

Fathers' Leave-taking, Labor Market Outcomes and Family Well-Being*

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1 Introduction and Policy Relevance

Child birth is a major driver of remaining gender inequality in labor market outcomes. In Denmark and many other countries, mothers face “child penalties” in earnings after the birth of their first child (i.e., earnings reductions relative to their pre-birth trajectory). These penalties are absent for fathers and, for mothers, can be traced in the long run (Kleven et al., 2019). Core contributing factors for diverging earning trajectories of mothers and fathers are specialization of maternal time in household chores and child care and selection of mothers into less career-oriented jobs. This pattern manifests early, with a gendered take-up of parental leave.

Given the finding of *early* divergence in labor market and household time use for new mothers and fathers, and given the long-run consequences for earnings and aspects like pension wealth, policy makers in many settings have introduced measures to actively incentivize *both* new parents' involvement in market and household work—in particular ear-marked parental leave. As an example, under a 2019 EU directive, all EU countries are required to implement at least 9 weeks of earmarked (non-transferable) leave for each parent. The goal of earmarked leave is to encourage new mothers' timely return to the labor market and to encourage fathers' involvement in household chores and child care. These within-household changes in time allocation during early parenthood may impact longer-run gender inequality on the labor market—either by preserving maternal attachment to the labor market and maternal human capital (which may depreciate during long parental leave and thus encourage maternal specialization on household chores), by changing norms around parenthood (i.e., individual and societal prescriptions around appropriate roles of mothers and fathers), or both.

This project answers two main sets of research questions: (1) What is the impact of paternal leave-taking on maternal and paternal labor market outcomes? Are there impacts of parental leave composition (the share of leave taken by mothers or fathers) on child development and test scores, family health and family well-being? (2) Does paternal leave taking have longer-run effects on the division of labor market and household work in families with children, and thus a lasting impact on gender equality in task allocation within households?

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Paternity leave may impact multiple family outcomes, in particular labor market outcomes (labor supply and earnings). For policy makers, it is instrumental to understand the labor supply responses to changes in the parental leave system that aim at increasing paternal time in care work—such as earmarked leave. Therefore, a core contribution of this project is an analysis of the consequences of paternal leave taking on maternal and paternal labor market outcomes.

A large body of literature has further established the critical role of early life parental time investments for short- and long-term child outcomes (Berlinski and Vera-Hernández, 2019). The causal literature on parental leave and its importance for child development has primarily used reform-based variation in access to and expansion of *maternity* leave (Olivetti and Petrongolo, 2017; Rossin-Slater, 2018), reflecting that mothers (historically and today) are the main “leave takers”. With policies that increasingly promote fathers’ leave taking and involvement in childcare, it becomes natural to ask whether a *leave expansion* with additional paternity leave or a changing *composition* of parental time investments in children affects their development and well-being.

A small economics literature has explicitly examined the impact of paternity leave. Typically these studies are reform-based and, for now, point to (i) the success of earmarked leave introduction on fathers’ leave-taking (the first stage), and (ii) inconclusive results for labor market, family and child outcomes: Ekberg et al. (2013) find strong impacts on paternal leave taking of a Swedish daddy month reform, longer-run (small) impacts on maternal labor market outcomes, but no impacts on fathers’ household work or earnings. On the other hand, Rege and Solli (2013) document large negative earnings impacts for fathers of a paternity leave reform in Norway. Regarding family outcomes, evidence from Spain suggests that paternity leave mandates may decrease fertility, potentially due to fathers adjusting their desired fertility (Farré and González, 2019). Moreover, also exploiting leave reforms, two studies find conflicting evidence for family composition and stability (a decrease and increase in the probability of family dissolution in Sweden and Iceland, respectively) (Avdic and Karimi, 2018; Olafsson and Steingrimsdottir, 2020). Family stability is a core outcome given potentially large consequences for children. Finally, little is known about the causal impacts of fathers’ leave on child outcomes. Cools et al. (2015) show that a Norwegian leave reform impacted paternal leave-taking and increased the educational attainment of in particular children with highly educated fathers. A very recent Spanish working paper, on the other hand, suggests negative impacts on early child development of paternity leave expansions (Farré et al., 2024).

Our project will extend this small literature and provide policy-relevant evidence to (1) assess the full impact of paternal leave taking on labor market outcome and relevant family outcomes, and to (2) assess whether impacts of paternal leave are short-lived or change within-family task allocation (in the home and in the market) in the longer run. This reallocation, if present, may be an important mechanism for potential labor market and family well-being impacts of the division of parental leave among fathers and mothers. If increased paternal leave taking results in longer-run increased paternal care and domestic work (and not only in increased maternal work hours in the

labor market), paternity leave may be a policy lever to confront the widely established “second shift” issue of working mothers (i.e., remaining very unequal division of household work despite more equal labor market participation of mothers and fathers) (Stratton, 2020).

2 Our study

We use combined administrative and survey data to study the impacts of parental leave division between mothers and fathers on labor market and family outcomes in Denmark. For identification, we use an instrumental variable approach, exploiting variation in fathers’ (compensated) leave entitlement across firms (within industries, years and regions), inspired by Jørgensen and Søgaaard (2024). Thus, we study variation in leave composition across families that is not induced by a reform or extension of parental leave, but rather focus on variation in fathers’ leave due to differences in the generosity of employer-provided compensation (serving as a supplement for public parental leave benefits). These differences create discrete changes in replacement rates at particular combinations of parents take-up of parental leave that are predictive of individual leave-taking and duration. Thus we use quasi-experimental variation in how mothers and fathers allocate parental leave (rather than total length of leave). We complement reform-based studies (i) by isolating the importance of leave composition (mom vs dad) from the impact of overall leave duration, and (ii) by not exploiting sudden mandates in the parental leave system. This point will be important for interpretation, as it implies that we likely study different compliers (relative to those in studies of major leave reform).

Parental leave composition, labor market outcomes and child and family well-being

In a first step, we examine the impact of fathers’ leave taking on short- and medium run labor market and family outcomes. We observe detailed measures for labor market outcomes (and family demographics) in the administrative data. We follow Jørgensen and Søgaaard (2024) to construct an instrument for paternal leave duration (given that we expect selection of fathers into paternity leave and leave duration in our setting). We assess the impact of increased paternity leave (a changing leave composition as mothers decrease their leave taking) on earnings, work hours on the labor market, infant and child health (measured as health care take-up), and child national test score results in grade 2 (as a long-run measure of child development).

As an important innovation, we complement the administrative data with a rich and large-scale survey, containing mother- and father-reported information on family well-being (parental stress, parental mental health (WHO-5 scale)) and child socio-emotional development (the *Ages & Stages Questionnaires: Social-Emotional*). Specifically, we use the first two waves of the SPOR survey (merged with administrative data).¹ For these waves, SPOR sampled and interviewed *both*

¹For further details on SPOR consult [\(Link to SPOR\)](#).

parents of children aged 9 months to 5 years at time of interview (survey sample per wave approx. N=50,000). We can thus assess the impact of fathers' leave on important and often unobserved child and family health and well-being measures.

Parental leave composition and within-family division of work To study not only labor market consequences but also within-couple allocation of time to care and household chores, we move beyond an analysis of coarse register data (e.g., on who takes the child to the doctor in case of sickness, as previously studied as a proxy for parental involvement). We exploit the third wave of SPOR, which will be in the field in autumn 2025-autumn 2026.² In this survey wave, we will interview large samples of mothers and fathers of two cohorts of children (aged nine months or aged four years at time of interview) on the household division of time, as well as mothers' and fathers' attitudes towards parenthood and child care. We will again exploit an instrumental variable strategy to estimate the impact of greater paternity leave on these outcome measures. Moreover, in the families with children aged four at the time of SPOR interview, we will complement our IV strategy with a regression discontinuity approach: These families (children born between Maj 2022-October 2022) were subject to the most recent policy reform of Danish parental leave, the introduction of earmarked parental leave. We will be able to provide policy-relevant evidence on the potential long-run changes of within family allocation of tasks for this reform sample.

3 Budget, Timeline and Expected Output

This application primarily concerns funding for data infrastructure and limited funding for researcher and research assistant time. The analyses will result in one scientific paper.

The research team consists of Miriam Wüst (associate prof., UCPH) and Lukas Diethelm (fully-funded CEBI PhD-student, UCPH). We have already done some preliminary work on the project: We have used existing administrative data sources to explore the strength of our proposed instrument, assess potential threats to identification (i.e., assess potential selection of fathers into specific firms), as well as descriptively studied paternal leave take-up and its correlation with child development in the first and second wave of the SPOR survey.

To move on with our analyses, we need to set up a dedicated dataset at DST that combines the data on leave taking, additional health data from administrative sources, test score data, and the SPOR survey waves 1 and 2. We will do so during fall 2025 and perform analyses in winter/spring 2025/2026. Moreover, in fall/winter 2026/2027, we will add the third SPOR wave to the project and thus have information on within-family time use. We will submit a working paper on the combined analyses by December 2027 latest.

²Miriam Wüst is actively involved in designing til SPOR questionnaire for the third wave of the survey in close collaboration with the VIVE research team around Prof. MSO Hans Henrik Sievertsen.

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