

The Role of Firms for Children's Development

Mathias Huebener* Malin Mahlbacher[†]* Susanne Schmid^c Gundula Zoch^d

October 31, 2023

Extended Abstract

Keywords: Maternal Employment, Child Development, Firm Characteristics

The last decades witnessed significant increases in female labour force participation. Accordingly, women now spend more time in education, in the labour market and in professional activities before giving first birth. Also, after childbirth, mothers continue to increase their labour force participation. This comes along with challenges from the different role requirements for paid work, domestic work, and parenthood. Consequently, family life and children's early education and care environments have changed significantly.

While a large body of literature has analysed the consequences of maternal employment *after* birth for child development (e.g., Brooks-Gunn et al., 2010; Lombardi and Coley, 2017), previous studies have paid little attention to the role of labour market experiences and firm characteristics *prior* to childbirth. These factors can help accumulate resources and create conditions until childbirth that facilitate women's re-entry into the labour market and their capacity to reconcile work and family life after birth. A newly emerging literature focuses on the importance of family-friendly workplaces for the careers of women and men after childbirth (Hotz et al., 2018) or for parental well-being (Lauber and Storck, 2019). This paper is the first to analyse how firm characteristics and women's labour market experiences prior to childbirth are related to children's development.

Pre-birth employment is likely to affect child development through several channels. First, employment can directly affect the unborn child, as more parental resources can improve prenatal care and uterine conditions. Conversely, higher (work-related) stress may have negative effects on fetal development (e.g., Berthelon et al., 2021). These initial effects could potentially have lasting consequences for children's later development through

*Federal Institute of Population Research (BiB), Wiesbaden, IZA Bonn, DIW Berlin

[†]Federal Institute of Population Research (BiB), Wiesbaden

*Corresponding author: malin.mahlbacher@bib.bund.de

^cUniversity of Oldenburg, University of Bamberg

^dUniversity of Oldenburg, Leibniz Institute for Educational Trajectories

dynamic complementarity (Cunha and Heckman, 2007). Additionally, pre-birth employment can also affect child development by facilitating women’s re-entry and enhancing post-birth employment conditions. Related to early childhood environment, labour market experiences may be linked to parenting styles (e.g., managerial, interactive, or manual tasks). However, evidence regarding the role of employment and firm characteristics prior to childbirth for children’s development remains scarce.

This study aims to fill this research gap by utilizing rich panel data on child development from the German National Education Panel Study, linked to administrative data on mothers’ employment histories (NEPS-SC1-ADIAB7521, 2012-2021; NEPS-Network et al. (2023)). The data provide exceptionally high-quality longitudinal data on employment trajectories of mothers, merged with objectively measured information on cognitive and non-cognitive abilities of children (Weinert et al., 2016). The data are enriched with information on firm characteristics from the Establishment History Panel (BHP), providing information on mothers’ workplaces prior to birth. To the best of our knowledge, no comparable data product is available that combines detailed information on family life and child development with mothers’ full administrative employment records and firm characteristics.

Additionally, we use a data product based on the IAB Establishment Panel, which links surveyed information about each employer’s establishment and workplace with employees’ individual employment trajectories (Linked-Employer-Employee-Data of the IAB (LIAB longitudinal model), 1975-2017; Schmidtlein et al. (2019)). Identifying mothers in this data set allows us to analyse in more detail how firm characteristics relate to employment after birth.

Therefore, as a first step, using the LIAB data and using an event study approach, we look at the role of pre-birth firm characteristics for mothers’ re-entry into the labour market and maternal employment after birth. We compare re-entry and post-birth employment of various groups of mothers differentiated by pre-birth firm characteristics, focusing especially on family-friendliness. In a next step, we use the NEPS-SC1-ADIAB data and OLS regression models to find out more about the relationship between maternal work context and child development. We analyse whether maternal work experience, employment conditions, and workplace characteristics before giving birth are related to child development at different ages. We examine cognitive and non-cognitive measures

of child development, measured by mathematical literacy and the SDQ, through the first ten years of children’s lives. In our analyses, we consider the role of maternal employment characteristics before birth, such as wages or fixed-term contracts, to capture resource accumulation or job stability. In addition, firm characteristics, such as firm size, the share of female workers or the workgroup size of mothers’ workplaces are indicators of the workplace environment that can shape re-entry conditions after childbirth. These indicators capture, for example, internal substitutability, which plays a role in parental leave absences or sudden absences due to sick children, or firm size, which can be a measure of monopsony power to offer non-wage amenities.

To understand potential mechanisms, we further investigate whether pre-birth employment conditions are related to parenting behaviour, well-being, and other mediators after childbirth. We know from literature that maternal well-being (related to their employment) (e.g., Chang, 2013), parental resources (e.g., Moroni et al., 2019) and parenting behaviour (e.g., Chen et al., 2019) are related to better child development outcomes, such as socio-emotional development. We show how parenting characteristics and activities, such as parent-child interaction quality, joint parent-child activities, and maternal happiness, are related to firm and employment experiences.

First analyses looking at the relation between maternal employment characteristics and child outcomes focus on children’s behavioural and socio-emotional development, measured by an indicator of the SDQ at the ages of 3, 5, 7, and 9. Preliminary findings using OLS models suggest that fixed-term employment before birth is related to increased behavioural problems of children. Accumulated work experience prior to birth is not related to non-cognitive child development. The analyses will soon include firm characteristics and further examine the importance of pre-birth employment for maternal re-entry and children’s development.

Recognizing the importance of firm and employment characteristics in influencing child development underscores the broader policy implications of fostering family-friendly workplace environments. Such an approach not only benefits mothers but also demonstrates that it can be an investment in nurturing future human capital. This understanding paves the way for policies that promote family-friendly initiatives by identifying key features of firms and mechanisms that are critical to their success.

References

- BERTHELON, M., D. KRUGER, AND R. SANCHEZ (2021): “Maternal stress during pregnancy and early childhood development,” *Economics and human biology*, 43, 101047.
- BROOKS-GUNN, J., W.-J. HAN, AND J. WALDFOGEL (2010): “First-Year Maternal Employment and Child Development in the First Seven Years,” *Monographs of the Society for Research in Child Development*, 75, 7–9.
- CHANG, Y. E. (2013): “The Relation Between Mothers’ Attitudes Toward Maternal Employment and Social Competence of 36-Month-Olds: The Roles of Maternal Psychological Well-Being and Sensitivity,” *Journal of Child and Family Studies*, 22, 987–999.
- CHEN, Y., J. HAINES, B. M. CHARLTON, AND T. J. VANDERWEELE (2019): “Positive parenting improves multiple aspects of health and well-being in young adulthood,” *Nature human behaviour*, 3, 684–691.
- CUNHA, F. AND J. HECKMAN (2007): “The Technology of Skill Formation,” *American Economic Review*, 97, 31–47.
- HOTZ, V. J., P. JOHANSSON, AND A. KARIMI (2018): “Parenthood, Family Friendly Workplaces, and the Gender Gaps in Early Work Careers,” *NBER Working Paper*.
- LAUBER, V. AND J. STORCK (2019): “Helping with the kids? How family-friendly workplaces affect parental well-being and behaviour,” *Oxford Economic Papers*, 71, 95–118.
- LOMBARDI, C. M. AND R. L. COLEY (2017): “Early Maternal Employment and Children’s Academic and Behavioral Skills in Australia and the United Kingdom,” *Child Development*, 88, 263–281.
- MORONI, G., C. NICOLETTI, AND E. TOMINEY (2019): “Child Socio-Emotional Skills: The Role of Parental Inputs,” *IZA Discussion Paper*, No. 12432.
- NEPS-NETWORK, N. BACHBAUER, C. WOLF, T. GRAF, S. GRIESSEMER, M. KÖHLER, C. LEHNERT, A. MOCZALL, M. OERTEL, A. SCHNEIDER, AND U. THOMSEN (2023): “NEPS-SC1 survey data linked to administrative data of the IAB (NEPS-SC1-ADIAB) – Version 7521 v1,” *Research Data Centre of the Federal Employment Agency (BA) at the Institute for Employment Research (IAB)*, DOI: 10.5164/IAB.NEPS-SC1-ADIAB7521.de.en.v1.
- SCHMIDTLEIN, L., S. SETH, M. UMKEHRER, T. GRAF, S. GRIESSEMER, S. KAIMER, M. KÖHLER, C. LEHNERT, M. OERTEL, AND C. SEYSEN (2019): “Linked-Employer-Employee-Data of the IAB (LIAB): LIAB longitudinal model 1975-2017, version 1,” *Research Data Centre of the Federal Employment Agency (BA) at the Institute for Employment Research (IAB)*, DOI: 10.5164/IAB.LIABLM7517.de.en.v1.
- WEINERT, S., A. LINBERG, M. ATTIG, J.-D. FREUND, AND T. LINBERG (2016): “Analyzing early child development, influential conditions, and future impacts: prospects of a German newborn cohort study,” *International Journal of Child Care and Education Policy*, 10.