

Paid Parental Leave and Paternity Acknowledgement

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Preliminary Draft based on aggregate data

Note that we have extended the analysis and now draw on administrative Microdata

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Over the last decades the share of children born to unmarried mothers has risen in many OECD countries. In the United States, it has more than doubled from 18% in 1980 to close to 41% in 2013. This rise has also been mirrored by an increase in the share of children growing up in single-mother households. For unmarried births, paternity acknowledgement legally defines the relationship of the father with his child and is significantly and positively associated with formal and informal child support payments and father-child visitation (see Mincy, Garfinkel and Nepomnyaschy 2005). Effectively establishing paternity is a crucial means to secure support from non-resident unmarried fathers and to promote greater involvement of fathers. In the U.S., policies have been enacted to encourage paternal recognition, for example by requiring states to establish in-hospital establishment programs

(see Mincy, Garfinkel and Nepomnyaschy 2005 for an evaluation of these programs).

A related debate is how public or social policy interacts with paternity establishment. Critics fear that an unwanted by-product of creating greater economic independence of single mothers is fathers being less engaged with their children. According to economic theory, increasing public support for unmarried mothers would incentivize out-of-wedlock childbearing and mothers to rear children on their own (see Willis 1999). The empirical evidence for an impact of the generosity of the welfare system on non-marital fertility and family composition is weaker. Studies conducted in the 90s find a nonzero but small positive effect of the Aid to Families with Dependent Children (AFDC) program on non-marital fertility (see Moffitt 1998 for a survey). In a recent paper, Moffitt, Phelan and Winkler (2015) find that stricter access rules to Temporary Assistance for Needy Families (TANF) coupled with family-oriented rules reversed this effect and lead to a reduction in single-parenthood. To the best of

my knowledge, there is no paper which looks at the direct effect of public policy on paternity acknowledgement.

In this paper we evaluate the impact of a reform in the German paid parental leave system on paternity acknowledgement. In contrast to the welfare policies analyzed in the US context, paid parental leave in Germany is a universal policy and not targeted to low-income mothers only. The reform substantially increased average leave payments and additionally incentivized leave-taking of fathers by reserving two months of paid leave exclusively to fathers, so called “daddy months”, which would otherwise be lost. In line with evidence from other countries (see Bartel et al. (2015) for California and Dahl, Løken and Mogstad (2014) for Norway), the reform led to a sharp increase in the take up of leave by fathers from 3.5% pre-reform to around 18% in 2007, the year after the reform, and has continued to increase up to 35% take-up in 2013. We exploit the sharp introduction of the new policy regime to obtain estimates of the causal impact of the reform on fatherhood acknowledgement. We draw on data from the universe of German birth records, which also records paternity acknowledgement at birth. To the best of my knowledge, administrative data on paternity acknowledgement has never

been used to study the effects of social policy on family composition.¹ WE find that the reform substantially increased paternity acknowledgement across most age ranges apart for children of young mothers below working age.

These results are in contrast to the concerns that providing greater economic independence to non-married mothers has adverse impacts on the fathers’ involvement in childrearing.

I. Institutional Background

Fatherhood Acknowledgement

As in many countries, paternity acknowledgement from unmarried fathers is a requirement for legally establishing parental rights.² In Germany, paternity acknowledgement occurs prior to birth at the youth welfare offices on a voluntary basis. Both parents have to be present for the appointment and have to fill out and sign a form. The youth welfare office informs both parents about the legal obligation the paternity acknowledgement entails. The father has a duty to support the child. Besides the child’s claim to maintenance and inheritance, a non-resident father is also legally obliged to pay

¹ Almond and Rossin-Slater (2013) use birth records from Michigan to explore the determinants of paternity acknowledgement.

² For married mothers, the law assumes that the husband is the father of the child.

alimony to the mother of the child up to the child's third birthday if the mother is unable to work whilst raising the child.

The Parental Leave Reform

All OECD countries except the US have implemented federally funded paid maternity or parental leave policies. In order to increase fathers' involvement in childrearing, many countries have made their parental leave policies, which historically applied to women, gender-neutral. In addition, some countries European countries as well as Quebec have also introduced "daddy-quotas", by reserving additional weeks of parental leave exclusively for fathers, in order to incentivize paternal leave-taking.

In 2006, Germany experienced a major structural reform of the paid parental leave system, which substantially increased parental leave payments by shifting from a flat-payment system to an earnings-related payment system, which was in place from 1st January 2007, granting up to 21,600 EUR for a child. For births prior to 1st January 2007, leave payments were independent of the pre-birth income of the caregiver, in almost all cases the mother. The average pre-reform total leave payment was around 4,400 EUR. The 2006 reform changed the fundamental structure of monthly payments in order

provide partial insurance (around 67%) for foregone earnings for up to 12 months after birth. A minimum leave payment of a total of 3,600 EUR was granted to caregivers not employed prior to childbirth or were on very low incomes. In 2008, previously employed mothers received on average 10,128 EUR total in leave payments under the new scheme. Take-up of the reform by mothers is high: Amongst all births in 2007 to 2010, 96% of mothers took the parental leave for an average of 11.7 months. Additional details of the reform are given in Raute (2015).

In order to increase father's participation in childrearing, the government further introduced a paternal-leave taking quota of two months. Both marital as well as non-marital fathers qualified for the leave if they were residing with the child. Conditional on taking leave, 76% of fathers took a leave period of up to two months, equivalent to the length of the "daddy quota".

II. Data and Definitions

My analysis employs administrative data from the administrative German births records (*Geburtenstatistik*) covering the universe of births in Germany for the years 2004-2010, around 4.8 million births in total. Besides basic child's and mothers/parental characteristics and parents' marital status, the

data also entails information on paternity acknowledgement for out-of-wedlock births at the time of the registration of the birth with the bureau of vital statistics, which has to take place within a week after birth. In 2006, the year before the policy change, around 30% of all births in Germany were out-of-wedlock. Amongst these, paternity has not been acknowledged prior to birth in 31% of cases.

For my analysis, we aggregate the individual-level data to month of births*year cells across all age groups as well as by mother's age. As paternity acknowledgement only concerns out of wedlock births, we restrict my sample to non-marital births.

III. Empirical Evidence

Parents to children born after 1st January 2007 were eligible for the new parental leave benefits, which allows me to use a regression discontinuity (RD) design.³

Figure 1 displays the evolution of the seasonality adjusted (residual) shares of fatherhood acknowledgements amongst unmarried monthly births over the years 2004-2010. The running variable, child's month of birth, has been normalized so that January

2007 is zero. We include an estimated regression line using separate quadratic trends on each side of the cutoff month. There is a sharp jump in paternity acknowledgement of around 1.5% points at the cutoff, with an increasing trend afterwards. In 2006, pre-reform, paternity was established for 69 out of 100 children born to unmarried mothers.

[Insert Figure 1 here]

Extrapolating to the yearly level, the reform would have caused around 1,000 additional fathers to establish paternity a year.

Table 1 presents the regression-based RD estimates for different maternal age groups. The specification includes separate quadratic time trends in birth months on each side of the discontinuity. For all age groups except the very young (below age 20) and old mothers (above age 40), the reform seems to have had a statistically significant positive effect on paternity acknowledgement. The effect is highest for children of working age mothers aged 35-39, for whom paternity establishment increased by 2.4% points.

[Insert Table 1 about here]

In contrast to the sizable effect on paternity acknowledgements, we do not find any effect on the share of children born to married couples due to the reform (results not shown).

³ It is important to note that the announcement of the draft bill (June 2006) as well as the passing of the law (September-November 2006) took place long after the conception for births around the reform date.

This suggests that there was no immediate marital response of expecting parents.

III. Concluding Remarks

A common concern of policy makers is that public policies which enhance the economic independence of mothers have adverse effects on fathers' involvement. The existing empirical evidence is not clear-cut. In this paper, we shed light on this question. We analyze how paid parental leave policies affect paternity acknowledgement in the context of a major reform in parental leave benefits in Germany. We establish that the reform was in fact successful at improving paternity acknowledgement for unmarried fathers. The causes for the increase in paternity acknowledgement could be twofold: Firstly, as the financial means for most families in the year after child birth were significantly improved through increased public transfers, the amount of private transfers a father was required to provide to the child and mother were lowered. The reform considerably reduced fathers' expected costs of having a child and should have increased their willingness to establish paternity. Secondly, higher parental leave transfers as well as the introduction of the daddy quota set higher incentives for fathers to take paternity leave which required paternity to be established

beforehand. Disentangling these two potential channels is beyond the scope of this paper. In ongoing work, we use the individual-level birth records to analyze whether there was a differential response of the father by the gender of the child and by mother's pre-birth employment status, which will help to distinguish the two channels.

Paternity establishment is the legal requirement for securing public support by the father for a substantial part of the child's life and will bear important economic consequences for public finances as well as for the welfare of single-headed households and their children. Cools, Fiva, and Kirkebøen (2015) find positive effects of a Norwegian paternal leave quota on children's school performance. The existing literature emphasized increasing father's time allocation to children as a potential mediating channel through which paternity leave would benefit children. The empirical evidence for the effects of paternity leave on fathers' involvement in the household has however been mixed. Rege and Solli (2013) and Patnaik (2015) find positive medium-run impacts on paternal time with the child, whereas Cools, Fiva, and Kirkebøen (2015) as well as Ekberg, Eriksson and Friebe (2013) do not find paternity leave to affect the traditional allocation of parents' labor supply.

My results indicate that an improvement in paternity acknowledgement might be an additional channel through which parental leave might generate longer-run improvements in children's outcomes.

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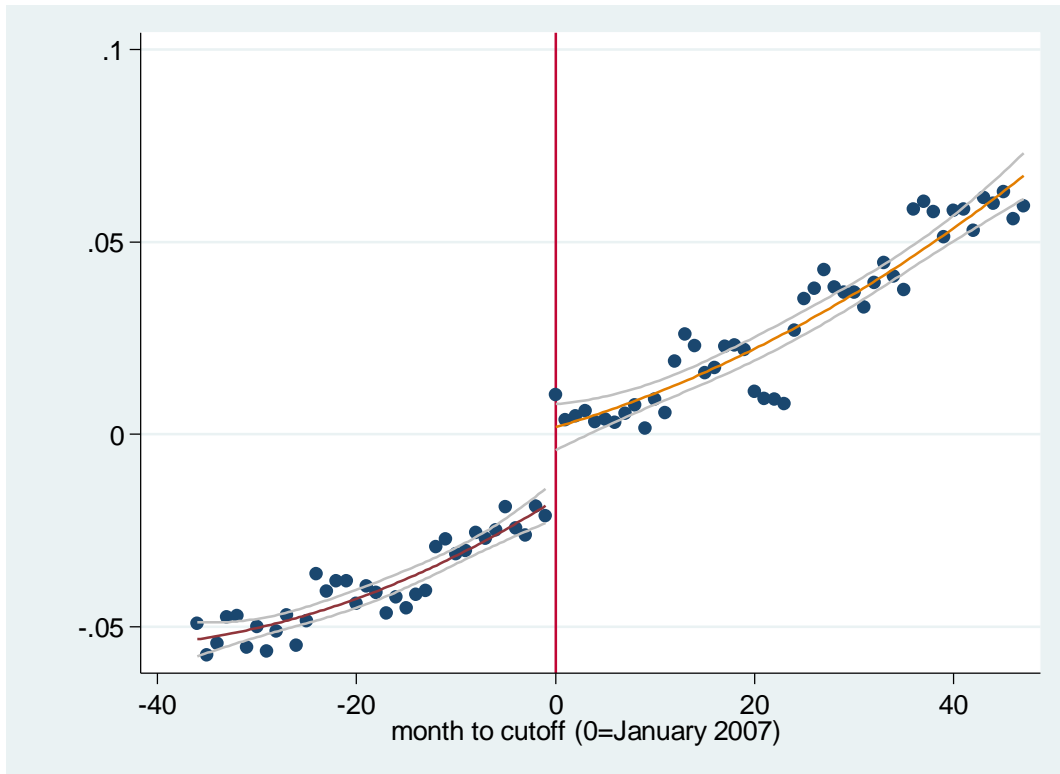


FIGURE 1. EVOLUTION OF PATERNITY ACKNOWLEDGEMENTS (SEASONALITY CORRECTED)

Note: Quadratic fit with 95% confidence interval on both sides of January 2007 (month to cutoff=0). The vertical line indicates the parental leave reform. *Data:* Residual (month of birth adjusted) share of paternity acknowledgements amongst births to unmarried mothers, 2004-2010 German birth records.

TABLE 1— RD ESTIMATES FOR EFFECT OF REFORM ACROSS MATERNAL AGE GROUPS

Age groups	<20	20-24	25-29
Effect on paternity establishment	0.011 (0.007)	0.011* (0.006)	0.017*** (0.005)
Share of paternity acknowledgements in 2006	41.2%	63.1%	74.4%
Effect with respect to 2006 acknowledgement level (in %)		1.74%	2.23%
Age groups	30-34	35-39	40-44
Effect on paternity establishment	0.012** (0.005)	0.024*** (0.007)	-0.008 (0.016)
Share of paternity acknowledgements in 2006	78%	77%	73.9%
Effect with respect to 2006 acknowledgement level (in %)	1.54%	3.12%	

Notes: The table reports regression discontinuity estimates of the reform using monthly birth data for different maternal age groups. I include separate quadratic trends in birth months on each side of the discontinuity. We additionally account for month of birth fixed effects to account for seasonality. The comparison mean of the share of paternity acknowledgements in 2006 is below the regression estimates. .

Source: Data generated from monthly birth records by maternal age groups (author's calculations). German birth records 2004-2010.

*** Significant at the 1 percent level.

** Significant at the 5 percent level.

* Significant at the 10 percent level.