

Can municipalities mitigate the effects of parental job loss on children's mental health? Evidence from Swedish register data.

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Abstract

Parental job losses have detrimental consequences for the mental health of children. To understand the buffering role of social policies, previous studies examined how the magnitude of these negative effects varies across countries with divergent social policies. However, little is known about the protective role of policies implemented by local authorities, namely municipalities. This study investigates whether municipal spending on elementary schools can moderate the adverse effects of parental job loss on children's mental health. Additionally, we explore what the type of municipal expenditures plays a particularly protective role.

Analyses are based on Swedish register data linked with the overall municipal expenditures on elementary education, as well as more specific indicators such as expenditures on after-school centers and proportions of qualified teachers. To reduce bias from unobserved factors that may affect both parental labour market outcomes and children's mental health, we focus on children whose parents experienced job displacements due to plant closures. Our analyses make use of state-of-the-art machine learning methods, specifically, we build on the approach developed by Athey and Wager (2019), namely a causal forest algorithm that accounts for the municipality cluster structure of the data.

Our findings reveal that higher municipal spending on elementary schools reduces the negative mental health effects of parental job loss. Our further analyses show that while these moderating effects could be potentially driven by the quality of services provided at after-school centres. Overall, our results underscore the importance of educational policy implemented in the local contexts in shaping families' resilience to socioeconomic shocks.

Introduction

Parental job losses may have detrimental consequences for the mental health of children (Högberg and Baranowska-Rataj 2024; Moustgaard et al. 2018; Mörk et al. 2014, 2020). Previous literature has explored how the magnitude of these negative effects varies across countries with divergent social policies (Hansen and Stutzer, 2022; Baranowska-Rataj et al., 2024). However, little is known about whether the effects of parental job losses on children's mental health vary across local environments, such as municipalities. This is an important knowledge gap. While family resources obviously play a fundamental role in children's well-being, the resources in municipalities where children live, receive schooling and spend their time socializing with peers may be relevant for children's resilience to negative life events. Moreover, local authorities have the legal mandate and funds to invest in the pedagogical support offered by the schools the children attend, and therefore they may partially compensate for the harmful effects of socioeconomic disadvantage among children (Bischoff and Owens, 2019).

The arguments about the moderating role of the municipal expenditures on schooling may be particularly relevant in the context of Sweden, which is the focus of this study. Swedish educational system is regarded as one of the most decentralised in OECD countries (Ahlin & Mörk 2008). Municipalities are responsible for provision of schooling at elementary level. Elementary schools are mandatory, with enrolment starting typically at the age of seven and lasting three years. In addition to formal education, elementary schools offer after-school programs, where children can engage in various activities, receive meals and benefit from full-day care. Municipalities also have the autonomy to make decisions regarding the recruitment of school personnel, including teachers, as well as the regulation of their salaries and working conditions.

Our study contributes first to the literature on the role of educational expenditures for reducing inequality in children's mental health. Although previous research has shown that educational expenditures improve educational outcomes (Pareliussen et al., 2019), the question of the benefits of equality in mental health outcomes among school-aged children remains unanswered. We investigate whether educational expenditures can support the most vulnerable subgroups of the population, such as school-aged children whose parents have lost their jobs. Thus, our paper adds to the literature on family resilience, which so far has tended to overemphasize the individual and within-family responsibility to overcome external shocks, often overlooking the impact of resources from the welfare state (Bawati et al., 2025).

Furthermore, we explore whether the type of investments matters. While some studies have shown that higher overall expenditures on schooling reduce behavioral problems (Harknett et al., 2005),

others suggest that the effects of educational investments can vary depending on what local authorities invest in. Relatively smaller benefits have been shown for investments in school infrastructure and relatively higher benefits were found for spending on the availability of well-qualified teachers (Cunningham et al., 2019). Accordingly, we explore whether the type of municipal expenditures matters, that is, whether the negative effects of parental job losses are particularly small in municipalities where schools have higher expenditures on after-school center services or higher proportions of qualified teachers.

Research design

We use Swedish registers combined with data on municipal expenditures on schooling. Our analyses make use of state-of-the-art machine learning methods, specifically, we build on the approach developed by Athey and Wager (2019), namely a causal forest algorithm that accounts for the municipality cluster structure of the data. The employer-employee links in Swedish registers provide the opportunity to focus on job losses resulting from plant closures. This approach has been applied in the literature on the health effects of unemployment in order to reduce the potential bias resulting, for example, from the reverse causality between job losses and health within families (Brand, 2015). When an entire plant closes, it is unlikely that a loss of job for a specific parent occurs due to health-related issues among his or her children. We test whether the negative effects of parental job losses are smaller in municipalities that allocate more economic resources to elementary schools. We also explore to what degree the overall positive moderating role of higher municipal expenditures on schooling may be driven by high teachers' qualifications in municipalities.

Preliminary results

Our results demonstrated a substantial reduction in negative impacts of parental job displacement in municipalities with higher municipal expenditures on schooling. In particular, our estimates indicate that increasing investments in municipal expenditures on schooling by approximately 7,500 SEK per student is associated to a reduction in the estimated risk of mental health problems by 42% in case of maternal and 58% in case of paternal job loss. Our further analyses show that while these moderating effects could be potentially driven by the quality of services provided at after-school centres, the results on the role of teachers' qualifications are somewhat less clear.

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