

The Labor Market Consequences of Maternity Leave Policies: Evidence from Brazil

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Executive Summary

In the last century, the participation of women in the labor market has increased substantially. Therefore, many countries have changed their labor legislation to accommodate pregnant women and mothers of young children in the workforce. Traditionally, women carry great share of responsibility towards their children and especially so of newborns. Thus, legislation on maternity leave can acutely affect the situation of women in the labor market.

Maternity leave policies are designed to help mothers cope with their work and family responsibilities in the presence of a newborn. Proponents of such policies advocate that time spent at home with newborns can enhance child development, as well as promote gender equality in both household and workplace. The efficacy of maternity leave policy depends on its specific rules (paid vs. unpaid leave, length of leave, eligibility requirements, etc.), the cultural norms on gender roles, the development of the local labor market and the specific childcare arrangements available in each country.

While there exists extensive evidence of maternity leave policies using credible research designs, those mostly exist for developed countries. Developing countries, in contrast, exhibit higher levels of poverty and lower levels of health care provision, aside from different arrangements in childcare and support. In this paper, we study maternity leave policies and the labor market trajectory of women in Brazil. In Brazil, maternity leave policy entitles eligible workers full income replacement for 120 days due to the birth of a child.

Using administrative data on the formal workers in the country (RAIS), we are able to identify maternity leave taken by eligible women and investigate the short and long run effects of maternity leave on employment, separations and hirings. We restrict the data for women who took maternity leave only once in a given year and were between 25 and 35 years old, excluding public sector employees.

While RAIS is a selected sample of formal workers, maternity leave eligibility hinges on formal labor market participation, by allowing mother to take time off and return to their previous jobs. According to the data from the National Household Sample Survey (PNAD), in 2012 Brazil had almost 55 million of women in fertile age (i.e, 15-49 years old), of which approximately 57% had worked during the reference week of the survey. Around 38% of these women were formally employed in the private sector, representing more than 11 million women. If we additionally restrict the analysis to women who were between 25 and 35 years old (5 million women), we find that approximately 4% of them had children in the last 12 months prior to the reference week of the survey and hence had

been benefited for the policy. Those women correspond to our universe of analysis in RAIS.

The empirical strategy is an event study analysis that explores the labor market trajectories of employed women, before and after leave-taking, controlling for month-year fixed effects, demographic characteristics and firm characteristics. We examine the work trajectories of women for 47 months prior and up to 47 months after leave-taking. Our identifying assumption is that, conditional on leave taking, the timing at which the leave occurs is uncorrelated with the outcomes we study. We also control for individual fixed effects in our robustness analysis. The outcomes we study are binary indicators for employment, separation and hiring.

In order to do so, we create a unique monthly panel for each women in the sample with employment information before and after leave-taking. Our final sample consists of 122,174 and 125,281 women taking maternity leave in 2009 and 2012 respectively.

We focus on women taking maternity leave in either 2009 or 2012 because a tax benefit that encouraged firms to offer paid maternity benefits up to 180 days after childbirth—the *Empresa Cidadã* program—came into effect in 2010. We investigate possible differential effects of maternity leave taking before and after the program using a difference-in-differences approach. Since the adoption of *Empresa Cidadã* was not mandatory, we identify firms that adopted the leave extension in 2012, and look at employment trajectories of women in those firms both in 2009 and 2012, before and after the adoption of the leave extension.

Results show that the likelihood of employment increases monotonically until the leave, reaching its maximum at the moment of the event, as employment is the eligibility criteria for maternity leave. During the leave period, employment is secured, but falls sharply when the job protection period ends (4 months after the leave). Employment is down by almost half 12 months after leave taking, and remains stable at that low level 36 months after the leave (48.41%-41.6%).

In line with the found employment effects, separations occurring between 2 and 3 months after leave taking are remarkably close to zero. At month 4, however, the probability of separation increases approximately 5 percentage points and reaches around 10 percentage points at month 5. Separation rates are higher 36 months after leave-taking in comparison to the rates observed 36 months before the event. Most of the separations that occur after the job protection periods are not fair dismissals, and are requested by the employer, rather than the employee.

As for hires, they increase substantially until one year before the leave-taking, reaching zero at the month of the event. During the first five months after the leave-taking, the probability of hiring is still statistically around zero, meaning no hires occur during this period. The probability of hiring returns to its previous levels one year after the leave.

When breaking results by education of mothers, we find that employment drops less after the job protection period for women with more than a high school degree, possibly indicating that the training and replacement cost for these highly skilled women makes the leave policy more effective for them.

The employment trajectories of women before and after *Empresa Cidadã* is quite similar, but we find that women who take extended maternity leave have their jobs secured for a longer time. For instance, women under the extended leave have a 7.5 percentage point higher likelihood of employment six months after the leave. Likewise, job separation probability at four (five) months after the event was 1.56 (3.8) percentage points lower for women who had extended maternity leave. However, employment rates are statistically the same for both groups of women 36 months after leave taking, indicating that the extended leave policy is not able to retain women in the labor market.

In sum, this study finds that employment of mothers in the formal labor market exhibits an inverted U-shaped pattern which peaks at the time of leave-taking. Although maternity leave in Brazil has ensured job stability shortly after childbirth, our findings suggest that it is not sufficient to retain women in the workforce in the long run, even when considering extended leaves made possible through the *Empresa Cidadã* program. Other policies, such as available and affordable childcare, might be more effective in the context of Brazil.