equation (2), alongside 95 percent confidence intervals. Each dot represents the change in the number of cumulative net hires among male and female coworkers (in panels a and b, respectively) between firms employing new mothers who belong to the first or the two intermediate quartiles of the distribution of the reform-induced increase in unemployment benefit duration and those employing mothers belonging to the highest quartile, at each event time around childbirth (between -6 and 36), after the reform relative to the period before the reform (event time -1 is the excluded dummy). The confidence intervals are obtained from cluster-robust standard errors at the firm level.

Table A.1: Magnitudes

	(1)	(2)	(3)	(4)	(5)	(6)
	Panel A: Effects on quit rate of mothers					
	Baseline quit rate (%)	Δ quit rate (p.p.)	Δ quit rate (%)			
	a	b	$c = b/a$			
Mothers	20.3	2.9	14.3			
	Panel B: Effects on net hiring rate					
	Baseline avg. empl.	Baseline avg. net hiring rate	Δ net hires	Δ net hiring rate (p.p.)	Δ net hiring rate (%)	Policy effect (%)
	d	e	f	$g = f/d$	$h = g/e$	$i = h/c$
Women	10.9	20.8	0.14	1.3	6.1	0.42
Men	10.9	20.8	0.08	0.8	3.7	0.26
	Panel C: Effects on turnover rate					
	Baseline avg. empl.	Baseline avg. turnover rate	Δ turnover	Δ turnover rate (p.p.)	Δ turnover rate (%)	Policy effect (%)
	j	k	l	$m = l/j$	$n = m/k$	$o = n/c$
Women	10.9	161.1	0.83	7.6	4.7	0.33
Men	10.9	161.1	0.24	2.2	1.3	0.09

Notes: Panel A reports the effects at the individual level on the quit rate of mothers. The baseline quit rate (column 1) is mothers' cumulative probability of quitting over 36 months in the pre-reform period. Column 2 (Δ quit rate p.p.) shows the estimated coefficient from equation (2) at event time $s = 36$. Column 3 (Δ quit rate %) reports the ratio between these two quantities. Panels B and C report the effects on the net hiring rate and the turnover (sum of hires and separations) rate of coworkers at the firm level, respectively. The baseline average net hiring (turnover) rate (column 2) is computed as the ratio between firm average cumulative net hires (turnover) over 36 months in the pre-reform period and baseline average employment (column 1). Column 3 (Δ net hires/turnover) shows the estimated coefficient from equation (2) at event time $s = 36$. Column 4 (Δ net hiring/turnover rate p.p.) reports the ratio between columns 3 and 1. Column 5 (Δ net hiring/turnover rate %) reports the ratio between column 4 and column 2. Column 6 reports the effect of the policy, calculated as the ratio between column 5 in Panels B and C and column 3 in Panel A. It tells the percentage change in the net hiring or turnover rate in response to a 1 percent increase in the quit rate of mothers.

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