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**Working Paper**

## Maternal Employment Effects of Paid Parental Leave

IZA Discussion Papers, No. 9073

**Provided in Cooperation with:**

IZA – Institute of Labor Economics

*Suggested Citation:* Bergemann, Annette; Riphahn, Regina T. (2015) : Maternal Employment Effects of Paid Parental Leave, IZA Discussion Papers, No. 9073, Institute for the Study of Labor (IZA), Bonn

This Version is available at:

<https://hdl.handle.net/10419/111523>

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IZA DP No. 9073

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May 2015

# Maternal Employment Effects of Paid Parental Leave

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## ABSTRACT

### Maternal Employment Effects of Paid Parental Leave<sup>\*</sup>

We study the short, medium, and longer run employment effects of a substantial change in the parental leave benefit program in Germany. In 2007, a means-tested parental leave transfer program that had paid benefits for up to two years was replaced by an earnings related transfer which paid benefits for up to one year. The reform generated winners and losers with heterogeneous response incentives. We find that the reform speeds up the labor market return of both groups of mothers after benefit expiration. The overall time until an average mother with (without) prior claims to benefits returns to the labor force after a birth declined after the reform by 10 (8) months at the median. We show that likely pathways for this substantial reform effect are changes in social norms and mothers' preferences for economic independence.

JEL Classification: J13, J21

Keywords: female labor supply, maternal labor supply, parental leave, parental leave benefit, child-rearing benefit, parents' money

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<sup>\*</sup> We thank Jerome Adda, Joseph Altonji, Martha Bailey, Pedro Carneiro, Kamily Cygan-Rehm, Christian Dustmann, Eric French, Stephen Kastoryano, Patrick Kline, Daniel Kuehnle, Shelly Lundberg, Sarah Smith, Toni Stocker, Michèle Tertilt, Trine Engh Vattø, Gerard van den Berg, Andrea Weber, participants of the SFB 884 Research Conference "Evaluation of Political Reforms", Internal Workshop of Empirical Economists and Sociologists, 2013 workshop of the Marburg Center for Institutional Economics (MACIE), ZEW Family Economics Workshop, Norwegian-German Seminar at cesifo, ZEW Family Policy Workshop, econometrics group of the German Economic Association, Seminar at Aarhus University, annual conference of the European Society of Population Economics in Braga, LASER center at the University of Erlangen-Nuremberg, University Osnabrück, Melbourne Institute, University of Auckland, annual conference of European Association of Labour Economists in Ljubljana and IZA for helpful discussions, and Alexandra Spitz-Oener and Alexandra Fedorets for sharing their data with us. Viola Ackfeld, Anna Hammerschmid, and Isabel Stockton provided very able research assistance.

## 1. Introduction

Paid and unpaid parental leave is high on the political agenda in many industrialized countries. A large number of countries in Europe has installed parental leave benefits with heterogeneous characteristics. In other countries, such as the U.S., the introduction or extension of such programs is intensely discussed. In this paper we exploit a major reform of a paid parental leave program to identify the causal effect of the introduction of a universal paid parental leave on the labor market attachment of recent mothers.

Parental leave regulations are typically characterized by the duration of employment protected parental leave and by the generosity of parental leave benefits in terms of transfer amount, duration, and eligibility. These regulations vary across countries and within countries over time. Even though a growing literature studies the causal relationship between parental leave and maternal labor market outcomes, mothers' behavioral responses are still not well understood. Some studies find strengthened labor market attachment in response to more generous or newly introduced parental leave while others conclude the opposite. A number of authors show that the availability of (paid) parental leave can increase employment rates and strengthen job continuity (see Berger and Waldfogel 2004, Burgess et al. 2008, Rossin-Slater et al. 2013, Byker 2014, and Baum and Ruhm 2013). On the other hand, a substantial part of the literature disagrees. Studies for Canada, Austria, Germany, and Norway report that mothers increase the time spent at home when maternity leave is extended and that the availability of leave weakens their short-term labor force attachment.<sup>1</sup>

This paper uses a recent fundamental reform of the parental leave benefit program in Germany to identify its causal effect on maternal employment after birth. Before the reform, German mothers could claim "child-rearing benefits" conditional on a means test; the benefits typically paid 300 Euro per month for up to 24 months after a birth. Since the reform, benefits

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<sup>1</sup> See Baker and Milligan (2008a, 2008b), Hanratty and Trzcinski (2009), Lalive and Zweimüller (2009), Lalive et al. (2014), Dustmann and Schönberg (2011), Schönberg and Ludsteck (2014), and Dahl et al. (2013).

are available to all mothers without a means test. Now, the benefits generally replace 67 percent of last net earnings, with minimum and maximum amounts fixed at 300 and 1,800 Euro per month. These benefits are paid for 12 months (plus two months for a partner).

This reform is of interest for many countries as it makes paid parental leave available to all mothers. In the U.S., there is a recent debate on introducing federal paid parental leave; three states have newly introduced paid leave (California in 2004, New Jersey in 2008 and Rhode Island in 2013) and others are considering it (see Byker 2014 or Bartel et al. 2014). Evidence from the German reform on labor market effects of paid parental leave thus delivers policy relevant information.

As the reform considered here implies a major revision of the German parental leave policy, it allows us to identify causal effects that are difficult to identify in scenarios of only minor institutional adjustments. In particular, we can study the effects of an introduction of parental leave benefits for some mothers (the 'winners' or *new* benefit recipients) and of a shortening of parental leave benefits for others (the 'losers' or *prior* benefit recipients); both changes occur simultaneously and in the same economic environment.<sup>2</sup>

We contribute to the literature by addressing the unresolved question regarding the effect of parental leave on maternal employment. We take advantage of the discontinuity in the regulatory framework and compare the labor market outcomes for mothers of children born under the old and the new benefit regime. Also, we compare the response of mothers with different characteristics over a short, medium, and longer term. In order to account for impacts of the business cycle and general trends, we combine this discontinuity approach with a difference-in-differences (DID) framework and compare the before-after adjustment in the

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<sup>2</sup> The elements of the reform render our contribution most similar to Lalive et al. (2014), who study the effects of a reduction and an increase in the duration of cash benefit payments for Austria. In contrast to their study where the reforms occurred subsequently, our reform constitutes a program change that affects different subgroups at the same time. Other studies investigating the introduction of paid parental leave are Sánchez-Mangas and Sánchez-Marcos (2008) for Spain or Rossin-Slater et al. (2013) for California; changes in benefit durations are evaluated by Hanratty and Trzcinski (2009) for Canada.

reform period for recent mothers with that for mothers of older children who were unaffected by the reform. We apply duration models to flexibly describe the determinants of the timing of post-birth events.

Several contributions already investigated the 2007 reform: Kluve and Tamm (2013) and Kluve and Schmitz (2014) found an employment decline in year one and an increase in year two after birth using cross-sectional data; they hypothesize that social norms could be the driving force, but do not test their hypothesis. They also do not discuss nor investigate the relevance of other channels. Geyer et al. (2014) estimate a structural labor supply model for mothers and consider up to two years after a birth. We go beyond these papers in various ways. Most importantly, based on our rich data, we are able to differentiate the heterogeneous effects for 'winners' and 'losers' with different reform-induced incentive changes. Second, we can study the mechanisms behind the observed behavioral adjustments. Third, while prior studies use cross-sectional data and observe mothers at only one point in time, we apply event study methods that allow us to carefully model the employment dynamics after childbirth which we then combine with a difference-in-differences approach.

We find that the reform yielded strong labor supply responses. During benefit receipt, i.e., in year one after a birth, the rate of returning to the labor force declined (insignificantly) for new benefit recipients whereas prior benefit recipients hardly responded to the reform. At benefit expiration, prior benefit recipients' hazards of returning to the labor force increased by a factor three after the reform. Even among new benefit recipients the reform generated a large and significant increase in the rate of returning to the labor force at the time of benefit expiration. The overall time until an average mother with (without) prior claims to benefits returns to the labor force after a birth declined by 10 (8) months at the median after the reform. We show that likely pathways for this substantial reform effect are changes in social norms and mothers' preferences for economic independence. At the same time, the reform redistributed benefits to households with higher incomes and overall parental leave

benefit expenditures went up from about 3.1 to 4.2 billion Euro between 2006 and 2008 (Ehlert 2008).

The paper develops as follows. In section two, we describe the institutional background and discuss the expected reform effects on maternal labor supply. Section three describes the data and our empirical approach. We present the estimation results and robustness tests in section four. Section five concludes.

## **2. Institutions and Hypotheses**

### **2.1 Institutional Background**

German parental leave regulations were introduced in the early 1950s and have been modified many times since (see, e.g., Dustmann and Schönberg 2011). The last major reform affected births after Dec. 31, 2006 and had three main objectives: to financially support all young families, to strengthen mothers' incentives to return to work after birth, and to enhance paternal involvement in child care. In this section, we first describe the institutional background. Then we discuss the expected female labor force participation response.

Three specific institutions of German family policy are of direct relevance for our analysis. First, maternity leave (*Mutterschutz*) and maternity benefits (*Mutterschaftsgeld*) are available six weeks before and until eight weeks after a birth. In that period mothers are not allowed to work and their job is protected, i.e., they cannot be laid off. Those employed before birth continue to receive their full net earnings, those not employed prior to birth receive no benefits. Second, parents can take parental leave (*Elternzeit*). Since 1992 employers are obliged to guarantee a parent's job for up to 3 years after birth. Couples are free to choose which partner uses the parental leave.

As a third institution, child-rearing benefits (*Erziehungsgeld*) were government transfers paid to one parent prior to the reform. These benefits were means tested and paid a maximum of 300 Euro per month for up to 24 months (regular benefit version) or,



alternatively, 450 Euro per month for 12 months (budget version).<sup>3</sup> The eligibility criteria of the means test relate to the expected family income in years one and two after a birth.<sup>4</sup> In principle, recipients of child-rearing benefits could work part-time. However, as labor earnings counted against the means test the benefit scheme set strong disincentives against labor force participation. Only "mini-jobs", i.e., subsidized marginal employment with earnings below 400 Euro per month did not count against the means test.

The parental leave benefit reform of 2006 changed this third institution leaving maternity leave, maternity benefits, and parental leave unaltered. Parents of children born on or after January 1, 2007 are entitled to "parents' money" (*Elterngeld*) instead of child-rearing benefits (*Erziehungsgeld*). The new benefit generally amounts to two thirds of average net earnings in the 12 months prior to the birth for the parent who does not work after birth. Parents employed part-time or in marginal employment (mini-job) after a birth receive 300 Euro per month as a minimum and additionally up to two thirds of the decline in earnings if a reduction in hours worked occurred after the birth. A minimum benefit of 300 Euros per month is provided also to those not previously employed. The maximum transfer amounts to 1,800 Euro per month. One parent can receive the benefit for up to 12 months, the other parent can receive the benefit for an additional two months of employment interruption. Couples are free to split the available 14 months of benefits between themselves. Single parents can receive the benefit for 14 months.

In terms of transfer amounts the new benefit is more generous than the prior means-tested benefit. In terms of transfer duration the new benefit is less generous than its

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<sup>3</sup> Only a minority of parents (e.g., 13 percent in 2006) used the budget version (RWI 2008).

<sup>4</sup> Parents were eligible for full child-rearing benefits if their annual net income was below a threshold. If net income exceeded the threshold payouts were reduced. The thresholds differed for couples and single parents and varied with the number of children in the household. They also differed for benefits to be paid in months 1-6 vs. 7-24 after a birth. In addition, the income concept on which eligibility is based, differs for months 1-12 and 13-24, resulting in different eligibility rules for months 1-6, 7-12, and 13-24. Benefit eligibility in months 1-12 (13-24) after the birth was based on income in the calendar year prior to (after) birth. Maternal income was not considered, if the mother did not work after birth.

predecessor as it runs for only 12 or 14 months as opposed to 24 months before, given eligibility.<sup>5</sup> Before the reform, part-time employment during benefit receipt was considered in the means test. The reform abolished the means test and thus strengthened work incentives.

Another relevant institution is child care. While child care has widely been available for children between ages three and six, care for children under age three was lacking in West Germany: in 2006, less than eight percent of those below age three attended public child care in West compared to nearly fifty percent in East Germany. In response, political agreements of 2005, 2007, and 2008 called for an increase in child care provision to guarantee availability by 2013 (for details see Bauernschuster et al. 2013). In consequence, child care availability for children below age 3 increased over time from coverage rates of 13.6 in 2006 to 27.6 percent in 2012, with substantial variation at the county level (BMFSFJ 2015).

## **2.2 Expected Labor Supply Responses to the Reform**

We are interested in the reform effect on maternal labor force participation. Given the institutional change, the behavioral adjustments can differ (i) for the first 12 months after a birth, i.e., the time of benefit payout, and the period afterwards and (ii) for mothers who would have received child-rearing benefits prior to the reform and those who would not have received pre-reform benefits. Next, we discuss the responses that we expect in the framework of an inter-temporal model of labor supply (see, e.g., Klerman and Leibowitz 1999).

For the first 12 months after a birth all prior benefit recipients continue to be eligible and parents who failed the means tests before are newly eligible. Among mothers who could not have claimed benefits before the reform (new recipients), we expect a pronounced drop in labor force participation. For prior benefit recipients transfer amounts may now increase beyond 300 Euro per month if the mother was employed before the birth. The abolition of the

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<sup>5</sup> It is possible to double the eligibility duration of the new parental leave benefit if the monthly benefit is cut in half; only about ten percent of recipients use this option (STBA 2013).

means test renders employment more attractive already in year 1 after birth. Also, the transfer now ends already after 12 instead of 24 months which might generate an incentive to reconnect to the labor market faster. Overall, we expect, increased labor market attachment of prior benefit recipients in year one after the birth. However, a countervailing mechanism could result from increased reservation wages following a benefit increase.

The change in regulations after month 12 after a birth differently modifies the labor supply incentives of those who previously could and could not claim child-rearing benefits: prior recipients now lose the benefit already after month 12. Due to a negative income effect, we expect an increase in their labor supply after month 12 compared to the pre-reform situation. In addition, the means-tests on household income are abolished and permit labor force participation. Similarly, new recipients who would not have received a benefit prior to the reform now lose their transfer after 12 months. While they should reduce labor supply in the first year after birth after the reform, labor supply models suggest no change in labor market behavior compared to the pre-reform situation after month 12. Thus, at the end of the transfer period their labor supply should increase to its pre-reform level. Alternatively, the newly available benefit may generate a wealth effect: after the reform and with the benefit mothers may be able to afford more time out of work than before the reform and without the benefit. In that case, the reform may as well reduce labor force participation after month 12.

### **3. Data and Empirical Approach**

#### **3.1 Description of the data**

We use data from of the German Socioeconomic Panel (SOEP), a long running panel study which provides detailed household and individual information (Wagner et al. 2007). The only disadvantage of the SOEP data is that the number of new mothers with births immediately before and after the reform is limited.

The reform affected all births on or after January 1, 2007. It was first discussed in May 2006 and was passed into law in September 2006. This implies that children born in a window of six months around January 1, 2007 were conceived before the details of the reform were available. We consider mothers who gave birth in time windows of equal length before and after the reform. While our main analysis uses 24 month periods, i.e., all births observed in 2005/06 vs. 2007/08 we offer robustness tests with more narrow windows of observations. We consider all births and censor spells after a first birth when a second birth occurs.

Our dependent variable describes the number of months until a recent mother returns to the labor market. To compare the reform effects for different types of transitions, we consider three outcomes: (a) labor force participation, which includes part- and full-time work, marginal employment, and registered unemployment; (b) substantial employment, which only considers regular part-time and full-time employment, and (c) full-time employment. We regard a transition into a labor market state of interest as absorbing. We study the labor market behavior of mothers for up to 42 months after birth. The available information covers the time until December 2011. Thus, the spells of mothers giving birth after the reform are partly censored.

We expect heterogeneous responses for prior and new beneficiaries. To test our hypotheses, we need to identify the two groups in the data. In order to determine the potential child-rearing benefit eligibility status of mothers, we use information on the household situation, i.e., partnership, number of children, and gross income in the year before the birth.<sup>6</sup> We consider households to be ineligible for child-rearing benefits if the gross income of the

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<sup>6</sup> The eligibility rules differ for months 1-6, 7-12, and 13-24 after birth. In our analysis we use the rules for months 7-12 to determine eligibility. We code households to be at least potentially eligible if either the income does not exceed the means test threshold or if the income falls below the threshold after the mother reduces working hours. We predict that about 64 percent of the mothers in our sample are potentially eligible for the prior child rearing benefit. This agrees well with actual recipient shares for the births of 2006 where 77 percent of parents were eligible in months 1-6 and 50 percent beyond month 6 (Ehlert 2008).

father before the births exceeds the threshold.<sup>7</sup> Sensitivity tests with respect to the determination of the eligibility status show that our results are robust to modifications in these procedures.

We observe 372 women giving birth before and 313 women giving birth after the reform with valid information on month of birth, monthly employment status and covariates.<sup>8</sup> For our dependent variables we observe 149 / 102 / 51 exits to the three different labor markets states (a-c) before and 111 / 84 / 50 exits, after the reform, respectively. We follow the literature and consider as basic covariates age, region of residence (i.e., East or West), not being German citizen, years of education, having a first child, and being single. If not indicated otherwise we treat covariates as time constant, measured at the time of the birth. However, the treatment effect (see next section) is time-varying with the age of the child. **Table 1** shows descriptive statistics for the pre- and post-reform samples. The two samples do not differ with respect to most characteristics, however, women in the new regime are slightly older and are more likely to give birth to a higher order child which agrees with overall demographic trends.

### 3.2 Empirical Approach

We are interested in mothers' return to the labor force after childbirth and in the effect of the parental leave benefit reform on the timing of this event. As a natural approach to model the time until labor force transition we use semi-parametric Cox hazard models. The main advantages of this method are that it does not impose constraints on the baseline hazard and therefore on duration dependence, it allows us to account for censored observations, and it

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<sup>7</sup> For months 7-12 after a birth the income of the father in the 12 months before the birth and the current income of the mother counted towards the means test. As we do not know how much mothers of children born under the new regime would have earned under the old regime, we assume that they would earn no more than before birth.

<sup>8</sup> The sample size declines from originally 568/472 women giving birth before/after the reform because we require complete information, e.g., on monthly employment status and family income.

takes advantage of the full distribution of time until an exit from the 'post-birth out of the labor force state'. We extend the basic Cox model by allowing for time-varying treatment effects and for different baseline hazards for treatment and control groups and for prior and new recipients.

We model the hazard of the transition out of the 'post-birth out of the labor force' state for females giving birth in the pre- and post-reform periods, 2005/06 and 2007/08. As all spells commence with a birth, there is no left censoring. We observe women in the out of the labor force state until they either return to the labor force or are right censored because they reach the last survey month (December 2011), reach the maximum duration in our sample (42 months), experience another birth, or attrit from the survey sample.<sup>9</sup>

We start out with the log hazard of leaving the 'post-birth out of the labor force' state at time  $t$  for mother  $i$ , conditional on being in this state until time  $t$ ,  $\lambda_i(t)$ . Our empirical approach takes two steps. In step one we conduct a before-after analysis which evaluates the shift in the baseline hazard after the reform for different parts of the baseline hazard distribution. In step two we apply a difference-in-differences estimation similar to Fortin et al. (2004), comparing women who are and are not affected by the reform. This accounts, e.g., for the effects of business cycles and aggregate unemployment trends.

Before-after analyses may evaluate a change in the hazard after a reform using a model such as (1) with a constant effect ( $\alpha$ ) of the reform ('reform') on the log hazard. Covariates  $z$  control for mechanisms affecting the hazard in addition to the reform. They can be time varying and are assumed to shift the log hazard by a factor  $\beta$ .

$$(1) \quad \lambda_i(t) = \lambda_0(t) + \text{reform}_i \alpha + z_i(t) \beta.$$

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<sup>9</sup> We have chosen the upper limit of 42 months in order to include the period of job protection under parental leave (36 months) and the time until a child's entrance to kindergarten that occurs around age three. With respect to the dependent variable 'time until any labor force participation' (substantial employment) [full-time employment], 1.9 (2.3) [5.4] percent of our mothers are censored because they reach the last survey month, 10.8 (18.3) [32.3] percent are censored because they reach the 42 months duration, 12.7 (15) [18.1] percent are censored because they experience another birth, and 18.4 (21) [24.8] percent attrit from the survey.

However, we do not expect a constant treatment effect ( $\alpha$ ) in our case. Instead, we allow the reform effect to vary over the duration of the spell, which here is identical to the age of the child ('age'). So, model (2) replaces the reform indicator with a vector of its interaction terms with age to evaluate how the baseline hazard changes after the reform:

$$(2) \quad \lambda_i(t) = \lambda_0(t) + \{\text{reform}_i * \text{age}(t)_i\} \alpha(t) + z_i(t) \beta.$$

The before-after analysis provides unbiased estimates of the causal reform effect if three conditions apply. First, there should be no anticipation and fertility in the treatment and control groups must be unaffected by the reform. Ideally, one would compare the behavior of mothers if their births occurred randomly in the pre- and post-reform periods. Such a situation is approximated if we consider only births from a short window of time around the reform date January 1, 2007. Due to sample size restrictions we use a broader time window and then test whether our results change when the window around the reform date is narrowed.

As a second condition, seasonality should not affect the difference between pre- and post-reform outcomes. We investigate this in a robustness test even though this source of bias is less important the wider is the time window of observations. Finally, we have to assume that there are no specific time trends in female return behavior to the labor force for those who are affected by the reform. As an approximation **Figure 1** shows the development of maternal employment since 2001 by the age of the youngest child. While recent years yield increasing participation, there is no evidence that such trends were important prior to 2007. In our main specification a linear time trend controls for these developments.

In the second step of our analysis we apply a difference-in-differences (DID) estimation to account for any general shifts in return behavior to the labor market that occurred after the reform and might bias our results. As the treatment group (T) we use women who gave birth shortly before and after the reform date of January 1, 2007. For the control group (C) we consider women who gave birth three years earlier and who therefore

are not affected by the reform.<sup>10</sup> Following Fortin et al. (2004), we allow the shift in the post reform hazard,  $\alpha(t)$ , to consist of one element that describes the causal reform effect,  $\alpha_R(t)$ , and one that describes general changes in the hazard over time,  $\alpha_P(t)$ :  $\alpha(t) = \alpha_P(t) + \alpha_R(t)$ . Now we can describe the models for the treatment and control groups:

$$(3) \quad \lambda_i(t)^T = \lambda_0(t)^T + \{\text{reform}_i * \text{age}(t)_i\} [\alpha_P(t)^T + \alpha_R(t)^T] + z_i(t) \beta^T$$

$$(4) \quad \lambda_i(t)^C = \lambda_0(t)^C + \{\text{reform}_i * \text{age}(t)_i\} [\alpha_P(t)^C + \alpha_R(t)^C] + z_i(t) \beta^C.$$

Generally, the two elements of the post reform shift,  $\alpha_P(t)^j$  and  $\alpha_R(t)^j$  for  $j = T, C$ , are not separately identified. The before-after approach assumes that  $\alpha_P(t)^T = 0$  and  $\alpha_R(t)^C = 0$ . In the DID framework we assume that the overall time effects are identical for the two groups, i.e.,  $\alpha_P(t)^T = \alpha_P(t)^C = \alpha_P(t)$ .<sup>11</sup> To keep things simple, we let  $\beta = \beta^T = \beta^C$ . If we set an indicator 'treat' to one for treatment and to zero for control observations, we obtain the following model:

$$(5) \quad \lambda_i(t) = \lambda_0(t)^C + \text{treat}_i [\lambda_0(t)^T - \lambda_0(t)^C] \\ + \{\text{reform}_i * \text{age}(t)_i\} \alpha_P(t) + \{\text{reform}_i * \text{age}(t)_i\} * \text{treat}_i \alpha_R(t)^T + z_i(t) \beta.$$

Line one of equation (5) gives the baseline hazard for the two subsamples. In line two we first consider a possible general shift in the hazard after the reform that equally affects treatment and control group ( $\alpha_P(t)$ ). The causal reform effect on the treated is estimated by  $\alpha_R(t)^T$  if there are no heterogeneous uncontrolled time trends for treatment and control groups. We underestimate the true reform effect for two reasons: first, as we do not observe maternal benefit receipt we identify intention to treat effects. Second, our sample is too small and has too few multiple spells to credibly account for the distribution of unobserved heterogeneity. As the assumption of no unobserved heterogeneity within a hazard rate model with a very

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<sup>10</sup> We considered using unemployed women, whose children are above age 18 as control group. However, the unemployment benefit duration was shortened (for older unemployed) in 2009, which made this approach infeasible. Also, male unemployed of the same age as the mothers could not be used, as men and women were differentially affected by the recession in 2008.

<sup>11</sup> **Figure 1** shows the time trends in employment for mothers of recent births and three years olds in Panels 1 and 4. In both cases the time trends are roughly flat, which strengthens the credibility of the parallel trends assumption.



flexible baseline hazard tends to bias the estimated hazard ratios towards one (see Ridder 1987, Van den Berg 2001), we estimate lower bounds of the true reform effect.

## 4. Results

### 4.1 Nonparametric and Graphical Results

**Figure 2** describes the development of maternal labor force participation after birth before and after the reform. It shows smoothed hazards and survivor functions separately by maternal child-rearing benefit eligibility before the reform, i.e., for prior and for new recipients.<sup>12</sup>

Before the reform, exit rates of prior recipients (see Panel 1) peaked after 3, 12, 24, and 36 months. These peaks are likely related to the end of maternity leave (8 weeks), the earliest entry age to formal childcare (typically 1 year), the end of child-rearing benefits and eased child care access (2 years), and the end of parental leave and guaranteed access to child care (3 years). The reform changed this pattern. Now, exit rates fall in the first few months after birth; around month 12 exit rates increase significantly relative to the pre-reform situation. Subsequent exit rates fall, the month 24 peak disappears, and at month 36 exit rates peak again.

The survivor functions describe the probability of staying out of the labor force after birth (see Panel 3). After the reform and for prior recipients, this probability increased in year one after a birth; however, at the end of the new benefit payment period, when the child reaches month 13 it falls below prior levels for about one year. After the child turns two, the survival probability is similar to the pre-reform level. For prior recipients the decline in the survivor function in year two after birth matches the expected increase in labor supply.

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<sup>12</sup> We omit similar figures for the two other labor force participation indicators to save space. They are available in the electronic appendix. The patterns are similar but show lower exit hazards.

Panels 2 and 4 show the behavior of new benefit recipients: the pre-reform peak in exit rates at age 2 is smaller than for prior recipients, most likely because there are no expiring child-rearing benefits for this group. Generally, the post-reform patterns are similar to those of prior recipients: exit rates peak after year one, then they fall and increase again when the child turns three years old. Panel 4 presents the survivor function: after the reform, the probability of staying out of the labor force increases in year one, then drops well below the pre-reform level in year two, and afterwards converges slowly to the pre-reform level. The development in year one matches expectations. However, while we predicted that after year one labor supply would return to its pre-reform level or stay below it, we find an increase in the probability to return to the labor force. The overall net effect of the reform on long term employment appears to be zero. However, the shortened employment interruptions may affect wages, job continuity, promotion opportunities, and labor market careers in the longer run.

#### **4.2 Estimation Results: Before-After Comparisons**

Next, we apply a before-after model with covariates in order to estimate the causal effect of the reform.<sup>13</sup> We use a condensed specification of period-specific hazards. This allows us to estimate the reform effect separately for those who would have been eligible for prior child rearing benefits and for those who would not have been eligible. We allow for different baseline hazards for the two groups.

**Table 2** presents the estimation results for the three outcomes. The estimates for the covariates mainly have the expected signs: those in East Germany and with a first child return to the labor market faster and those without German nationality more slowly. We find no statistically significant time trend. Additional years of age and education increase exit rates and single mothers show a significantly reduced exit rate to substantial employment.

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<sup>13</sup> We control for age and education of the mother, whether the mother lives in East Germany, is of non-German citizenship, is a single parent, whether the child is a first birth, and a linear time trend. We approximate maternal work experience using age.

We do not find statistically significant reform effects for the exit rates in the first 11 months for either group; however, as expected, exit hazards fall on average for new benefit recipients after the reform. The estimations yield mainly significant reform effects around month 12 after birth for both groups: mothers who would have been eligible for the pre-reform benefit show an increased exit rate when the new benefit expires. Also, the new recipients show mostly significant increases in the exit rates in months 12-14. This increase in exit rates appears for all three outcome measures and is particularly large for overall labor force participation and substantial employment. For months 15-21 we find increased exit rates to the labor force for both groups after the reform. At higher ages of the child the exit hazards are generally reduced. The latter patterns are not precisely estimated.

In order to visualize these reform effects we simulated the pre- and post-reform survivor functions for prior and new recipients using average characteristics of both groups. **Figure 3** describes the predicted survivor functions for three labor force exits separately for prior and new recipients. The reform yields increased exit rates to the labor force starting around month 12 for both groups and all three outcomes. At, e.g., month 15 the survivor rate has dropped by 14 (15) percentage points for prior (new) recipients (cf. Panels 1 and 2). The predictions yield that the median time for prior recipients to return to the labor force fell by ten months, from 29 months prior to the reform to 19 afterwards (see Panel 1 along a horizontal line at the median). For new recipients this duration fell by eight months, from 37 to 29 months at the median after the reform (see Panel 2). Panels 3 and 4 reveal that at the median and for average prior and new benefit recipients the time until returning to regular full- and part-time employment did not change after the reform. However, this is related to the generally low employment rates of German mothers: Panels 3-6 show that over the entire

period the survivor curves do not cross the median line.<sup>14</sup> Remarkably, the figures show increased exit rates to full-time employment particularly for prior benefit recipients after the reform starting at month 12.

Based on the predicted survivor function, we can sign the cumulative change in the number of hours worked, e.g., by months 24 or 36. If we assume a constant employment intensity among mothers before and after the reform and apply a 'back-of-the-envelope' calculation, the overall number of hours worked increased both for substantial as well as full-time employment after the reform. This confirms a strengthened labor market attachment.

The most unexpected outcome is the strong increase in the propensity of newly eligible mothers to return to the labor market after month 12. This does not agree with the prediction of no behavioral change or even falling labor supply discussed before. In the next section we explore alternative explanations of this effect.

### **4.3 Heterogeneity in before-after effects: hypotheses and results**

A number of mechanisms may determine the post-reform labor market choices at the point when benefits run out for mothers who newly receive parental leave benefits. In this section we discuss and evaluate the plausibility of six mechanisms: (i) speed premium, (ii) paternal involvement, (iii) child care availability, (iv) maternal preferences for own income and economic independence, (v) social norms, and (vi) the relevance of job tasks. We evaluate these mechanisms by comparing the behaviors of those who are and those who are not affected by any given mechanism.<sup>15</sup>

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<sup>14</sup> When we evaluate the effect on returning to substantial employment at the 75th instead of the 50th percentile of the distribution (i.e., drawing a horizontal line at the 75th percentile in Panels 3 and 4), we find effects of 3 and 4 months for prior and new recipients, respectively.

<sup>15</sup> This section describes the results obtained when studying prior and new recipients jointly; the mechanisms should affect both groups and pooling them provides larger estimation samples. However, in robustness tests we repeated the tests for the new recipients only. While the sample sizes are smaller the resulting patterns are not substantially different from those presented here (available upon request).

(i) A first rationale for new recipients' increased labor force attachment after month 12 is that employment after a birth may now affect future parental leave benefits. This generates a work incentive for mothers who expect to have additional children. To evaluate the plausibility of this explanation, we tested whether mothers of first children respond more strongly to the reform (see **Table 3**). We do not find economically or statistically significantly higher exit rates after month 12 among first time mothers; thus, there seems to be no support for this rationale.

(ii) A second mechanism that might explain increased maternal labor force attachment after month 12 may be related to the new regulation that provides two additional benefit months if the father takes the leave: as couples often use paternal after maternal leave, the household employment situation changes after month 12. This may facilitate maternal return to work compared to a situation with static household labor supply. To test this mechanism, we evaluated the sensitivity of maternal exit to the labor force to paternal leave taking by adding interaction terms of paternal involvement with the vector of reform indicators to the specification (see **Table 4**). However, we find no evidence to support the hypothesis.

(iii) Next, we investigate whether changes in child care availability over time might be related to maternal labor force attachment. As a first test we control for annual child care coverage for children below age three in the maternal county of residence. It is a particular advantage of our approach that it allows us to incorporate region-specific and calendar-time varying information for all mothers. The results in **Table 5** show small positive effects of child care availability on maternal return to the labor market which is statistically significant only for return to substantial employment. However, our main result, i.e., that new recipients increase their labor supply after 12 months after the reform is even stronger after controlling for child care availability. In additional estimations we used more flexible specifications and interacted regional child care availability with the age of the child because availability may affect mothers differently depending on the age of her child. The results confirm this

expectation (see the electronic appendix) and show significantly positive effects of child care availability on labor force return. However, we continue to find strong and significant reform induced increases in labor force return after year one. We also allowed the child age-specific child care availability effects to change after the reform and to differ in urban (high demand) and rural (lower demand) areas. These additional controls did not affect our main estimates of the reform effects (see the electronic appendix).<sup>16</sup>

(iv) Another potential mechanism relates to mothers' preferences with respect to economic independence and an own income: before the reform, mothers without child-rearing benefits who left the labor force and cared for a child lost their benefit income at the end of maternity leave, eight weeks after birth. Afterwards, there was no reason to return to work at any specific time; many mothers chose to be financially dependent on their partner, which one might label a "housewife trap" for those who stayed at home. After the reform, the loss of an own income typically occurs only after month 12. At that time, mothers may judge the option of returning to work and seeking external care for their child differently than after week eight. The loss of an own income after month 12 can provide an impetus to return to work which might increase labor force participation rates beyond pre-reform levels.<sup>17</sup> To test whether the high rate of return to the labor force at month 12 can be explained by mothers' preferences for an own income and economic independence, we apply two measures. First, we test whether women who strongly value being able "to afford something" react stronger to the reform.<sup>18</sup>

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<sup>16</sup> In German municipalities access to child care is rationed. Government agencies apply "social criteria" such as having a partner or family income when allocating child care spots. Single parents receive preferential treatment. To test whether this might affect our results, we added child care availability interacted with child age and the triple interaction of child care availability with child age and single parent status to our model (see the electronic appendix). Our results are robust to adding these controls, as well.

<sup>17</sup> The same response can result from a consumption habit where behavior responds to a taste for certain consumption levels. Alternatively, it may be influenced by the mothers' interest in maintaining her economic independence and bargaining position in the partnership.

<sup>18</sup> The variable is based on the question "Various things can be important for various people. Are the following things currently very important, important, less important, not at all important for you? Afford to buy something for myself." We code those who indicate "very important". This applies to 21% of our sample.

These women might be particularly attracted by the new option of avoiding the "housewife trap." Indeed, we find a weakly significant increase in the exits to the labor force around month 12 for this particular group (**Table 6**). In addition, we consider information on how couples handle their finances. We assume that women who manage their account separately or partly separately value their financial independence.<sup>19</sup> **Table 7** shows the results when estimating the model with a main and interaction effect of this indicator with child age: those mothers who handled their finances independently before the birth generally have a higher hazard of returning to the labor force. Also, they respond stronger to the reform: they are significantly less likely to return to the labor force in months 1-11 and they are substantially (yet mostly insignificantly) more likely to return after the benefit runs out. Similarly, we observe that the propensity to return to the labor force when the benefit runs out increases (insignificantly) more strongly among the more highly educated mothers (see the electronic appendix). Overall, the evidence appears to agree with our expectations.<sup>20</sup>

(v) Alternatively, one might argue that the institutional regulation of benefit expiration after month 12 generates a new social norm and signal for young mothers that it is socially acceptable (or even expected) to return to work and to use child care when the child has reached the age of one year. Similarly, young mothers might respond to (perceived) expectations of their employers (e.g., Bernheim 1994).<sup>21</sup> Such social norm effects are a common explanation of observed retirement behavior (e.g., Hanel and Riphahn 2012). If prior to the reform the focal, expected, or normal point for young mothers to return to work was after 36 months at the end of employment protection (see **Figure 2**) this may have shifted

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<sup>19</sup> The variable is based on the question "How do you and your partner decide what to do with the income that one of you or both receive?" We code those who manage their account before birth separately or partly separately as financial independent. This applies to 44% of our sample.

<sup>20</sup> If financial independence is the driving force, we should observe different behaviors for single mothers and for those with a partner. However, we could not test this potential explanation of new recipients' behavior as all single mothers in our sample were in the group of prior recipients.

<sup>21</sup> Traditionally, West German social norms were opposed to maternal employment and child care use, particularly for small children. For a discussion see, e.g., Borck (2014).

after the reform to month 12, the end of transfer receipt. Thus, increased maternal labor force participation after month 12 could result from of a change in social norms.<sup>22</sup>

We use various approaches to test the plausibility of this hypothesis. (a) As a change in social norms takes time we expect a potential reform effect to increase over time. Thus, we consider an interaction term of the reform effect which indicates whether a child was born in 2008 rather than in 2007. The estimation results in **Table 8** show that the increase in exit rates in months 12-14 was significantly higher for births that occurred in 2008 rather than in 2007. In addition, the decline in months 1-11 is (insignificantly) stronger for later births.<sup>23</sup> This supports the social norm hypothesis. (b) Next, we test whether women who value success at work react stronger to the new policy. Because the traditional social norm of staying at home after a birth was particularly binding for this group, they might adjust faster to the change in circumstances than others. The results in **Table 9** support this reasoning: mothers who value success at work return to work faster and respond significantly stronger to the end of the new benefit. (c) Third, personalities respond differently to changes in social norms. One might expect that women with a more external locus of control respond stronger to changes in social norms.<sup>24</sup> We test whether mothers who agree with the statement that "others make the crucial decisions in my life" respond stronger to the reform by adding an interaction term of this characteristic with the reform effect to the empirical specification (see the electronic appendix). The results yield (insignificantly) stronger responses among mothers who stated that others make the crucial decisions in their life. (d) Finally, we compare the reform response between East- and West-German mothers. Given the socialist heritage of East Germany, social norms there are more in favor of maternal employment and early return to

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<sup>22</sup> Such a change in social norms is observationally equivalent with a peer effect that snowballs through the system and can affect heterogeneous individuals in different ways (see Dahl et al. 2014).

<sup>23</sup> Clearly, we are not able distinguish whether the differences in behavior after births in 2007 vs. 2008 truly derive from shifts in social norms or from other factors affecting shifts in choices over time.

<sup>24</sup> Coleman and DeLeire (2003), Cobb-Clark et al. (2014), and Caliendo et al. (2010) show that locus of control is related to education, life style, and labor market choices.



work. If a shift in social norms occurs after the reform it should be visible particularly in West Germany. The estimation results show (see the electronic appendix) that the reform effects around month 12 are economically but not statistically significantly larger in the West. This confirms the plausibility of a shift in social norms after the reform which may drive increased labor force return in months 12-14.<sup>25</sup>

(vi) Our final approach to explain the return to work around month 12 relates to the hypothesis that this is driven by those females who have a particularly high depreciation rate on their human capital (cf. Adda et al. 2011). To test this hypothesis, we interacted the reform effects with the individual job task content of mothers expecting that those with routine jobs are least affected by skill depreciation and postpone their return to work the most (Edin and Gustavsson 2008). However, our results show that women on jobs with a high share of routine tasks are more likely to return to work after month 12, than women working in nonroutine jobs (see the electronic appendix).<sup>26</sup> Overall, this leads us to reject the hypothesis that depreciation speeds up the return to work at the end of the transfer period.

Overall, we find support for the hypothesis that the increased labor force participation after month 12 relates to changes in social norms and to a preference for financial independence.

#### **4.4 Estimation results: difference-in-differences approach**

We apply a difference-in-differences (DID) estimation approach to account for the potentially biasing effects of the business cycle. Between 2005 and 2011 the German labor market underwent substantial changes. In 2005, unemployment had peaked at 11.7%. In the first

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<sup>25</sup> In an additional test we compared the reform effects for mothers living in rural and non-rural areas because women living in rural areas might be more strongly affected by social norms than women living in urban areas. We find that those living in the countryside respond significantly more strongly to the end of the benefit payout than those in urban areas (see the electronic appendix). This agrees with the expectations that a change in norms matters more for the rural population.

<sup>26</sup> The estimates are not statistically significant when the model is stratified by prior benefit receipt; they turn significant when we additionally stratify by job task content. The data for task content is an update version of the data used in Black and Spitz-Oener (2010).

reform year, 2007, employment was picking up. During the financial crisis unemployment hardly responded even though GDP declined by 5% (see, e.g., Dustmann et al. 2014).

We reestimated our model using mothers of three years olds as a control group. We allow for different baseline hazards for the treatment and control groups because the form of exit hazards may differ between mothers of very young and older children. **Table 10** shows the estimation results when the period effect ( $\alpha_p$ ) is constant across child age groups. In separate specifications we additionally considered time trend controls, used duration-varying effects and estimated models controlling for detailed quarterly calendar effects (see the electronic appendix). Our key results are robust: for both groups of mothers, prior and new recipients, we find an intensified return to the labor force after year one in the post-reform regime.<sup>27</sup>

#### 4.5 Robustness Tests

**Seasonality** - In the investigation of after-birth-events the seasonality of births is often a concern (e.g., Cygan-Rehm 2013). However, as we use a time window of two years before and after the reform date, seasonality effects should average out. Nevertheless, as a sensitivity test we add controls for month of birth to our baseline specification (see the electronic appendix): the main results are robust and only the hazard ratios decline slightly in magnitude. We cannot reject the hypothesis that in our sample the birth month does not have an effect.

**Before-after observation window** - So far, we considered maternal employment outcomes for births that occurred two years before and after the reform. When we set the time horizon to 6 months before and after the reform we obtain 162 observations. This sampling choice slightly

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<sup>27</sup> As an additional test of the relevance of the business cycle and labor market situation, we reestimated the models in **Table 2** when additionally controlling for county level unemployment rates: the coefficient of the local unemployment rate is almost equal to zero and it does not affect the estimated reform effects (see electronic appendix). The estimated reform effects are also robust to considering controls for interactions of the local unemployment rate with child age (see electronic appendix).

affects results: now it appears that after the reform prior benefit recipients returned to employment faster already in months 1-11 rather than around month 12. However, the estimates confirm the large post-reform increase of exit rates into the labor force and substantial employment around month 12 for new recipients (see **Table 11**).<sup>28</sup>

When setting the observation period to one year before and after the reform (see the electronic appendix), the reform effect for the new recipients around month 12 is significant for two exit states and even larger than in **Table 2**. Again, we do not find an increase in the exit rate to substantial employment for prior recipients around month 12.

*Omitting December 2006 and January 2007 births* - Tamm (2013) showed manipulations of the timing of births around the reform date, January 1 2007. To ensure that such behaviors do not bias our results, we reestimated our model in **Table 2** after dropping the births of December 2006 and January 2007 (N=24). Omitting these observations does not affect the results (see the electronic appendix).

*Definition of child-rearing benefit eligibility* - We offer two tests to investigate the robustness of our results to our approach of defining the pre-reform benefit eligibility status. First, we conduct a sensitivity analysis with respect to the eligibility rules for child-rearing benefit. So far, we used the rules applied to determine benefit eligibility in months 7-12. When we instead consider the requirements for benefit eligibility in months 13-24 and replicate our analyses, the baseline specification confirms the significant increase in the hazard rate around month 12 for prior and new recipients (see **Table 12**). Second, given our rich household-level information, we can group mothers who would have received pre-reform child-rearing benefits more finely into those (i) who certainly would have received the full amount of 300 Euro, (ii) those who certainly would have received a partial amount, and (iii) those who would have received the full or a partial amount if they reduced their working hours after birth. We estimate the reform effects separately for these groups. We find that

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<sup>28</sup> To avoid multicollinearity with the base line hazard we did not use a time trend here.

mothers who certainly would have received the full amount increased their exit rates to the labor force already in year one after birth, whereas those who would have received only a partial amount or for whom this is not certain react mainly around month 12 (see the electronic appendix).

***Potential misreporting*** - Maternity leave rules prohibit the employment of mothers in the first eight weeks after a birth. Nevertheless, in our data a few women report to return to the labor force in months 1 and 2 after a birth. We recoded these events to test whether this affects our results but find not substantial differences after recoding (see the electronic appendix).

***Seam effects*** - As survey data can suffer from seam effects (Bassi 1998), i.e., a mismeasurement of events at the start of a new interview period, we reestimated our models accounting for a "January effect." We find that the propensity to change labor force status is particularly high in January. However, the controls do not affect our key results (see the electronic appendix).

## **5. Conclusions**

This study evaluates the response of maternal labor force participation to a recent reform of the German paid parental leave program. The reform replaced a program which paid means-tested benefits for up to 24 months with one which provides earnings-related benefits for 12 months, without a means test, and for all mothers. The reform generated winners and losers who should respond differently. Our rich and detailed survey data allow us to identify these winners and losers. We apply event study methods to evaluate the reform effects in before-after comparisons which exploit the temporal discontinuity generated by the reform. We use difference-in-differences procedures to account for business cycle effects and provide sensitivity analyses.

We expected that after the reform and during benefit receipt (i.e., in months 1-12 after a birth) exit rates from the 'post-birth out of the labor force state' decline for new benefit

recipients and possibly increase for prior benefit recipients. We find that the exit rates indeed decline by more for new than for prior benefit recipients, however, these reform effects are insignificant. For the period after benefit expiration (i.e., after month 12 after a birth) we expected an increase in the hazard to exit the 'post-birth out of the labor force state' for prior benefit recipients who lose previously available benefits. We find clear evidence of this reform effect with a significant increase in transitions to the labor force by a factor three for this group. For new benefit recipients standard labor supply models predict either no reform effect or - if wealth effects are additionally taken into account - falling labor force participation. The estimates, however, show large and significant increases in the exit rate from the 'post-birth out of the labor force state' for new benefit recipients after month 12. Thus, both, the winners and the losers of the reform increase their labor market attachment after the reform when the child reaches age one.

The time until an average mother with (without) prior claims to benefits returns to the labor force after a birth declined after the reform by 10 (8) months at the median. This represents a substantial reform effect. In addition, the net effect of first declining and then increasing employment in years one and two after a birth is an overall increase in the cumulative number of hours worked by months 24 and 36 on average.

Our results for prior benefit recipients (losers of the reform) agree with those of, e.g., Lalive et al. (2014), who find an increase in labor force participation when cash benefit duration fell from 24 to 18 months in Austria. However, our finding that overall employment of new benefit recipients (winners of the reform) increases after the introduction of benefit payments differs from the literature on European paid parental leave reforms: Lalive et al. (2014) study an Austrian reform which increased benefit duration from 18 to 30 months in 2000. They found a decline in the propensity to return to the labor force. Similarly, Schönberg and Ludsteck (2014) study a 1993 German reform which extended benefit duration from 18 to 24 months and also find a decline in the propensity to return to work. In contrast, our finding

resembles the findings from U.S. studies, where, e.g., Rossin-Slater et al. (2013) or Waldfogel et al. (1999) confirm positive medium term effects of parental leave on labor force attachment.

The difference in findings from prior European analyses may relate to two factors: first, the benefit we study is newly introduced. The German 2007 reform constituted a major reform of the program, whereas in other reforms existing benefit claims were extended. Second, the benefits paid out in Germany after 2006 are substantially higher than those discussed in the studies of Lalive et. al. (2014) and Schönberg and Ludsteck (2014): in the German 1993 reform benefits amounted to at most 300 Euro per month and in the Austrian 2000 reform benefits did not exceed 435 Euro per month which contrasts with up to two thirds of past net earnings (up to 1,800 Euro per month) provided in Germany after 2006.

In order to understand the mechanisms that generate the increase in labor force involvement in year two after birth among new benefit recipients, we consider a variety of mechanisms. While we do not offer formal tests, we find patterns that render a shift in social norms plausible: the impact of the reform increased over time, women who may be expected to be restricted more by social norms (e.g., those with external locus of control, who value success at work, who live in West Germany, or reside in the countryside) tend to respond more strongly to the reform. In addition to social norms, maternal preferences for an own income and for economic independence may be at work particularly among new benefit recipients.

The finding of increasing labor force attachment among new beneficiaries of paid parental leave may be of particular interest for other countries - such as the United States - where paid parental leave programs do not yet exist at the federal level.

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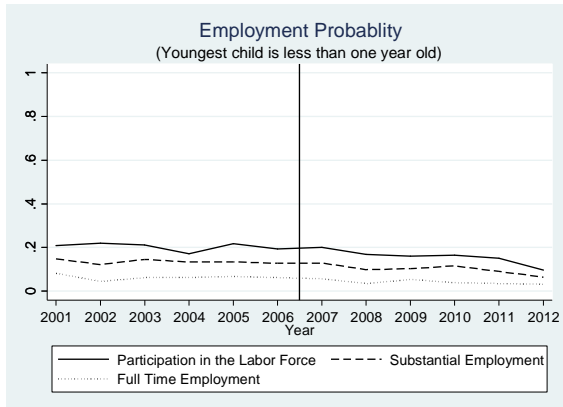
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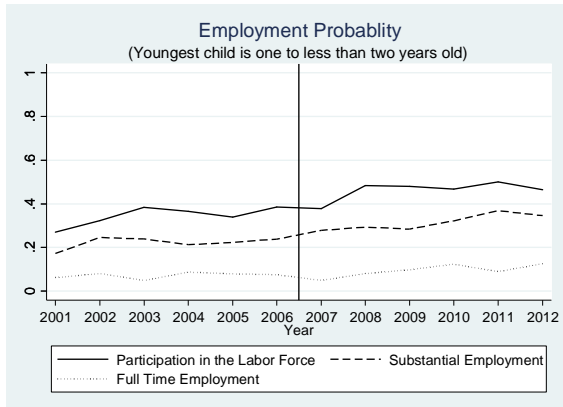
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**Figure 1** Employment Probability of Mothers

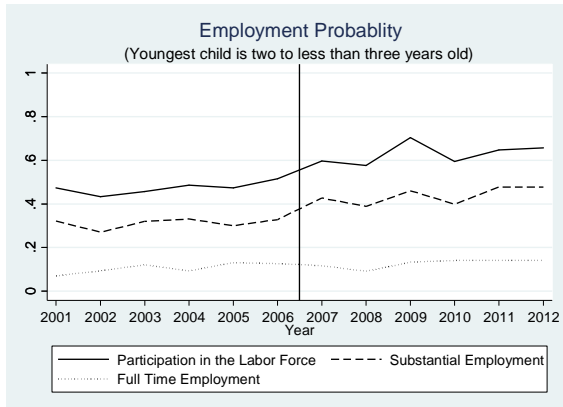
Panel 1



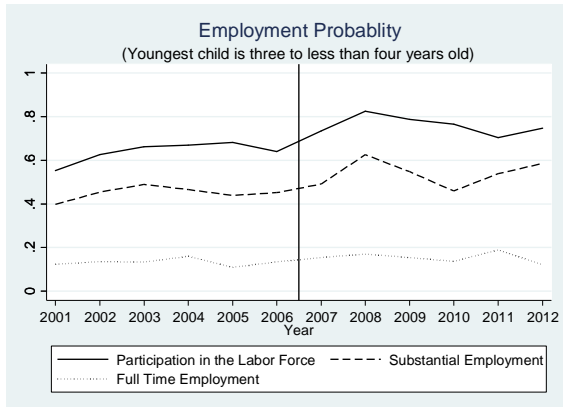
Panel 2



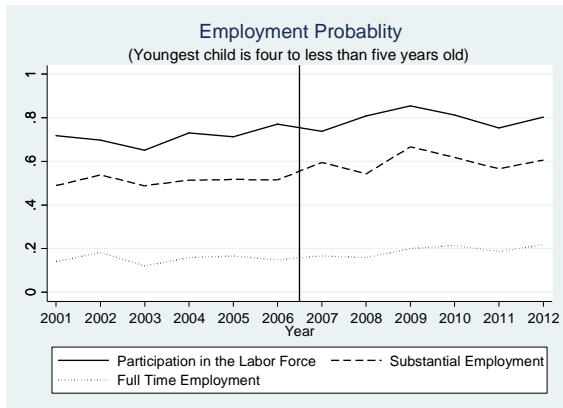
Panel 3



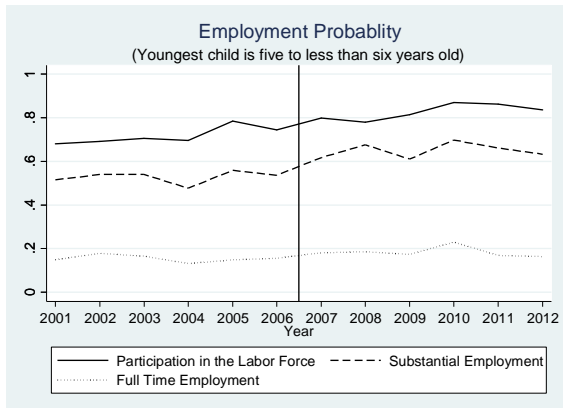
Panel 4



Panel 5



Panel 6

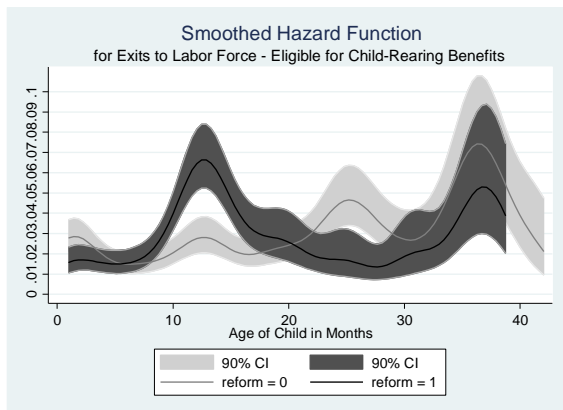


**Note:** The figures show weighted cross-sectional evidence on the annual share of mothers in a certain type of employment.

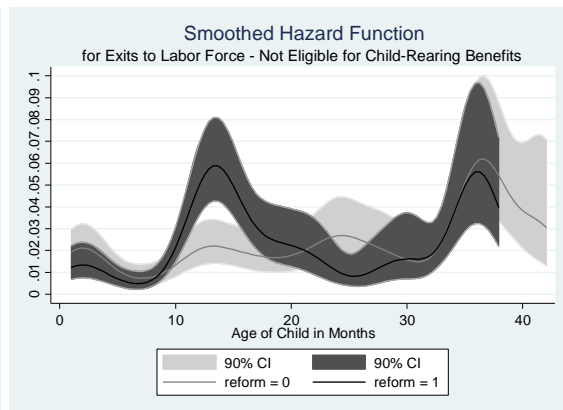
**Source:** SOEP (various years).

**Figure 2** Labor Force Participation Behavior of Mothers after Child Birth

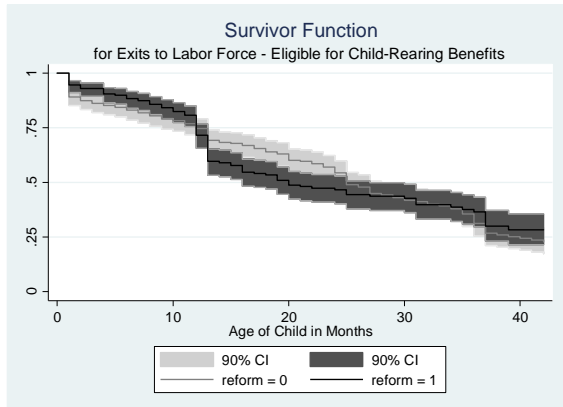
Panel 1



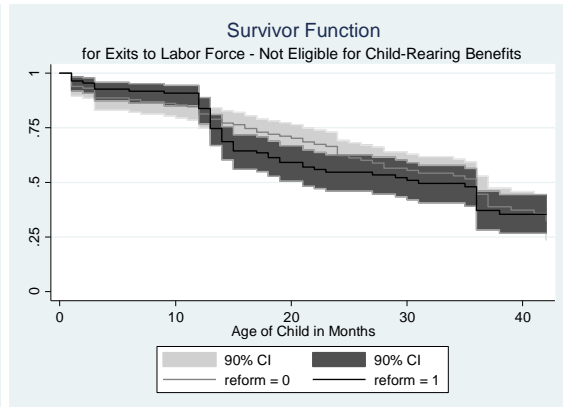
Panel 2



Panel 3

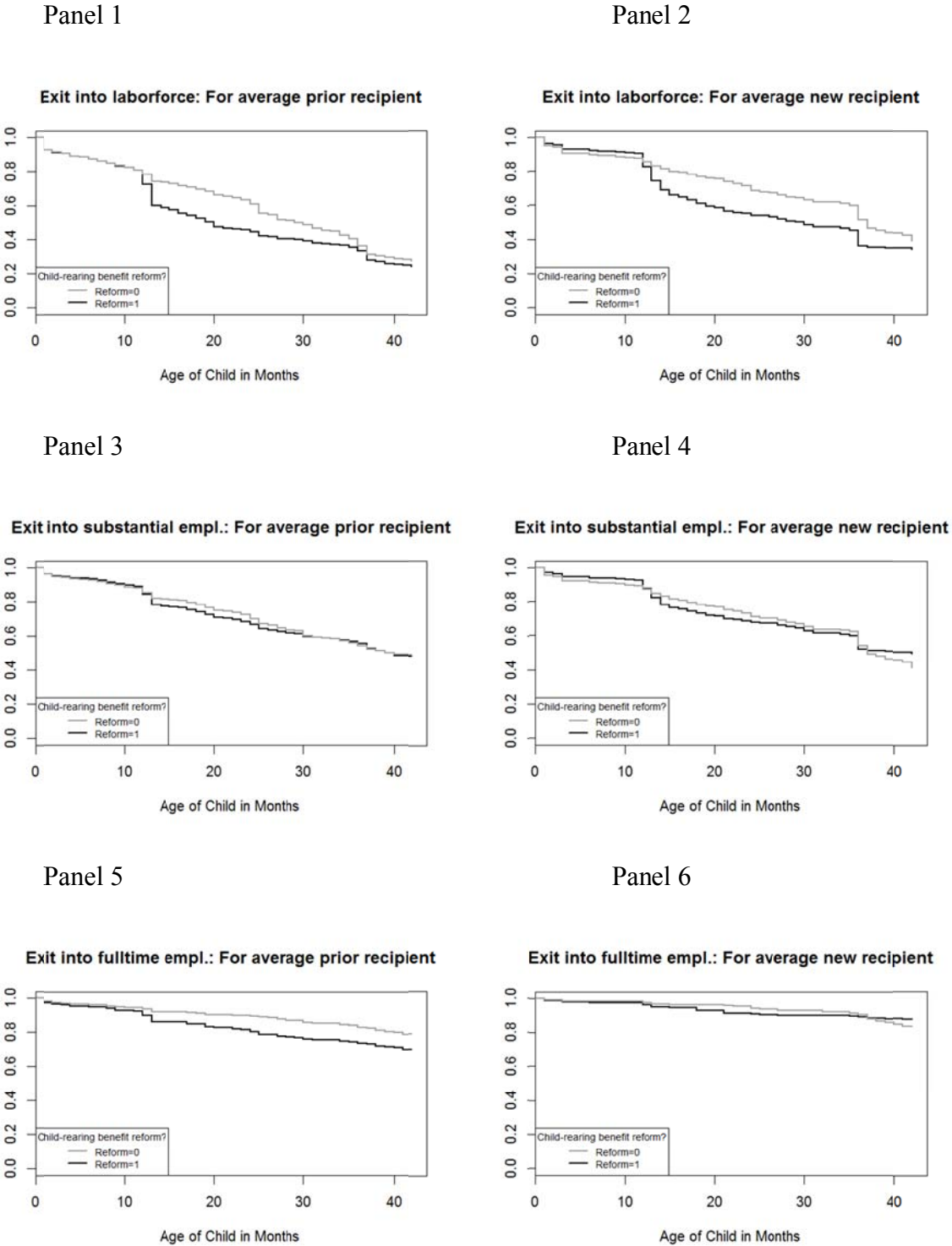


Panel 4



**Note:** Panels 1 and 3 use 441 observations and Panels 2 and 4 244 observations. Panels 1 and 2 use a Gaussian kernel without boundary correction and a bandwidth of 2 months.

**Figure 3** Simulated Survivor Curves for Average Prior and New Recipient



**Note:** Simulated survivor curves based on estimation results in **Table 2**.

**Table 1** Descriptive Statistics

	Old regime (N = 372 births)			New regime (N = 313 births)	
	Mean	St. Er.		Mean	St. Er.
<b>Independent Variables:</b>					
Maternal age in years	30.906	0.302	*	31.674	0.290
Maternal schooling in years	12.700	0.144		12.906	0.151
East Germany (0/1)	0.263	0.023		0.259	0.025
Foreign origin (0/1)	0.089	0.015		0.077	0.015
First child (0/1)	0.487	0.026	**	0.409	0.028
Single mother (0/1)	0.102	0.016		0.089	0.016
Eligible (certain and probable) to child-rearing benefits	0.642	0.025		0.645	0.027
Not eligible	0.358	0.025		0.355	0.027

**Note:** \*\*\*, \*\* and \* indicate statistically significant difference of the subgroup means in a two sided test at the 1, 5 and 10 percent levels.

**Table 2** Hazard Models – Basic Specification

	Exit into labor force participation	Exit into substantial employment	Exit into full time employment
Maternal age in years	1.004 (0.0113)	1.036 <sup>***</sup> (0.0131)	1.009 (0.0206)
Maternal schooling in years	1.025 (0.0233)	1.097 <sup>***</sup> (0.0267)	1.090 <sup>**</sup> (0.0410)
East-Germany	1.561 <sup>***</sup> (0.184)	1.633 <sup>***</sup> (0.222)	2.232 <sup>***</sup> (0.424)
Not German citizenship	0.431 <sup>***</sup> (0.110)	0.305 <sup>***</sup> (0.123)	0.317 <sup>**</sup> (0.182)
First child	1.354 <sup>***</sup> (0.143)	1.562 <sup>***</sup> (0.185)	1.937 <sup>***</sup> (0.364)
Single mother	1.108 (0.198)	0.644 <sup>*</sup> (0.154)	0.820 (0.243)
Time trend	0.991 (0.00722)	1.002 (0.00806)	0.992 (0.0122)
Reform&1-11 months& prior recipient	1.007 (0.279)	0.907 (0.305)	1.384 (0.631)
Reform&12-14 months& prior recipient	3.364 <sup>***</sup> (1.089)	1.812 (0.672)	2.828 <sup>*</sup> (1.568)
Reform&15-21 months& prior recipient	1.993 <sup>*</sup> (0.752)	1.082 (0.464)	2.064 (1.410)
Reform&22-25 months& prior recipient	0.536 (0.276)	0.888 (0.417)	3.502 (2.710)
Reform&26-36 months& prior recipient	0.575 (0.248)	0.666 (0.297)	1.078 (0.596)
Reform&37-42 months& prior recipient	1.160 (0.571)	1.446 (0.870)	0.913 (0.670)
Reform&1-11 months& new recipient	0.741 (0.313)	0.670 (0.299)	1.404 (1.260)
Reform&12-14 months& new recipient	3.819 <sup>***</sup> (1.589)	2.274 <sup>*</sup> (0.986)	1.462 (1.215)
Reform&15-21 months& new recipient	2.060 (0.983)	1.159 (0.595)	6.110 (7.211)
Reform&22-25 months& new recipient	0.504 (0.416)	0.485 (0.418)	0.467 (0.573)
Reform&26-36 months& new recipient	1.412 (0.613)	0.980 (0.462)	0.419 (0.518)
Reform&37-42 months& new recipient	0.225 (0.238)	0.165 <sup>*</sup> (0.176)	0.224 (0.258)
Number of Subjects	685	685	685

**Note:** Exponentiated coefficients; standard errors in parentheses, clustered at the individual level. In all estimations baseline hazards are stratified by potential child rearing benefit eligibility status. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

**Table 3** Hazard Models – Test whether First Time Mothers Respond more Strongly to the Reform

	Exit into labor force participation	Exit into substantial employment	Exit into full time employment
Maternal age in years	1.004 (0.0114)	1.035 <sup>***</sup> (0.0132)	1.012 (0.0211)
Maternal schooling in years	1.025 (0.0234)	1.097 <sup>***</sup> (0.0267)	1.093 <sup>**</sup> (0.0418)
East-Germany	1.536 <sup>***</sup> (0.182)	1.626 <sup>***</sup> (0.224)	2.319 <sup>***</sup> (0.452)
Not German citizenship	0.428 <sup>***</sup> (0.110)	0.303 <sup>***</sup> (0.122)	0.316 <sup>**</sup> (0.180)
First child	1.314 <sup>*</sup> (0.188)	1.505 <sup>**</sup> (0.250)	2.668 <sup>***</sup> (0.693)
Single mother	1.108 (0.199)	0.645 <sup>*</sup> (0.154)	0.847 (0.252)
Time trend	0.991 (0.00722)	1.002 (0.00806)	0.992 (0.0122)
Reform&1-11 months& prior recipient	1.148 (0.368)	0.899 (0.354)	2.009 (1.077)
Reform&12-14 months& prior recipient	3.333 <sup>***</sup> (1.146)	1.748 (0.687)	3.323 <sup>*</sup> (2.079)
Reform&15-21 months& prior recipient	1.778 (0.753)	0.938 (0.464)	3.589 <sup>*</sup> (2.553)
Reform&22-25 months& prior recipient	0.271 (0.237)	0.738 (0.460)	6.136 <sup>**</sup> (5.040)
Reform&26-36 months& prior recipient	0.496 (0.225)	0.672 (0.322)	1.837 (1.153)
Reform&37-42 months& prior recipient	1.158 (0.608)	1.704 (1.083)	1.112 (1.072)
Reform&1-11 months& new recipient	0.832 (0.354)	0.665 (0.312)	1.985 (1.775)
Reform&12-14 months& new recipient	3.790 <sup>***</sup> (1.665)	2.196 <sup>*</sup> (1.046)	1.679 (1.607)
Reform&15-21 months& new recipient	1.849 (0.950)	1.007 (0.555)	10.59 <sup>*</sup> (12.95)
Reform&22-25 months& new recipient	0.262 (0.223)	0.408 (0.334)	0.798 (1.078)
Reform&26-36 months& new recipient	1.204 (0.586)	0.988 (0.504)	0.695 (0.939)
Reform&37-42 months& new recipient	0.227 (0.248)	0.184 (0.200)	0.257 (0.269)
Reform&1-11 months& first child	0.760 (0.242)	1.016 (0.375)	0.559 (0.289)
Reform&12-14 months& first child	1.022 (0.285)	1.075 (0.370)	0.807 (0.464)
Reform&15-21 months& first child	1.273 (0.515)	1.335 (0.618)	0.364 (0.254)
Reform&22-25 months& first child	3.224	1.444	0.372

	(2.738)	(0.923)	(0.299)
Reform&26-36 months& first child	1.565	0.973	0.357
	(0.720)	(0.470)	(0.280)
Reform&37-42 months& first child	0.954	0.489	0.737
	(0.780)	(0.479)	(0.739)
<hr/> Number of Subjects	<hr/> 685	<hr/> 685	<hr/> 685

**Note:** see Table 2.



**Table 4** Hazard Models – Test for a Response to Paternal Leave Taking

	Exit into labor force participation	Exit into substantial employment	Exit into full time employment
Maternal age in years	1.004 (0.0117)	1.036 <sup>***</sup> (0.0134)	1.011 (0.0213)
Maternal schooling in years	1.024 (0.0237)	1.098 <sup>***</sup> (0.0272)	1.082 <sup>**</sup> (0.0419)
East-Germany	1.508 <sup>***</sup> (0.185)	1.560 <sup>***</sup> (0.222)	2.009 <sup>***</sup> (0.399)
Not German citizenship	0.440 <sup>***</sup> (0.113)	0.317 <sup>***</sup> (0.128)	0.331 <sup>*</sup> (0.190)
First child	1.361 <sup>***</sup> (0.149)	1.561 <sup>***</sup> (0.193)	2.057 <sup>***</sup> (0.407)
Single mother	1.089 (0.196)	0.656 <sup>*</sup> (0.158)	0.872 (0.262)
Time trend	0.991 (0.00749)	1.003 (0.00831)	0.992 (0.0130)
Father on parental leave	0.978 (1.028)	1.566 (1.603)	0.745 (0.897)
Reform&1-11 months& prior recipient	0.960 (0.280)	0.941 (0.337)	1.321 (0.655)
Reform&12-14 months& prior recipient	3.288 <sup>***</sup> (1.104)	1.702 (0.659)	2.739 <sup>*</sup> (1.659)
Reform&15-21 months& prior recipient	1.625 (0.653)	0.992 (0.433)	1.861 (1.302)
Reform&22-42 months& prior recipient	0.716 (0.218)	0.887 (0.293)	1.342 (0.615)
Reform&1-11 months& new recipient	0.571 (0.270)	0.506 (0.254)	0.823 (0.864)
Reform&12-14 months& new recipient	3.716 <sup>***</sup> (1.642)	2.153 (1.004)	1.079 (0.954)
Reform&15-21 months& new recipient	2.170 (1.110)	1.307 (0.731)	3.817 (4.793)
Reform&22-42 months& new recipient	1.011 (0.378)	0.784 (0.321)	0.364 (0.300)
Reform&1-11 months& father in leave	1.255 (1.406)	0.810 (0.889)	2.234 (2.931)
Reform&12-14 months& father in leave	0.986 (1.098)	0.784 (0.859)	2.991 (3.990)
Reform&15-21 months& father in leave	1.704 (1.956)	0.803 (0.941)	2.132 (3.065)
Reform&22-42 months& father in leave	0.461 (0.604)	0.277 (0.357)	1.724 (2.489)
Number of Subjects	597	597	597

**Note:** see Table 2. The number of observations is reduced because we do not observe fathers' leave taking behavior for all fathers. Due to the reduced number of observations and additional interaction effects we had to aggregate the time periods of 22-25, 26-36 and 37-42 months of the interaction effects.



**Table 5** Hazard Models – Test by Controlling for Local Child Care Supply

	Exit into labor force participation	Exit into substantial employment	Exit into full time employment
Maternal age in years	1.002 (0.0113)	1.036*** (0.0131)	1.010 (0.0206)
Maternal schooling in years	1.021 (0.0231)	1.089*** (0.0263)	1.086** (0.0404)
East-Germany	1.134 (0.267)	0.983 (0.265)	1.540 (0.685)
Not German citizenship	0.421*** (0.108)	0.290*** (0.119)	0.307** (0.178)
First child	1.364*** (0.145)	1.585*** (0.189)	1.965*** (0.369)
Single mother	1.020 (0.186)	0.594** (0.147)	0.792 (0.238)
Local child-care share	1.011 (0.00692)	1.017** (0.00801)	1.012 (0.0134)
Time trend	0.988* (0.00733)	0.998 (0.00811)	0.990 (0.0124)
Reform&1-11 months& prior recipient	1.007 (0.285)	0.943 (0.321)	1.353 (0.619)
Reform&12-14 months& prior recipient	3.369*** (1.085)	1.829 (0.675)	2.743* (1.509)
Reform&15-21 months& prior recipient	2.011* (0.760)	1.087 (0.466)	2.001 (1.366)
Reform&22-25 months& prior recipient	0.532 (0.272)	0.876 (0.410)	3.401 (2.623)
Reform&26-36 months& prior recipient	0.563 (0.243)	0.649 (0.289)	1.046 (0.574)
Reform&37-42 months& prior recipient	1.125 (0.550)	1.394 (0.834)	0.885 (0.647)
Reform&1-11 months& new recipient	0.783 (0.336)	0.730 (0.333)	1.464 (1.325)
Reform&12-14 months& new recipient	4.390*** (1.857)	2.676** (1.173)	1.452 (1.198)
Reform&15-21 months& new recipient	2.402* (1.174)	1.387 (0.725)	6.148 (7.252)
Reform&22-25 months& new recipient	0.531 (0.438)	0.525 (0.452)	0.476 (0.585)
Reform&26-36 months& new recipient	1.465 (0.637)	1.034 (0.485)	0.427 (0.527)
Reform&37-42 months& new recipient	0.228 (0.242)	0.170* (0.181)	0.229 (0.262)
Number of Subjects	679	680	683

**Note:** See **Table 2**. The number of observations varies because depending on the considered outcome individual observations stay non-censored for different periods of time, which modifies the probability of matching regional information.

**Table 6** Hazard Models – Differential Effects by "Valuing to be able to afford something"

	Exit into labor force participation	Exit into substantial employment	Exit into full time employment
Maternal age in years	1.004 (0.0115)	1.039 <sup>***</sup> (0.0133)	1.011 (0.0207)
Maternal schooling in years	1.028 (0.0240)	1.104 <sup>***</sup> (0.0274)	1.088 <sup>**</sup> (0.0409)
East-Germany	1.602 <sup>***</sup> (0.191)	1.657 <sup>***</sup> (0.225)	2.320 <sup>***</sup> (0.438)
Not German citizenship	0.434 <sup>***</sup> (0.112)	0.306 <sup>***</sup> (0.125)	0.322 <sup>**</sup> (0.184)
First child	1.354 <sup>***</sup> (0.148)	1.530 <sup>***</sup> (0.186)	1.937 <sup>***</sup> (0.367)
Single mother	1.005 (0.184)	0.625 <sup>*</sup> (0.154)	0.787 (0.238)
Time trend	0.991 (0.00732)	1.003 (0.00812)	0.993 (0.0122)
Values being able to afford something	0.991 (0.156)	1.282 (0.231)	1.161 (0.314)
Reform&1-11 months& prior recipient	1.003 (0.301)	0.992 (0.352)	1.626 (0.793)
Reform&12-14 months& prior recipient	2.896 <sup>***</sup> (1.002)	1.716 (0.689)	2.825 <sup>*</sup> (1.725)
Reform&15-21 months& prior recipient	2.175 <sup>**</sup> (0.844)	1.240 (0.542)	2.005 (1.403)
Reform&22-42 months& prior recipient	0.648 (0.206)	0.841 (0.286)	1.512 (0.686)
Reform&1-11 months& new recipient	0.712 (0.304)	0.687 (0.309)	1.494 (1.344)
Reform&12-14 months& new recipient	3.455 <sup>***</sup> (1.463)	2.256 <sup>*</sup> (0.997)	1.468 (1.162)
Reform&15-21 months& new recipient	2.094 (1.007)	1.266 (0.655)	6.098 (7.161)
Reform&22-42 months& new recipient	0.854 (0.321)	0.659 (0.271)	0.347 (0.269)
Reform&1-11 months& value able to afford s.	1.111 (0.458)	0.849 (0.406)	0.444 (0.352)
Reform&12-14 months& value able to afford s.	1.735 <sup>*</sup> (0.545)	1.259 (0.512)	0.919 (0.681)
Reform&15-21 months& value able to afford s.	0.457 (0.329)	0.463 (0.338)	1.020 (0.820)
Reform&22-42 months& value able to afford s.	1.013 (0.444)	1.036 (0.461)	0.573 (0.418)
Number of Subjects	674	674	674

**Note:** See **Table 2**. The number of observations is reduced because the question on values is not asked in every wave. Due to the reduced number of observations and additional interaction effects we had to aggregate the time periods of 22-25, 26-36 and 37-42 months of the interaction effects.

**Table 7** Hazard Models - Differential Effects by Financial Independence

	Exit into labor force participation	Exit into substantial employment	Exit into full time employment
Maternal age in years	1.004 (0.0139)	1.027* (0.0156)	0.991 (0.0266)
Maternal schooling in years	0.997 (0.0266)	1.069** (0.0298)	1.062 (0.0468)
East-Germany	1.807*** (0.246)	1.689*** (0.262)	2.306*** (0.525)
Not German citizenship	0.455** (0.152)	0.359** (0.174)	0.539 (0.315)
First child	1.327** (0.178)	1.519** (0.223)	1.897** (0.446)
Single mother	0.991 (0.260)	0.632 (0.212)	0.688 (0.289)
Time trend	0.992 (0.00853)	1.003 (0.00943)	0.993 (0.0147)
Financial independence	1.095 (0.189)	1.065 (0.208)	1.104 (0.329)
Reform&1-11 months& prior recipient	1.762 (0.648)	1.527 (0.675)	2.713* (1.622)
Reform&12-14 months& prior recipient	2.413** (1.007)	1.327 (0.655)	0.774 (0.736)
Reform&15-25 months& prior recipient	0.650 (0.333)	0.494 (0.269)	0.851 (0.831)
Reform&26-42 months& prior recipient	0.460* (0.205)	0.980 (0.445)	1.329 (0.905)
Reform&1-11 months& new recipient	0.926 (0.484)	0.893 (0.505)	3.528 (3.636)
Reform&12-14 months& new recipient	3.244** (1.536)	1.908 (0.986)	0.591 (0.756)
Reform&15-25 months& new recipient	0.999 (0.515)	0.538 (0.310)	0.663 (0.767)
Reform&26-42 months& new recipient	0.792 (0.387)	0.674 (0.355)	0.304 (0.351)
Reform&1-11 months& financial independence	0.401** (0.164)	0.426* (0.188)	0.384 (0.228)
Reform&12-14 months& financial independence	1.307 (0.412)	1.465 (0.569)	2.608 (2.204)
Reform&15-25 months& financial independence	1.907 (0.902)	2.465* (1.235)	3.938 (3.339)
Reform&26-42 months& financial independence	1.380 (0.664)	0.622 (0.325)	0.664 (0.487)
Number of Subjects	496	496	496

**Note:** See **Table 2**. The number of observations is reduced because the question on finances is not asked in every wave. Due to the reduced number of observations and additional interaction effects we had to aggregate the time periods of 26-36 and 37-42 months of the interaction effects.

**Table 8** Hazard Models - Differential Effects by Time since Reform

	Exit into labor force participation	Exit into substantial employment	Exit into full time employment
Maternal age in years	1.005 (0.0114)	1.036*** (0.0131)	1.010 (0.0207)
Maternal schooling in years	1.024 (0.0233)	1.097*** (0.0267)	1.085** (0.0406)
East-Germany	1.572*** (0.187)	1.639*** (0.225)	2.267*** (0.433)
Not German citizenship	0.432*** (0.111)	0.306*** (0.123)	0.314** (0.180)
First child	1.362*** (0.143)	1.574*** (0.186)	1.950*** (0.364)
Single mother	1.107 (0.197)	0.644* (0.152)	0.812 (0.238)
Time trend	0.990 (0.00912)	1.000 (0.01000)	0.988 (0.0149)
Reform&1-11 months& prior recipient	1.140 (0.339)	1.265 (0.442)	1.745 (0.811)
Reform&12-14 months& prior recipient	2.657*** (0.943)	1.404 (0.574)	1.792 (1.201)
Reform&15-21 months& prior recipient	2.115* (0.915)	0.986 (0.496)	2.277 (1.685)
Reform&22-29 months& prior recipient	0.505 (0.267)	0.768 (0.355)	1.568 (1.008)
Reform&30-42 months& prior recipient	1.054 (0.427)	1.003 (0.454)	1.528 (0.827)
Reform&1-11 months& new recipient	0.829 (0.354)	0.894 (0.398)	1.752 (1.596)
Reform&12-14 months& new recipient	3.140*** (1.375)	1.859 (0.880)	1.002 (0.950)
Reform&15-21 months& new recipient	2.185 (1.041)	1.065 (0.582)	6.823 (8.208)
Reform&22-29 months& new recipient	0.721 (0.455)	0.656 (0.450)	0.726 (0.786)
Reform&30-42 months& new recipient	1.137 (0.499)	0.607 (0.298)	0.225 (0.260)
Reform&1-11 months& child born in 2008	0.789 (0.247)	0.549 (0.204)	0.726 (0.363)
Reform&12-14 months& child born in 2008	1.606* (0.435)	1.715 (0.565)	2.685* (1.460)
Reform&15-21 months& child born in 2008	0.907 (0.366)	1.366 (0.602)	0.999 (0.675)
Reform&22-29 months& child born in 2008	0.595 (0.408)	0.834 (0.454)	2.009 (1.303)
Reform&30-42 months& child born in 2008	0.835 (0.369)	1.463 (0.648)	0.254 (0.279)
Number of Subjects	685	685	685

**Note:** see Table 2. Due to the small sample size in cells of the triple interaction terms we had to aggregate the time periods 22 to 29 months and 30 to 42 months.

**Table 9** Hazard Models - Test for Response Heterogeneity by Value of Success at Work

	Exit into labor force participation	Exit into substantial employment	Exit into full time employment
Maternal age in years	1.004 (0.0115)	1.039 <sup>***</sup> (0.0132)	1.013 (0.0206)
Maternal schooling in years	1.031 (0.0239)	1.105 <sup>***</sup> (0.0272)	1.095 <sup>**</sup> (0.0419)
East-Germany	1.561 <sup>***</sup> (0.186)	1.613 <sup>***</sup> (0.219)	2.213 <sup>***</sup> (0.426)
Not German citizenship	0.442 <sup>***</sup> (0.114)	0.312 <sup>***</sup> (0.127)	0.331 <sup>*</sup> (0.191)
First child	1.315 <sup>**</sup> (0.144)	1.495 <sup>***</sup> (0.185)	1.847 <sup>***</sup> (0.351)
Single mother	1.004 (0.182)	0.622 <sup>*</sup> (0.152)	0.776 (0.235)
Time trend	0.990 (0.00735)	1.001 (0.00829)	0.992 (0.0125)
Values being successful at work	1.093 (0.190)	1.206 (0.251)	1.590 (0.602)
Reform&1-11 months& prior recipient	0.854 (0.369)	0.837 (0.424)	1.733 (1.336)
Reform&12-14 months& prior recipient	1.966 (0.913)	1.034 (0.579)	3.073 (2.571)
Reform&15-25 months& prior recipient	1.078 (0.465)	0.651 (0.327)	1.503 (1.315)
Reform&26-42 months& prior recipient	0.861 (0.361)	0.960 (0.483)	1.793 (1.252)
Reform&1-11 months& new recipient	0.636 (0.316)	0.600 (0.329)	1.688 (1.671)
Reform&12-14 months& new recipient	2.453 <sup>*</sup> (1.166)	1.386 (0.744)	1.643 (1.685)
Reform&15-25 months& new recipient	1.286 (0.650)	0.655 (0.389)	1.156 (1.392)
Reform&26-42 months& new recipient	1.160 (0.545)	0.781 (0.395)	0.505 (0.566)
Reform&1-11 months& value success in job	1.334 (0.520)	1.263 (0.564)	0.854 (0.596)
Reform&12-14 months& value success in job	2.025 <sup>**</sup> (0.721)	2.163 <sup>*</sup> (0.978)	0.955 (0.700)
Reform&15-25 months& value success in job	1.258 (0.506)	1.899 (0.880)	2.011 (1.692)
Reform&26-42 months& value success in job	0.795 (0.323)	0.893 (0.399)	0.505 (0.346)
Number of Subjects	673	673	673

**Note:** See **Table 2**. The number of observations is reduced because the question on “values success at work” is not asked in every wave. Due to the reduced number of observations and additional interaction effects we had to aggregate the time periods of 26-36 and 37-42 months of the interaction effects.

**Table 10** Hazard Models - DiD Specification without Time Trend

	Exit into labor force participation	Exit into substantial employment	Exit into fulltime employment
Maternal age in years	0.997 (0.00932)	1.018 (0.0112)	1.003 (0.0179)
Maternal schooling in years	1.033* (0.0195)	1.106*** (0.0227)	1.088*** (0.0358)
East-Germany	1.587*** (0.175)	1.507*** (0.190)	2.626*** (0.467)
Not German citizenship	0.510*** (0.0993)	0.317*** (0.102)	0.338** (0.169)
First child	1.381*** (0.127)	1.484*** (0.155)	1.868*** (0.313)
Single mother	1.061 (0.161)	0.711* (0.137)	0.844 (0.223)
Reform	1.174 (0.190)	1.106 (0.214)	0.727 (0.269)
Reform&treat&1-11 months& prior rec.	0.693 (0.181)	0.874 (0.281)	1.598 (0.802)
Reform&treat&12-14 months& prior rec.	2.302*** (0.714)	1.742 (0.641)	3.260** 81.9199
Reform&treat&15-21 months& prior rec.	1.357 (0.498)	1.037 (0.440)	2.375 (1.665)
Reform&treat&22-25 months& prior rec.	0.364** (0.184)	0.855 (0.394)	4.000* (3.144)
Reform&treat&26-36 months& prior rec.	0.398** (0.172)	0.638 (0.285)	1.241 (0.741)
Reform&treat&37-42 months& prior rec.	0.813 (0.411)	1.357 (0.851)	1.053 (0.832)
Reform&treat&1-11 months& new recip.	0.498* (0.203)	0.646 (0.287)	1.576 (1.414)
Reform&treat&12-14 months& new recip.	2.558** (1.036)	2.173* (0.939)	1.647 (1.445)
Reform&treat&15-21 months& new recip.	1.381 (0.628)	1.112 (0.550)	6.945* (8.094)
Reform&treat&22-25 months& new recip.	0.337 (0.276)	0.464 (0.397)	0.528 (0.651)
Reform&treat&26-36 months& new recip.	0.937 (0.383)	0.942 (0.421)	0.470 (0.576)
Reform&treat&37-42 months& new recip.	0.153* (0.163)	0.157* (0.169)	0.252 (0.293)
Number of Subjects	1030	1030	1030

**Note:** See **Table 2**. In the DiD-estimations the baseline hazards are stratified by treatment group affiliation and for those belonging to the treatment group by potential child rearing benefit eligibility status.



**Table 11** Basic Specification with 6 Months Window without Time Trend

	Exit into labor force participation	Exit into substantial employment
Maternal age in years	1.009 (0.0252)	1.037 (0.0279)
Maternal schooling in years	1.097* (0.0528)	1.189*** (0.0625)
East-Germany	1.787*** (0.399)	1.967*** (0.488)
Not German citizenship	0.289** (0.151)	0.347 (0.252)
First child	1.511* (0.336)	1.613** (0.393)
Single mother	0.794 (0.361)	0.704 (0.400)
Reform&1-11 months& prior recipient	1.609 (0.693)	3.128* (1.888)
Reform&12-14 months& prior recipient	0.995 (0.478)	0.461 (0.287)
Reform&15-21 months& prior recipient	1.421 (0.737)	1.308 (0.719)
Reform&26-36 months& prior recipient	2.440 (1.965)	1.234 (1.266)
Reform&37-42 months& prior recipient	0.398 (0.336)	0.670 (0.672)
Reform&1-11 months& new recipient	0.608 (0.564)	1.027 (1.051)
Reform&12-14 months& new recipient	3.077 (3.279)	2.617 (2.940)
Reform&15-25 months& new recipient	0.918 (0.739)	1.004 (0.834)
Reform&26-36 months& new recipient	2.530 (2.889)	2.514 (2.840)
Reform&37-42 months& new recipient	0.941 (1.186)	1.071 (1.340)
Number of Subjects	162	162

**Note:** See **Table 2**. Due to the very small sample size and the few number of exits to full time employment we cannot report these results. We aggregate the cells for 15-21 and 22-25 months interaction terms due to the low number of observed exits in these cells.

**Table 12** Estimation of Table 2 with Alternative Thresholds for Prior Benefit Eligibility

	Exit into labor force participation	Exit into substantial employment	Exit into full time employment
Maternal age in years	1.004 (0.0108)	1.036 <sup>***</sup> (0.0121)	1.020 (0.0196)
Maternal schooling in years	1.036 (0.0225)	1.115 <sup>***</sup> (0.0260)	1.117 <sup>***</sup> (0.0393)
East-Germany	1.583 <sup>***</sup> (0.178)	1.711 <sup>***</sup> (0.224)	2.282 <sup>***</sup> (0.425)
Not German citizenship	0.441 <sup>***</sup> (0.106)	0.367 <sup>***</sup> (0.130)	0.314 <sup>**</sup> (0.179)
First child	1.331 <sup>***</sup> (0.138)	1.524 <sup>***</sup> (0.177)	2.044 <sup>***</sup> (0.376)
Single mother	1.133 (0.198)	0.680 (0.161)	0.836 (0.241)
Time trend	0.991 (0.00687)	1.001 (0.00783)	0.993 (0.0120)
Reform&1-11 months& prior recipient	1.148 (0.304)	1.087 (0.347)	1.395 (0.624)
Reform&12-14 months& prior recipient	3.154 <sup>***</sup> (1.010)	1.850 <sup>*</sup> (0.678)	3.376 <sup>**</sup> (1.831)
Reform&15-21 months& prior recipient	1.835 <sup>*</sup> (0.676)	1.068 (0.460)	1.738 (1.173)
Reform&22-25 months& prior recipient	0.432 (0.245)	0.975 (0.490)	3.466 (2.685)
Reform&26-36 months& prior recipient	0.800 (0.313)	0.947 (0.392)	1.297 (0.675)
Reform&37-42 months& prior recipient	1.090 (0.541)	1.893 (1.186)	1.079 (0.817)
Reform&1-11 months& new recipient	0.564 (0.234)	0.557 (0.246)	0.710 (0.657)
Reform&12-14 months& new recipient	4.703 <sup>***</sup> (1.847)	2.672 <sup>**</sup> (1.113)	2.439 (1.919)
Reform&15-21 months& new recipient	1.671 (0.725)	1.263 (0.590)	2.518 (2.431)
Reform&22-25 months& new recipient	0.486 (0.323)	0.482 (0.334)	0.804 (1.032)
Reform&26-36 months& new recipient	1.113 (0.476)	0.828 (0.386)	0.257 (0.297)
Reform&37-42 months& new recipient	0.652 (0.437)	0.445 (0.299)	0.239 (0.272)
Number of Subjects	775	775	775

**Note:** See **Table 2**. The number of observations increases because the paternal income information is now gathered in the year of birth, for which we have more observations.

## Electronic Appendix

for

### Maternal Employment Effects of Paid Parental Leave

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Table EA.17 Estimation of Table 2 without Births around Reform: Dec 2006 and Jan 2007

Table EA.18 Estimation of Table 2 with Alternative Prior Benefit Eligibility Groups

Table EA.19 Estimation of Table 2 Accounting for Potential Maternity Leave Misreporting

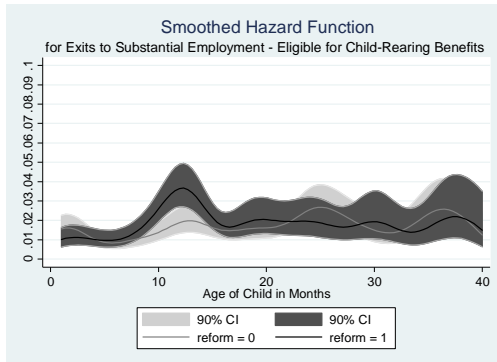
Table EA.20 Estimation of Table 2 Controlling for a "January" - Seam Effect

**General Note:**

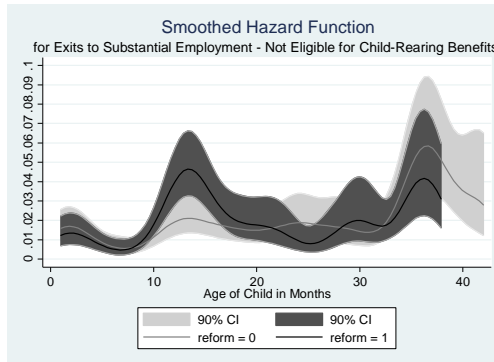
All presented estimations control for age and education of the mother, whether the mother lives in East Germany or is of non-German citizenship, whether she is living with a partner or a single parent, whether the child is a first birth and a time trend; unless stated otherwise all estimations of baseline hazards are stratified by potential child-rearing benefit (pre reform benefit) eligibility status; all tables present exponentiated coefficients and standard errors which are clustered at the individual level in parentheses. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

**Figure EA.1** Substantial Employment of Mothers after Child Birth: Smoothed Hazard and Survivor Function

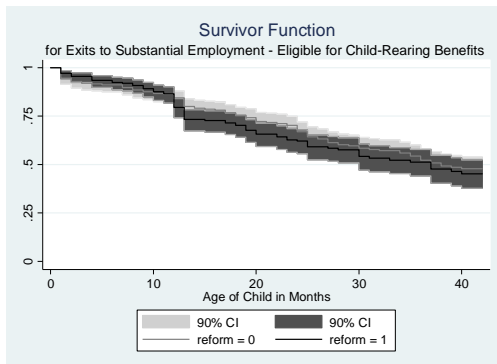
Panel 1



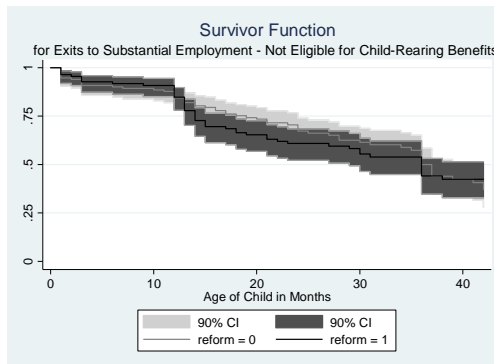
Panel 2



Panel 3



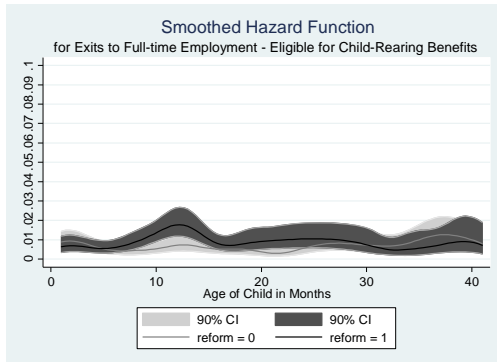
Panel 4



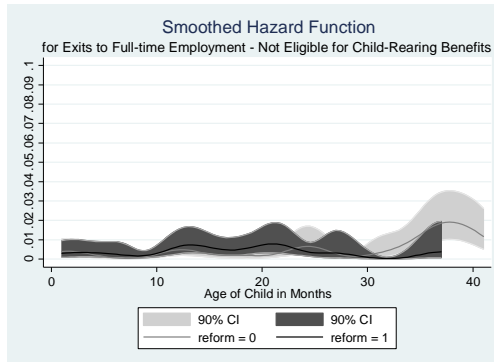
**Note:** Panels 1 and 3 use 441 observations and Panels 2 and 4 244 observations. Panels 1 and 2 use a Gaussian kernel without boundary correction and a bandwidth of 2 months.

**Figure EA.2** Full-time Employment of Mothers after Child Birth: Smoothed Hazard and Survivor Function

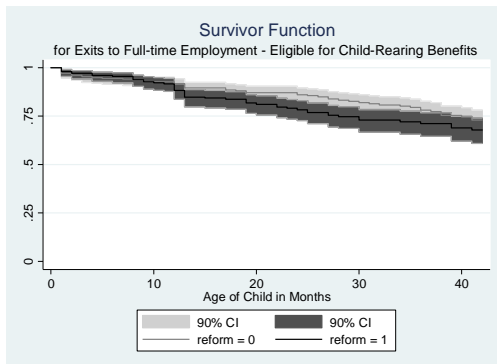
Panel 1



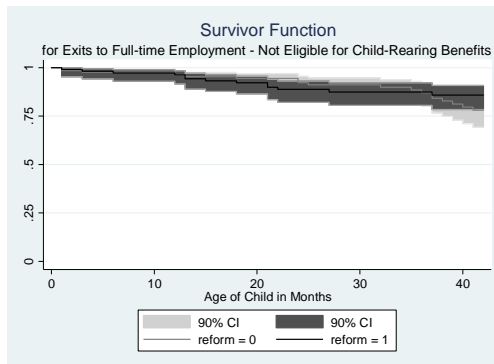
Panel 2



Panel 3



Panel 4



**Note:** Panels 1 and 3 use 441 observations and Panels 2 and 4 244 observations. Panels 1 and 2 use a Gaussian kernel without boundary correction and a bandwidth of 2 months.

**Table EA.1** Interact Child Care Availability with Age of the Child

	Exit into labor force participation	Exit into substantial employment	Exit into full time employment
Reform&1-11 months& prior recipient	1.068 (0.301)	1.048 (0.358)	1.560 (0.719)
Reform&12-14 months& prior recipient	3.243*** (1.050)	1.749 (0.649)	2.520* (1.410)
Reform&15-21 months& prior recipient	1.979* (0.773)	1.058 (0.465)	2.048 (1.448)
Reform&22-25 months& prior recipient	0.489 (0.242)	0.794 (0.363)	2.896 (2.337)
Reform&26-36 months& prior recipient	0.549 (0.241)	0.575 (0.264)	1.009 (0.560)
Reform&37-42 months& prior recipient	1.189 (0.582)	1.474 (0.866)	0.933 (0.676)
Reform&1-11 months& new recipient	0.819 (0.348)	0.779 (0.351)	1.653 (1.485)
Reform&12-14 months& new recipient	4.290*** (1.804)	2.674** (1.169)	1.344 (1.091)
Reform&15-21 months& new recipient	2.402* (1.177)	1.398 (0.735)	6.305 (7.539)
Reform&22-25 months& new recipient	0.528 (0.436)	0.531 (0.456)	0.462 (0.571)
Reform&26-36 months& new recipient	1.445 (0.636)	0.953 (0.461)	0.423 (0.525)
Reform&37-42 months& new recipient	0.241 (0.256)	0.182 (0.194)	0.240 (0.279)
1-11 months& child care share	0.995 (0.00862)	0.991 (0.0101)	0.980 (0.0164)
12-14 months& child care share	1.027*** (0.00901)	1.035*** (0.0106)	1.045** (0.0187)
15-21 months& child care share	1.016 (0.0106)	1.026** (0.0120)	1.013 (0.0204)
22-25 months& child care share	1.023* (0.0122)	1.033** (0.0139)	1.040* (0.0223)
26-36 months& child care share	1.015 (0.0121)	1.035** (0.0142)	1.022 (0.0187)
37-42 months& child care share	1.002 (0.0125)	1.007 (0.0172)	1.007 (0.0202)
Number of Subjects	679	680	683

**Note:** The number of observations varies because depending on the considered outcome individual observations stay non-censored for different periods of time, which modifies the probability of matching regional information.

**Table EA.2** Interact Child Care Availability with Age of the Child and Reform Period

	Exit into labor force participation	Exit into substantial employment	Exit into full time employment
Reform&1-11 months& prior recipient	0.994 (0.292)	1.040 (0.363)	1.541 (0.748)
Reform&12-14 months& prior recipient	3.848*** (1.498)	1.997 (0.897)	4.579* (3.912)
Reform&15-21 months& prior recipient	2.630** (1.033)	1.384 (0.615)	4.289* (3.716)
Reform&22-25 months& prior recipient	0.376* (0.223)	0.674 (0.378)	4.539* (4.020)
Reform&26-36 months& prior recipient	0.574 (0.266)	0.618 (0.305)	0.835 (0.593)
Reform&37-42 months& prior recipient	0.995 (0.567)	0.995 (0.710)	0.948 (0.827)
Reform&1-11 months& new recipient	0.895 (0.382)	0.847 (0.387)	1.971 (1.773)
Reform&12-14 months& new recipient	4.470*** (1.862)	2.770** (1.203)	1.794 (1.472)
Reform&15-21 months& new recipient	2.357* (1.170)	1.433 (0.761)	7.540* (8.521)
Reform&22-25 months& new recipient	0.516 (0.444)	0.511 (0.455)	0.578 (0.769)
Reform&26-36 months& new recipient	1.466 (0.641)	0.975 (0.470)	0.389 (0.511)
Reform&37-42 months& new recipient	0.230 (0.246)	0.163* (0.179)	0.244 (-0.315)
1-11 months& child care share	0.985 (0.00978)	0.983 (0.0124)	0.962* (0.0215)
12-14 months& child care share	1.036*** (0.0127)	1.041*** (0.0135)	1.064** (0.0273)
15-21 months& child care share	1.030** (0.0124)	1.037*** (0.0135)	1.048* (0.0274)
22-25 months& child care share	1.019 (0.0134)	1.028* (0.0164)	1.052** (0.0265)
6-36 months& child care share	1.016 (0.0135)	1.037** (0.0167)	1.017 (0.0206)
37-42 months& child care share	0.991 (0.0152)	0.978 (0.0225)	1.007 (0.0204)
Reform&1-11 months& child care share	1.024** (0.0116)	1.018 (0.0158)	1.033 (0.0245)
Reform&12-14 months& child care share	0.987 (0.0131)	0.990 (0.0150)	0.971 (0.0274)
Reform&15-21 months& child care share	0.965** (0.0173)	0.972 (0.0198)	0.942* (0.0323)



Reform&22-25 months& child care share	1.019 (0.0255)	1.013 (0.0244)	0.976 (0.0337)
Reform&26-36 months& child care share	0.996 (0.0208)	0.994 (0.0221)	1.013 (0.0296)
Reform&37-42 months& child care share	1.03 (0.0253)	1.068** (0.0328)	1.000 (0.0421)
Number of Subjects	679	680	683

**Note:** The number of observations varies because depending on the considered outcome individual observations stay non-censored for different periods of time, which modifies the probability of matching regional information.

**Table EA.3** Interact Child Care Availability with Age of the Child and Urban/Rural Agglomeration

	Exit into labor force participation	Exit into substantial employment	Exit into full time employment
Reform&1-11 months& prior recipient	1.076 (0.304)	1.045 (0.357)	1.572 (0.720)
Reform&12-14 months& prior recipient	3.341*** (1.078)	1.750 (0.647)	2.511* (1.401)
Reform&15-21 months& prior recipient	1.852 (0.744)	1.017 (0.454)	2.048 (1.435)
Reform&22-25 months& prior recipient	0.482 (0.232)	0.787 (0.359)	2.882 (2.334)
Reform&26-36 months& prior recipient	0.548 (0.240)	0.535 (0.257)	0.998 (0.554)
Reform&37-42 months& prior recipient	1.210 (0.585)	1.376 (0.805)	0.929 (0.673)
Reform&1-11 months& new recipient	0.820 (0.348)	0.772 (0.348)	1.663 (1.497)
Reform&12-14 months& new recipient	4.290*** (1.807)	2.649** (1.157)	1.328 (1.074)
Reform&15-21 months& new recipient	2.347* (1.151)	1.343 (0.711)	6.234 (7.451)
Reform&22-25 months& new recipient	0.519 (0.430)	0.535 (0.459)	0.455 (0.563)
Reform&26-36 months& new recipient	1.436 (0.629)	0.984 (0.469)	0.430 (0.535)
Reform&37-42 months& new recipient	0.254 (0.269)	0.192 (0.205)	0.239 (0.280)
1-11 months& child care share	0.989 (0.00946)	0.984 (0.0114)	0.971 (0.0192)
12-14 months& child care share	1.019** (0.00986)	1.027** (0.0116)	1.041** (0.0201)
15-21 months& child care share	1.024** (0.0119)	1.033*** (0.0129)	1.017 (0.0244)
22-25 months& child care share	1.024* (0.0147)	1.028 (0.0175)	1.044* (0.0260)
26-36 months& child care share	1.015 (0.0160)	1.025 (0.0182)	1.016 (0.0244)
37-42 months& child care share	0.987 (0.0149)	0.993 (0.0202)	1.006 (0.0278)
1-11 months& child care share & rural	1.013 (0.0131)	1.016 (0.0163)	1.020 (0.0242)
12-14 months& child care share & rural	1.015	1.015	1.005

	(0.0101)	(0.0122)	(0.0159)
15-21 months& child care share & rural	0.973	0.975	0.989
	(0.0178)	(0.0211)	(0.0268)
22-25 months& child care share & rural	0.995	1.009	0.991
	(0.0175)	(0.0196)	(0.0240)
26-36 months& child care share & rural	0.999	1.022	1.011
	(0.0186)	(0.0208)	(0.0229)
37-42 months& child care share & rural	1.027	1.032	1.000
	(0.0214)	(0.0312)	(0.0268)
<hr/> Number of Subjects	<hr/> 679	<hr/> 680	<hr/> 683

**Note:** The number of observations varies because depending on the outcome individual observations stay non-censored for different periods of time, which modifies the probability of matching regional information.

**Table EA.4** Interact Child Care Availability with Age of the Child and Single Mother Status

	Exit into labor force participation	Exit into substantial employment	Exit into full time employment
Reform&1-11 months& prior recipient	1.083 (0.304) 3.115**	1.037 (0.358)	1.563 (0.719)
Reform&12-14 months& prior recipient	* (1.008)	1.674 (0.626)	2.377 (1.340)
Reform&15-21 months& prior recipient	1.942* (0.765)	1.025 (0.457)	2.010 (1.435)
Reform&22-25 months& prior recipient	0.451 (0.231)	0.795 (0.371)	3.249 (2.520)
Reform&26-36 months& prior recipient	0.519 (0.244)	0.586 (0.270)	0.958 (0.530)
Reform&37-42 months& prior recipient	1.106 (0.574)	1.379 (0.823)	0.913 (0.655)
Reform&1-11 months& new recipient	0.835 (0.353) 4.309**	0.770 (0.347)	1.670 (1.497)
Reform&12-14 months& new recipient	* (1.806)	2.639** (1.158)	1.316 (1.067)
Reform&15-21 months& new recipient	2.418* (1.183)	1.378 (0.730)	6.206 (7.406)
Reform&22-25 months& new recipient	0.534 (0.439)	0.525 (0.450)	0.467 (0.576)
Reform&26-36 months& new recipient	1.435 (0.632)	0.936 (0.453)	0.417 (0.518)
Reform&37-42 months& new recipient	0.238 (0.252)	0.170* (0.182)	0.238 (0.276)
1-11 months& child care share	0.994 (0.00855) 1.032**	0.991 (0.0105)	0.977 (0.0177) 1.052**
12-14 months& child care share	* (0.00917)	1.040*** (0.0108)	* (0.0186)
15-21 months& child care share	1.020* (0.0109)	1.034*** (0.0125)	1.019 (0.0214)
22-25 months& child care share	1.032** (0.0129)	1.035** (0.0150)	1.033 (0.0227)
26-36 months& child care share	1.020 (0.0146)	1.037** (0.0156)	1.027 (0.0191)
37-42 months& child care share	1.007 (0.0150)	1.018 (0.0189)	1.010 (0.0215)
1-11 months& child care share & single	1.015	0.999	1.015

	(0.0167)	(0.0228)	(0.0279)
12-14 months& child care share & single	0.962**	0.947***	0.902**
	(0.0164)	(0.0168)	(0.0366)
			0.941**
15-21 months& child care share & single	0.981	0.918***	*
	(0.0257)	(0.0227)	(0.0175)
22-25 months& child care share & single	0.970	0.980	1.026
	(0.0281)	(0.0224)	(0.0233)
26-36 months& child care share & single	0.990	0.982	0.968
	(0.0213)	(0.0223)	(0.0356)
37-42 months& child care share & single	0.986	0.900***	0.981
	(0.0296)	(0.0369)	(0.0309)
<b>Number of Subjects</b>	<b>679</b>	<b>680</b>	<b>683</b>

**Note:** The number of observations varies because depending on the outcome individual observations stay non-censored for different periods of time, which modifies the probability of matching regional information.

**Table EA.5** Test for Response Heterogeneity by Educational Attainment

	Exit into labor force participation	Exit into substantial employment	Exit into full time employment
Reform&1-11 months& prior recipient	1.125 (0.327)	1.001 (0.358)	1.496 (0.736)
Reform&12-14 months& prior recipient	3.086 <sup>***</sup> (1.038)	1.590 (0.636)	2.488 (1.522)
Reform&15-21 months& prior recipient	1.960 <sup>*</sup> (0.779)	1.057 (0.480)	2.501 (1.776)
Reform&22-25 months& prior recipient	0.390 (0.249)	0.772 (0.406)	3.409 (2.862)
Reform&26-36 months& prior recipient	0.614 (0.268)	0.688 (0.316)	0.890 (0.574)
Reform&37-42 months& prior recipient	1.149 (0.628)	1.379 (0.912)	0.799 (0.696)
Reform&1-11 months& new recipient	0.937 (0.449)	0.814 (0.453)	1.628 (1.578)
Reform&12-14 months& new recipient	3.186 <sup>**</sup> (1.449)	1.784 (0.897)	1.154 (1.117)
Reform&15-21 months& new recipient	1.977 (1.114)	1.108 (0.758)	9.493 <sup>*</sup> (12.69)
Reform&22-25 months& new recipient	0.259 (0.241)	0.355 (0.326)	0.441 (0.573)
Reform&26-36 months& new recipient	1.820 (0.979)	1.102 (0.695)	0.277 (0.370)
Reform&37-42 months& new recipient	0.216 (0.222)	0.143 <sup>*</sup> (0.153)	0.161 (0.213)
Reform&1-11 months& highly educated	0.705 (0.238)	0.768 (0.303)	0.820 (0.427)
Reform&12-14 months& highly educated	1.297 (0.362)	1.367 (0.476)	1.352 (0.777)
Reform&15-21 months& highly educated	1.073 (0.448)	1.066 (0.556)	0.535 (0.425)
Reform&22-25 months& highly educated	2.442 (1.805)	1.519 (0.942)	1.078 (0.843)
Reform&26-36 months& highly educated	0.699 (0.342)	0.856 (0.467)	1.644 (1.199)
Reform&37-42 months& highly educated	1.067 (0.690)	1.216 (0.873)	1.487 (1.460)
Number of Subjects	685	685	685

**Table EA.6** Test for Response Heterogeneity by Locus of Control ("Others Make Crucial Decisions")

	Exit into labor force participation	Exit into substantial employment	Exit into full time employment
Others make crucial decisions	1.165 (0.193)	0.948 (0.200)	0.682 (0.235)
Reform&1-11 months& prior recipient	1.015 (0.299)	0.878 (0.304)	1.377 (0.647)
Reform&12-14 months& prior recipient	2.961 <sup>***</sup> (0.993)	1.600 (0.610)	2.400 (1.421)
Reform&15-25 months& prior recipient	1.176 (0.406)	0.833 (0.312)	1.898 (1.152)
Reform&26-42 months& prior recipient	0.750 (0.257)	0.846 (0.331)	1.037 (0.511)
Reform&1-11 months& new recipient	0.714 (0.308)	0.655 (0.296)	1.424 (1.294)
Reform&12-14 months& new recipient	3.287 <sup>***</sup> (1.384)	1.972 (0.868)	0.912 (0.823)
Reform&15-25 months& new recipient	1.322 (0.535)	0.825 (0.359)	1.530 (1.177)
Reform&26-42 months& new recipient	1.030 (0.417)	0.699 (0.299)	0.322 (0.289)
Reform&1-11 months& others make c. decisions	1.187 (0.437)	1.115 (0.532)	0.761 (0.627)
Reform&12-14 months& others make c. decisions	1.490 (0.474)	1.496 (0.649)	1.639 (1.233)
Reform&15-25 months& others make c. decisions	1.210 (0.624)	1.795 (0.876)	2.801 (1.875)
Reform&26-42 months& others make c. decisions	0.698 (0.495)	0.712 (0.570)	0.594 (0.674)
Number of Subjects	665	665	665

**Note.** The number of observations is reduced because the question on the locus of control is not asked in every wave. Due to the reduced number of observations and additional interaction effects we had to aggregate the time periods of 26-36 and 37-42 months of the interaction effects.

**Table EA.7** Test for Response Heterogeneity by Region of Residence (East vs. West)

	Exit into labor force participation	Exit into substantial employment	Exit into full time employment
Reform&1-11 months& prior recipient	1.587 (0.606)	1.305 (0.654)	2.284 (1.588)
Reform&12-14 months& prior recipient	2.817 <sup>***</sup> (0.995)	1.593 (0.644)	2.531 <sup>*</sup> (1.369)
Reform&15-21 months& prior recipient	0.921 (0.477)	0.540 (0.311)	0.991 (0.812)
Reform&22-25 months& prior recipient	0.507 (0.337)	0.888 (0.529)	1.737 (1.358)
Reform&26-36 months& prior recipient	0.583 (0.320)	0.514 (0.296)	1.026 (0.717)
Reform&37-42 months& prior recipient	2.849 (2.569)	2.215 (2.080)	1.023 (0.965)
Reform&1-11 months& new recipient	0.786 (0.396)	0.604 (0.365)	0.638 (0.624)
Reform&12-14 months& new recipient	2.678 <sup>**</sup> (1.042)	1.581 (0.733)	1.151 (1.017)
Reform&15-21 months& new recipient	0.797 (0.495)	0.474 (0.290)	0.821 (0.712)
Reform&22-25 months& new recipient	0.309 (0.266)	0.262 (0.224)	0.458 (0.539)
Reform&26-36 months& new recipient	1.034 (0.611)	0.698 (0.410)	0.194 (0.227)
Reform&37-42 months& new recipient	0.562 (0.712)	0.523 (0.652)	0.439 (0.498)
Reform&1-11 months & west	0.577 (0.228)	0.769 (0.397)	0.732 (0.527)
Reform&12-14 months & west	1.457 (0.639)	1.471 (0.733)	1.294 (1.177)
Reform&15-21 months & west	3.325 <sup>**</sup> (2.001)	3.342 <sup>*</sup> (2.095)	11.67 <sup>*</sup> (15.00)
Reform&22-25 months & west	1.178 (0.937)	1.293 (0.941)	2.189 (2.484)
Reform&26-36 months & west	1.006 (0.603)	1.388 (0.832)	1.299 (1.116)
Reform&37-42 months & west	0.319 (0.320)	0.346 (0.364)	0.518 (0.569)
Number of Subjects	685	685	685



**Table EA.8** Test for Response Heterogeneity by Rural Residence

	Exit into labor force participation	Exit into substantial employment	Exit into full time employment
Rural area	1.248 (0.191)	1.453 <sup>**</sup> (0.244)	1.572 <sup>*</sup> (0.408)
Reform&1-11 months& prior recipient	0.991 (0.302)	1.008 (0.363)	1.805 (0.895)
Reform&12-14 months& prior recipient	2.792 <sup>***</sup> (0.968)	1.442 (0.584)	2.736 <sup>*</sup> (1.643)
Reform&15-21 months& prior recipient	1.610 (0.526)	1.174 (0.424)	3.249 <sup>**</sup> (1.884)
Reform&26-42 months& prior recipient	0.893 (0.343)	1.022 (0.407)	1.164 (0.624)
Reform&1-11 months& new recipient	0.749 (0.323)	0.722 (0.327)	1.668 (1.508)
Reform&12-14 months& new recipient	3.397 <sup>***</sup> (1.454)	2.007 (0.891)	1.455 (1.174)
Reform&15-25 months& new recipient	1.632 (0.681)	1.030 (0.467)	2.139 (1.720)
Reform&26-42 months& new recipient	1.064 (0.426)	0.744 (0.323)	0.326 (0.298)
Reform&1-11 months& rural area	1.084 (0.355)	0.734 (0.293)	0.496 (0.284)
Reform&12-14 months& rural area	1.884 <sup>**</sup> (0.546)	1.867 <sup>*</sup> (0.654)	1.162 (0.698)
Reform&15-25 months& rural area	0.211 <sup>**</sup> (0.161)	0.543 (0.287)	0.543 (0.344)
Reform&26-42 months& rural area	0.543 (0.283)	0.465 (0.245)	0.697 (0.458)
Number of Subjects	685	685	685

**Note:** We aggregate the cells for 15-21 and 22-25 as well as 26-36 and 37-42 months interaction terms due to the low number of observed exits in these cells.

**Table EA.9** Test for Response Heterogeneity by Task Content: Routine Task

	Exit into labor force participation	Exit into substantial employment	Exit into full time employment
Reform&1-11 months& prior recipient	0.568 (0.238)	0.605 (0.279)	0.686 (0.438)
Reform&12-14 months& prior recipient	2.087* (0.814)	1.171 (0.513)	1.028 (0.637)
Reform&15-42 months& prior recipient	1.257 (0.437)	0.908 (0.338)	0.961 (0.519)
Reform&1-11 months& new recipient	0.538 (0.248)	0.499 (0.247)	1.076 (1.113)
Reform&12-14 months& new recipient	3.649** (1.885)	2.400 (1.296)	2.080 (2.460)
Reform&15-42 months& new recipient	1.052 (0.432)	0.749 (0.330)	0.458 (0.356)
Routine task content	0.828 (0.176)	0.933 (0.214)	0.869 (0.326)
Reform&1-11 months& routine task content	1.814 (0.782)	1.550 (0.727)	1.713 (1.192)
Reform&12-14 months& routine task content	1.404 (0.494)	1.519 (0.638)	2.339 (1.544)
Reform&15-42 months& routine task content	0.801 (0.346)	0.999 (0.425)	1.515 (0.977)
Number of Subjects	380	380	380

**Note:** The number of observations is reduced because the information on task content is available only for women who were observed in an occupation before giving birth. Due to the reduced number of observations and additional interaction effects we had to aggregate the time periods of 15-21, 22-25, 26-36 and 37-42 months of the interaction effects.

**Table EA.10** Differences-in-Differences Estimation Controlling for Time Trend

	Exit into labor force participation	Exit into substantial employment	Exit into fulltime employment
Reform	1.093 (0.247)	0.838 (0.220)	0.599 (0.272)
Reform&treat&1-11 months& prior recipient	0.696 (0.182)	0.882 (0.283)	1.614 (0.809)
Reform&treat&12-14 months& prior recipient	2.309 <sup>***</sup> (0.716)	1.752 (0.642)	3.284 <sup>**</sup> (1.928)
Reform&treat&15-21 months& prior recipient	1.361 (0.499)	1.046 (0.444)	2.401 (1.680)
Reform&treat&22-25 months& prior recipient	0.365 <sup>**</sup> (0.185)	0.863 (0.397)	4.040 <sup>*</sup> (3.171)
Reform&treat&26-36 months& prior recipient	0.401 <sup>**</sup> (0.174)	0.650 (0.291)	1.256 (0.751)
Reform&treat&37-42 months& prior recipient	0.823 (0.417)	1.406 (0.882)	1.069 (0.845)
Reform&treat&1-11 months& new recipient	0.496 <sup>*</sup> (0.202)	0.637 (0.283)	1.563 (1.404)
Reform&treat&12-14 months& new recipient	2.550 <sup>**</sup> (1.033)	2.147 <sup>*</sup> (0.929)	1.633 (1.432)
Reform&treat&15-21 months& new recipient	1.375 (0.625)	1.093 (0.541)	6.883 <sup>*</sup> (8.027)
Reform&treat&22-25 months& new recipient	0.336 (0.275)	0.455 (0.389)	0.520 (0.641)
Reform&treat&26-36 months& new recipient	0.931 (0.381)	0.915 (0.411)	0.460 (0.566)
Reform&treat&37-42 months& new recipient	0.153 <sup>*</sup> (0.163)	0.157 <sup>*</sup> (0.169)	0.251 (0.291)
Number of Subjects	1030	1030	1030

**Note:** In the DiD-estimations the baseline hazards are stratified by treatment group affiliation and for those belonging to the treatment group by potential child rearing benefit eligibility status.

**Table EA.11** Difference-in-Differences Estimation with Duration Varying Reform Effect

	Exit into labor force participation	Exit into substantial employment
Reform&1-11 months duration	1.333 (0.343)	1.066 (0.334)
Reform&12-14 months duration	0.557 (0.378)	0.343 (0.280)
Reform&15-22 months duration	0.949 (0.447)	1.010 (0.579)
Reform&22-25 months duration	0.873 (0.638)	0.660 (0.419)
Reform&26-42 months duration	0.474 (0.282)	0.379 (0.257)
Reform&treat&1-11 months& prior recipient	0.562** (0.160)	0.692 (0.248)
Reform&treat&12-14 months& prior recipient	4.463** (3.162)	4.272* (3.628)
Reform&treat&15-21 months& prior recipient	1.546 (0.856)	0.867 (0.576)
Reform&treat&22-25 months& prior recipient	0.451 (0.389)	1.094 (0.818)
Reform&treat&26-42 months& prior recipient	1.171 (0.760)	1.798 (1.326)
Reform&treat&1-11 months& new recipient	0.401** (0.170)	0.500 (0.236)
Reform&treat&12-14 months& new recipient	4.923** (3.725)	5.235* (4.618)
Reform&treat&15-21 months& new recipient	1.560 (0.968)	0.906 (0.644)
Reform&treat&22-25 months& new recipient	0.414 (0.444)	0.577 (0.598)
Reform&treat&26-42 months& new recipient	1.489 (0.987)	1.410 (1.080)
Number of Subjects	1030	1030

**Note:** In the DiD-estimations the baseline hazards are stratified by treatment group affiliation and for those belonging to the treatment group by potential child rearing benefit eligibility status. As this specification has an additional set of interaction terms with durations and there is only a small number of exits to full time employment this flexible specification could not be estimated for full time employment. In addition we had to aggregate the time periods of 26-36 and 37-42 months of the interaction effects.

**Table EA.12** Difference-in-Differences Estimation Controlling for Yearly Quarters

	Exit into labor force participation	Exit into substantial employment	Exit into fulltime employment
Reform&treat&1-11 months& prior recipient	0.616** (0.149)	0.682 (0.204)	0.995 (0.432)
Reform&treat&12-14 months& prior recipient	2.284*** (0.683)	1.420 (0.489)	2.011 (1.116)
Reform&treat&15-21 months& prior recipient	1.415 (0.511)	0.849 (0.352)	1.502 (1.014)
Reform&treat&22-25 months& prior recipient	0.345** (0.176)	0.645 (0.304)	2.280 (1.768)
Reform&treat&26-36 months& prior recipient	0.454* (0.209)	0.579 (0.261)	0.969 (0.530)
Reform&treat&37-42 months& prior recipient	0.990 (0.551)	1.188 (0.749)	2.134 (1.782)
Reform&treat&1-11 months& new recipient	0.402** (0.158)	0.441* (0.187)	0.877 (0.759)
Reform&treat&12-14 months& new recipient	2.553** (0.992)	1.855 (0.750)	1.047 (0.872)
Reform&treat&15-21 months& new recipient	1.282 (0.586)	0.839 (0.420)	4.581 (5.390)
Reform&treat&22-25 months& new recipient	0.363 (0.298)	0.415 (0.351)	0.342 (0.430)
Reform&treat&26-36 months& new recipient	0.975 (0.434)	0.748 (0.362)	0.509 (0.589)
Reform&treat&37-42 months& new recipient	0.173 (0.188)	0.136* (0.154)	0.461 (0.581)
+ control for yearly quarters	yes	yes	yes
Number of Subjects	1030	1030	1030

**Note:** In the DiD-estimations the baseline hazards are stratified by treatment group affiliation and for those belonging to the treatment group by potential child rearing benefit eligibility status.

**Table EA.13** Estimation of Table 2 with Controls for County Level Unemployment

	Exit into labor force participation	Exit into substantial employment	Exit into full time employment
Local unemployment rate	1.007 (0.0174)	1.019 (0.0201)	1.048 (0.0349)
Reform&1-11 months& prior recipient	1.024 (0.296)	0.956 (0.333)	1.531 (0.727)
Reform&12-14 months& prior recipient	3.380*** (1.103)	1.834 (0.689)	2.994* (1.688)
Reform&15-21 months& prior recipient	1.988* (0.753)	1.081 (0.466)	2.110 (1.456)
Reform&22-25 months& prior recipient	0.529 (0.272)	0.871 (0.410)	3.458 (2.696)
Reform&26-36 months& prior recipient	0.562 (0.243)	0.644 (0.289)	1.048 (0.586)
Reform&37-42 months& prior recipient	1.127 (0.556)	1.398 (0.841)	0.884 (0.646)
Reform&1-11 months& new recipient	0.713 (0.303)	0.636 (0.285)	1.339 (1.211)
Reform&12-14 months& new recipient	3.807*** (1.590)	2.223* (0.967)	1.417 (1.181)
Reform&15-21 months& new recipient	2.050 (0.981)	1.122 (0.577)	5.672 (6.723)
Reform&22-25 months& new recipient	0.499 (0.412)	0.465 (0.401)	0.418 (0.515)
Reform&26-36 months& new recipient	1.391 (0.608)	0.936 (0.442)	0.367 (0.453)
Reform&37-42 months& new recipient	0.222 (0.236)	0.159* (0.171)	0.196 (0.224)
Number of Subjects	678	680	681

**Note:** The number of observations varies across columns because, first, depending on the considered outcome individual observations stay non-censored for different periods of time, which, second, modifies the probability of matching regional information.

**Table EA.14** Estimation of Table 2 with Controls for Age Varying, County Level  
Unemployment

	Exit into labor force participation	Exit into substantial employment	Exit into full time employment
Reform&1-11 months& prior recipient	0.946 (0.283)	0.822 (0.295)	1.234 (0.597)
Reform&12-14 months& prior recipient	3.750*** (1.280)	2.110* (0.838)	3.475** (2.098)
Reform&15-21 months& prior recipient	2.007* (0.750)	1.117 (0.480)	2.297 (1.605)
Reform&22-25 months& prior recipient	0.565 (0.294)	0.907 (0.434)	3.729* (2.944)
Reform&26-36 months& prior recipient	0.562 (0.242)	0.650 (0.289)	1.084 (0.596)
Reform&37-42 months& prior recipient	1.018 (0.519)	1.421 (0.850)	1.094 (0.845)
Reform&1-11 months& new recipient	0.678 (0.287)	0.588 (0.262)	1.214 (1.087)
Reform&12-14 months& new recipient	4.012*** (1.662)	2.366** (1.027)	1.534 (1.262)
Reform&15-21 months& new recipient	2.057 (0.991)	1.140 (0.588)	5.930 (6.933)
Reform&22-25 months& new recipient	0.516 (0.425)	0.474 (0.408)	0.430 (0.532)
Reform&26-36 months& new recipient	1.386 (0.605)	0.937 (0.442)	0.376 (0.463)
Reform&37-42 months& new recipient	0.216 (0.230)	0.161* (0.172)	0.167 (0.189)
1-11 months& unemployment rate	0.985 (0.0224)	0.977 (0.0266)	0.984 (0.0403)
12-14 months& unemployment rate	1.037 (0.0292)	1.059* (0.0343)	1.082 (0.0607)
15-21 months& unemployment rate	1.012 (0.0345)	1.031 (0.0370)	1.070 (0.0665)
22-25 months& unemployment rate	1.064* (0.0400)	1.049 (0.0416)	1.076 (0.0697)
26-36 months& unemployment rate	1.011 (0.0402)	1.029 (0.0429)	1.054 (0.0592)
37-42 months& unemployment rate	0.928 (0.0516)	1.035 (0.0641)	1.224** (0.104)
Number of Subjects	678	680	681

**Note:** The number of observations varies across columns because, first, depending on the considered outcome individual observations stay non-censored for different periods of time, which, second, modifies the probability of matching regional information.

**Table EA.15** Estimation of Table 2 with Controls for Month of Birth

	Exit into labor force participation	Exit into substantial employment	Exit into full time employment
Reform&1-11 months& prior recipient	0.867 (0.262)	0.748 (0.282)	0.912 (0.469)
Reform&12-14 months& prior recipient	2.911 <sup>***</sup> (0.997)	1.510 (0.603)	1.907 (1.12)
Reform&15-21 months& prior recipient	1.736 (0.687)	0.906 (0.412)	1.418 (1.004)
Reform&22-25 months& prior recipient	0.464 (0.244)	0.731 (0.356)	2.473 (1.942)
Reform&26-36 months& prior recipient	0.507 (0.227)	0.556 (0.261)	0.779 (0.445)
Reform&37-42 months& prior recipient	1.006 (0.507)	1.222 (0.761)	0.677 (0.508)
Reform&1-11 months& new recipient	0.628 (0.271)	0.546 (0.252)	0.949 (0.879)
Reform&12-14 months& new recipient	3.243 <sup>***</sup> (1.414)	1.860 (0.862)	0.991 (0.862)
Reform&15-21 months& new recipient	1.726 (0.846)	0.939 (0.499)	4.154 (4.946)
Reform&22-25 months& new recipient	0.418 (0.349)	0.385 (0.335)	0.321 (0.388)
Reform&26-36 months& new recipient	1.141 (0.512)	0.744 (0.369)	0.285 (0.356)
Reform&37-42 months& new recipient	0.181 (0.192)	0.124 <sup>*</sup> (0.133)	0.154 (0.180)
Birth in January	0.919 (0.228)	0.792 (0.216)	0.752 (0.308)
Birth in February	0.810 (0.225)	0.590 (0.202)	0.531 (0.268)
Birth in April	0.855 (0.222)	0.610 <sup>*</sup> (0.176)	0.846 (0.330)
Birth in May	0.858 (0.208)	0.744 (0.203)	0.845 (0.340)
Birth in June	1.193 (0.280)	0.869 (0.231)	0.752 (0.306)
Birth in July	0.974 (0.251)	0.776 (0.204)	0.273 <sup>**</sup> (0.142)
Birth in August	0.929 (0.239)	0.561 <sup>*</sup> (0.173)	0.457 <sup>*</sup> (0.212)
Birth in September	0.927 (0.237)	0.676 (0.192)	0.514 (0.228)
Birth in October	0.890 (0.224)	0.645 (0.180)	0.542 (0.240)
Birth in November	0.698	0.549 <sup>*</sup>	0.483



	(0.213)	(0.186)	(0.247)
Birth in December	0.570*	0.516**	0.391*
	(0.177)	(0.172)	(0.206)
<hr/> Number of Subjects	685	685	685
	<hr/>	<hr/>	<hr/>

**Table EA.16** Estimation of Table 2 only with Births 12 months Before and After Reform

	Exit into labor force participation	Exit into substantial employment
Reform&1-11 months& prior recipient	0.964 (0.269)	1.159 (0.375)
Reform&12-14 months& prior recipient	1.490 (0.552)	0.682 (0.329)
Reform&15-21 months& prior recipient	2.113* (0.867)	0.807 (0.390)
Reform&22-25 months& prior recipient	0.914 (0.657)	1.384 (0.916)
Reform&26-36 months& prior recipient	1.059 (0.563)	0.635 (0.401)
Reform&37-42 months& prior recipient	1.055 (0.526)	2.563 (2.094)
Reform&1-11 months& new recipient	0.519 (0.301)	0.918 (0.611)
Reform&12-14 months& new recipient	4.456** (3.283)	3.875* (2.900)
Reform&15-21 months& new recipient	0.424 (0.300)	0.426 (0.307)
Reform&22-25 months& new recipient	0.354 (0.444)	0.389 (0.480)
Reform&26-36 months& new recipient	1.007 (0.704)	0.875 (0.643)
Reform&37-42 months& new recipient	0.532 (0.717)	0.556 (0.745)
Number of Subjects	327	327

**Note:** Due to the low number of exits to full-time employment, we cannot report these results.

**Table EA.17** Estimation of Table 2 without Births around Reform: Dec 2006 and Jan 2007

	Exit into labor force participation	Exit into substantial employment	Exit into full time employment
Reform&1-11 months& prior recipient	1.015 (0.299)	0.959 (0.342)	1.285 (0.630)
Reform&12-14 months& prior recipient	3.621 <sup>***</sup> (1.249)	2.206 <sup>**</sup> (0.881)	3.253 <sup>**</sup> (1.946)
Reform&15-21 months& prior recipient	1.798 (0.712)	1.101 (0.496)	2.085 (1.481)
Reform&22-25 months& prior recipient	0.541 (0.281)	0.879 (0.434)	2.992 (2.419)
Reform&26-42 months& prior recipient	0.709 (0.243)	0.857 (0.336)	0.828 (0.434)
Reform&1-11 months& new recipient	0.807 (0.348)	0.771 (0.352)	1.395 (1.274)
Reform&12-14 months& new recipient	3.816 <sup>***</sup> (1.622)	2.334 <sup>*</sup> (1.039)	1.453 (1.224)
Reform&15-21 months& new recipient	2.426 <sup>*</sup> (1.200)	1.417 (0.754)	6.063 (7.265)
Reform&22-25 months& new recipient	0.543 (0.450)	0.542 (0.470)	0.709 (0.909)
Reform&26-42 months& new recipient	1.020 (0.424)	0.720 (0.325)	0.293 (0.265)
Number of Subjects	661	661	661

**Note:** We aggregated the cells for 26-36 and 37-42 months interaction terms due to the small number of observed exits in these cells.

**Table EA.18** Estimation of Table 2 with Alternative Prior Benefit Eligibility Groups

	Exit into labor force participation	Exit into substantial employment
Reform&1-11 months& certainly full prior benefit	1.447 (0.499)	2.984* (1.857)
Reform&12-14 months& certainly full prior benefit	5.341*** (2.998)	1.848 (1.170)
Reform&15-25 months& certainly full prior benefit	0.946 (0.459)	0.565 (0.294)
Reform&26-42 months& certainly full prior benefit	0.380* (0.206)	0.477 (0.285)
Reform&1-11 months& certainly part prior benefit	0.496 (0.565)	0.401 (0.462)
Reform&12-14 months& certainly part prior benefit	5.810* (5.919)	2.293 (2.547)
Reform&15-25 months& certainly part prior benefit	0.509 (0.585)	0.360 (0.408)
Reform&26-42 months& certainly part prior benefit	0.889 (0.494)	2.171 (1.647)
Reform&1-11 months& probably prior benefit	0.751 (0.272)	0.666 (0.263)
Reform&12-14 months& probably prior benefit	2.576** (0.991)	1.839 (0.820)
Reform&15-25 months& probably prior benefit	1.716 (0.661)	1.875 (0.797)
Reform&26-42 months& probably prior benefit	1.116 (0.564)	1.022 (0.539)
Reform&1-11 months& no prior benefit	0.732 (0.309)	0.681 (0.304)
Reform&12-14 months& no prior benefit	3.771*** (1.568)	2.308* (0.998)
Reform&15-25 months& no prior benefit	1.388 (0.573)	0.941 (0.422)
Reform&26-42 months& no prior benefit	0.974 (0.386)	0.683 (0.291)
Number of Subjects	685	685

**Note:** Due to the small number of observed exits to full time employment in many cells, we cannot report these results. In addition, we aggregate the cells for 15-21 and 22-25 months as well as 26-36 and 37-42 months interaction terms.

**Table EA.19** Estimation of Table 2 Accounting for Potential Maternity Leave Misreporting

	Exit into labor force participation	Exit into substantial employment	Exit into full time employment
Reform&1-11 months& prior recipient	1.049 (0.298)	0.900 (0.308)	1.277 (0.593)
Reform&12-14 months& prior recipient	3.327*** (1.063)	1.733 (0.631)	2.603* (1.451)
Reform&15-21 months& prior recipient	1.861* (0.697)	1.135 (0.481)	1.897 (1.300)
Reform&22-25 months& prior recipient	0.471 (0.240)	0.866 (0.407)	3.214 (2.491)
Reform&26-36 months& prior recipient	0.547 (0.237)	0.582 (0.257)	1.002 (0.556)
Reform&37-42 months& prior recipient	1.101 (0.542)	1.398 (0.841)	0.851 (0.626)
Reform&1-11 months& new recipient	0.717 (0.317)	0.669 (0.317)	1.931 (1.913)
Reform&12-14 months& new recipient	3.726*** (1.560)	2.233* (0.974)	1.360 (1.129)
Reform&15-21 months& new recipient	2.184* (1.031)	1.260 (0.636)	5.704 (6.751)
Reform&22-25 months& new recipient	0.495 (0.409)	0.479 (0.413)	0.438 (0.538)
Reform&26-36 months& new recipient	1.363 (0.594)	0.943 (0.445)	0.388 (0.481)
Reform&37-42 months& new recipient	0.217 (0.230)	0.159* (0.170)	0.207 (0.238)
Number of Subjects	685	685	685

**Table EA.20** Estimation of Table 2 Controlling for a "January" - Seam Effect

	Exit into labor force participation	Exit into substantial employment	Exit into full time employment
Seam	2.676 <sup>***</sup> (0.361)	2.645 <sup>***</sup> (0.404)	4.218 <sup>***</sup> (0.822)
Reform&1-11 months& prior recipient	1.072 (0.298)	0.951 (0.321)	1.515 (0.689)
Reform&12-14 months& prior recipient	3.518 <sup>***</sup> (1.132)	1.856 <sup>*</sup> (0.684)	2.970 <sup>**</sup> (1.632)
Reform&15-21 months& prior recipient	2.090 <sup>*</sup> (0.788)	1.121 (0.481)	2.265 (1.544)
Reform&22-25 months& prior recipient	0.553 (0.286)	0.904 (0.426)	3.677 <sup>*</sup> (2.868)
Reform&26-36 months& prior recipient	0.608 (0.261)	0.678 (0.298)	1.147 (0.621)
Reform&37-42 months& prior recipient	1.303 (0.654)	1.552 (0.933)	1.015 (0.744)
Reform&1-11 months& new recipient	0.775 (0.328)	0.687 (0.307)	1.481 (1.339)
Reform&12-14 months& new recipient	3.969 <sup>***</sup> (1.648)	2.328 <sup>*</sup> (1.006)	1.597 (1.321)
Reform&15-21 months& new recipient	2.180 (1.039)	1.223 (0.631)	7.589 <sup>*</sup> (8.895)
Reform&22-25 months& new recipient	0.533 (0.442)	0.509 (0.440)	0.515 (0.624)
Reform&26-36 months& new recipient	1.375 (0.598)	0.941 (0.443)	0.466 (0.575)
Reform&37-42 months& new recipient	0.239 (0.257)	0.174 (0.192)	0.248 (0.289)
Number of Subjects	685	685	685