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Childhood Shocks and Fertility: Evidence from Parental Job Loss

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Abstract

Do economic shocks experienced in childhood carry on to the fertility outcomes in adulthood and if they do, how? Using plant closures from the years 1991–1993 in Finland, I find that maternal and paternal job loss have asymmetric effects on children's fertility outcomes.

Maternal job loss increases the probability of a son becoming a parent, while paternal job loss decreases it. For paternal job loss, I find negative effects on son's other outcomes, such as having a spouse, earnings, and employment which might drive the effects on their fertility outcomes. Instead, maternal job loss has no effect on son's other outcomes. Hence, fertility might be affected through other channels such as changes in parent-child relationship quality. For daughters, I find effects on timing; they have children earlier due to maternal job loss and later due to paternal job loss. There are no effects on daughters' other outcomes suggesting that the effects on fertility outcomes might work through other channels.

The results might be best interpreted in terms of spousal roles; mothers might shift more energy towards their role as a caregiver, while paternal job loss can be more stressful if the father fails to fulfill his role as a breadwinner.

Tiivistelmä

Lapsuusajan sokit ja hedelmällisyystulemat: Näyttöä vanhempien työpaikan menetyksestä

Vaikuttavatko lapsuudessa koetut taloudelliset sokit hedelmällisyystulemiin aikuisiällä, ja jos vaikuttavat, miten? Tutkimalla Suomessa vuosina 1991–1993 tapahtuneita toimipaikkasulkeutumisia havaitsen, että äidin ja isän työpaikan menetyksellä on epäsymmetrisiä vaikutuksia lasten hedelmällisyyteen.

Äidin työpaikan menetys lisää pojan todennäköisyyttä tulla vanhemmaksi, kun taas isän työpaikan menetys vähentää sitä. Isän työpaikan menetyksellä on negatiivinen vaikutus poikien muihin tulemiin, kuten koulutukseen, tuloihin, työllistymiseen ja parisuhteeseen, mikä voi heijastua myös hedelmällisyystulemiin. Äidin työpaikan menetyksellä ei ole taas vaikutusta poikien muihin tulemiin. Hedelmällisyyteen saattavat siten vaikuttaa muut asiat, kuten muutokset vanhemman ja lapsen välisen suhteen laadussa. Tyttärille havaitaan vaikutuksia lastensaannin ajoituksessa: he saavat lapsia aikaisemmin äidin työpaikan menetyksen seurauksena ja myöhemmin isän työpaikan menetyksen seurauksena. Tyttärien muihin tulemiin ei ole havaittavissa vaikutuksia.

Tuloksia selittänevät parhaiten puolisoiden roolit: äidit saattavat työpaikan menetyksen jälkeen käyttää enemmän aikaa lasten ja perheen hoitamiseen, kun taas isille työpaikan menetys voi olla stressaavampaa osittain siksi, että he eivät pysty täyttämään rooliaan elättäjänä.

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Keywords: Job loss, Fertility, Childhood shocks

Asiasanat: Työpaikan menetys, Hedelmällisyys, Lapsuusajan sokit

JEL: J13, J63

1 Introduction

The decrease in fertility rates has been accelerating rapidly in the last few decades in many countries.[1] The mechanisms behind this phenomenon remain mainly unclear. Previous evidence has indicated that economic conditions and uncertainty can affect fertility (see e.g., Ahn and Mira, 2001; Adsera, 2005; Huttunen and Kellokumpu, 2016; Coskun and Dalgic, 2022), but the current drop in fertility does not coincide with worse economic conditions. The origins of fertility decisions could be somewhere else and can even be formed in childhood. We know little about how parental unemployment and income shocks in childhood affect fertility decisions and outcomes later in adulthood. Parental job loss might affect children's fertility outcomes through its impact on childhood family size (e.g., Huttunen and Kellokumpu, 2016), family income (see e.g., Huttunen and Riukula, 2019, among many others), and parental employment and hence, both time spent with parents but also parental stress. It might affect fertility decisions either directly affecting childhood conditions i.e., time spent with parents, or indirectly through affecting, for example, child's own labor market and educational outcomes (see e.g., Hilger, 2016; Oreopoulos et al., 2008; Huttunen and Riukula, 2019). Education, employment and earnings have all been shown to affect both the timing and completed fertility for women (e.g., Becker, 1960; Adsera, 2005; Monstad et al., 2008; Currie and Schwandt, 2014). They might also affect the fertility outcomes of men through assortative mating.

[1] The total fertility rate in Finland has decreased from 1.9 in 2010 to 1.4 in 2019. In the US it has decreased from 1.9 in 2010 to 1.7 in 2019. *Source*: World Development Indicators.

In this paper I study how economic shocks in childhood affect fertility outcomes in adulthood. Specifically, I utilize Finnish administrative data and focus on how parental job loss due to plant closures affects children's fertility outcomes in their adult years. Does parental job loss affect the offspring's timing of fertility and completed fertility? And if it does, how? Several papers have documented that displaced workers suffer long-lasting employment and earnings losses (Jacobson et al., 1993; Stevens, 1997; Couch and Placzek, 2010; Huttunen et al., 2011), and these effects may spill over to their offspring through, for example, reduced investments and increased family stress. This shock to families might affect the fertility decisions of the children. I study the effects of maternal and paternal job loss separately; parental roles and how parents react to job loss might differ (see, e.g., Rege et al. (2011)), which might, in turn, affect children's outcomes in different ways.

This study is the first to examine how parental job loss during childhood affects fertility decisions in adulthood. Using plant closures from the years 1991–93 and focusing on children aged 11–18 at the time of job loss, the paper provides three key findings. First, parental job loss has asymmetric effects on children's fertility by the gender of the parent; maternal job loss *increases* sons' probability of being a parent, or having a child by the age of 40, while paternal job loss *decreases* it. Daughters have children earlier due to maternal job loss and later due to paternal job loss. Second, fathers' job loss results in lower education, earnings, employment, and the probability of having a spouse for sons, but not for daughters. This, in turn, suggests that paternal job loss might affect sons' prospects of finding a spouse and thus, lowering his

fertility outcomes. Third, as maternal job loss does not affect children's other outcomes, other channels such as parent-child relationship quality or changes in the views of family life might be at work affecting children's, particularly sons', fertility outcomes.

The asymmetric effects I find for paternal and maternal job loss might be best interpreted in the light of spousal role theories from the field of sociology (Jahoda et al., 1982; Gallie et al., 1994) following Rege et al. (2011). Paternal job loss can be more stressful if the father fails to fulfill his role as a breadwinner, thus affecting the offspring. Mothers, in turn, might more easily adapt to job loss as it is more socially acceptable for them not to work and as a result, they might shift more energy towards their role as a caregiver. Hence, paternal and maternal job loss might affect children's views on having a family and also their other outcomes differently. Sanders (2012) suggests that parent–child relationship quality and socioeconomic status positively predict interest in childbearing. Furthermore, Karhunen et al.'s (2023) findings suggest that the early family environment is associated with attitudes related to fertility.

Why are sons more affected? Boys are more vulnerable to adverse events as shown by a large literature (e.g., Golding and Fitzgerald, 2017; Schore, 2017) and might therefore react more strongly to the shock. In contrast, girls typically mature earlier and are more resilient. For instance, García et al. (2018) show that home care is beneficial for boys compared to low-quality center childcare while girls are robust to their childcare arrangements.

This paper ties two brands of literature together. First, there is a growing

body of research aiming to isolate the causal effect of childhood income shocks (Løken, 2010; Løken et al., 2012) or policies (e.g., Hoynes et al., 2016; Dahl and Lochner, 2012), on later outcomes. These studies find consistent evidence that income in early childhood affects children's health, cognitive skills, and labor market outcomes. Related to the setting, many papers have studied the effects of parental job loss on infant health (Schaller and Zerpa, 2019; Liu and Zhao, 2014; Lindo, 2011), school performance and educational attainment (Mörk et al., 2020; Hilger, 2016; Stevens and Schaller, 2011; Rege et al., 2011; Bratberg et al., 2008) and labor market outcomes (Huttunen and Riukula, 2019; Hilger, 2016; Oreopoulos et al., 2008; Hilger, 2016). I add to the literature on the consequences of job displacements by providing new evidence on how childhood shocks might also carry on to the fertility outcomes of the children.

Second, there is a vast literature studying economic conditions and their implications on fertility outcomes (see, e.g., Ahn and Mira, 2001; Adsera, 2005; Huttunen and Kellokumpu, 2016; Lee and Orsini, 2018; Landaud, 2021). For example, Adsera (2011) shows that high and persistent unemployment in a country is associated with delays in childbearing.[2] Most relevant to this study are the studies concerning the effects of job loss on fertility.[3] For example, Huttunen and Kellokumpu (2016) find a negative effect of female job displacement and no effect for male job displacement on the number of children. This study, in turn, provides evidence on the intergenerational effects of job loss on

[2]Similarly, Landaud (2021) provide evidence that being permanently employed has a much stronger effect than being in temporary employment on the probability of entering a first cohabiting relationship as well as on the probability of having a first child.

[3]See, for example, Lindo (2010); Del Bono et al. (2012); Bono et al. (2015); Huttunen and Kellokumpu (2016).

fertility.[4]

2 Data

2.1 Sample

The key to the analysis is the Finnish Longitudinal Employer-Employee Data (FLEED), covering the years 1988–2016. This data set covers all Finnish residents aged 16 to 70 years and provides rich information on individuals, including their education and labor market outcomes. I have merged this data with the Finnish parent-child linked data using individual identification codes. The data includes the dates of birth for all children born between 1949 and 2020, as well as details on familial relationships (identifying mothers and fathers). This rich data set enables a thorough examination of fertility patterns for both parents and their children.

I focus on parents working in private sector plants employing 10–500 workers in Finland during 1991–1993. I label these years "base years" b. The analysis is further narrowed to include only workers who had a minimum tenure of one year in the base year. For each base year b, I construct separate samples by including observations for each worker from three years prior to the base year up to ten years following it. In the analyses, I pool these three base year samples into a panel, covering 1988–2003, for examining parental outcomes.[5]

[4]Given that the mean age of the mothers in the maternal job loss sample is over 40, significant adjustments in their fertility are not anticipated.

[5]If a worker is displaced and appears multiple times in the dataset, only the first instance of displacement is considered. Conversely, non-displaced workers may feature up to three times, reflecting the number of base years. Children of non-displaced parents can also appear

Consistent with prior research, I define displaced workers as those who involuntarily lose their jobs due to exogenous shocks. A worker is defined as displaced if their plant closed between year b and $b+1$, or if they left a plant during the same interval that subsequently closed between $b+1$ and $b+2$. The comparison group comprises workers who were not displaced between years b and $b+1$. Importantly, I allow workers in the control group to separate for other reasons than displacement, such as voluntary job changes and health issues.[6]

In the analysis, I restrict the sample to mothers (or fathers) with at least one child aged between 11 and 18, and who did not give birth during the base year b. The minimum age of children in the sample ranges from 11 to 13, varying according to the base year b, to ensure that all children can be tracked until they reach 40 years of age. This extended follow-up period is essential for accurately evaluating the impact of parental job loss on both the timing and completed fertility of their children.[7] For the paternal job loss sample, children are linked through the base year spouse, as children typically reside with their mothers post-divorce. This approach ensures that the focus is on children who likely lived in the same household as the father during the base year b, allowing for a more precise assessment of the father's job loss impact on these children.

Appendix Table A1 presents the background characteristics from the base

multiple times in the sample, contingent on the frequency of their parent's appearance and the child's age in each base year sample.

[6]This methodology closely aligns with that used in Huttunen and Kellokumpu (2016), Huttunen et al. (2011), and Huttunen and Riukula (2019).

[7]In 2020, only 3.0% of Finnish mothers giving birth were aged 41 or older. Source: Births, Statistics Finland.

year b for both displaced and non-displaced workers, as well as their children in the male and female samples. By most characteristics, parents who experienced a plant closure during the deep recession in Finland were very similar to the parents who did not experience job loss during this period. Their age, education, income, and family characteristics, such as marital status and number of children, were similar. Unsurprisingly, the variables that significantly differ between displaced and non-displaced workers are plant size and tenure, indicating that plant closures occur more often in small plants. In the analysis, I control for these characteristics. I also condition on several other observable characteristics such as parent's educational field and level, industry and region, and thus compare children whose parents were observationally similar to each other at the moment of job loss. Later, I also show how the pre-displacement trends are similar for the non-displaced and displaced workers.

3 Specification and Results

3.1 Effect of Job Loss on Parental and Family Outcomes

To illustrate the shock resulting from a plant closure to these families, I plot the employment status, annual earnings, and whether the parent is together with the base year spouse, for both maternal and paternal job loss in Figure 1. Job displacement occurred between the end of year 0 and the end of year 1. I observe that during that time a significant gap opens in the outcomes between the displaced and non-displaced workers. The figure highlights two important aspects of the set-up. First, the workers who lost their jobs due to

plant closures during the deep recession in Finland were similar to the non-displaced workers, mitigating any selection problems I may encounter. Second, job loss resulted in a large and long-lasting employment and earnings shock for the workers. Additionally, a notable increase in separation rates is observed in the paternal job loss sample.

To further calculate the magnitude of the shock to families in terms of these outcomes, I follow the displacement literature (Jacobson et al., 1993; Davis and Von Wachter, 2011; Huttunen and Kellokumpu, 2016) and estimate the following specification:

$$Y_{ibt} = \alpha + \beta X_{ibt} + \sum_{j=-3}^{10} \delta_j D_{ib,t+j} + \gamma_{bt} + (\alpha_{ib}) + \epsilon_{ibt} \quad (1)$$

In equation 1, Y_{ibt} is annual earnings (deflated to year 2013 euros), the probability of being employed, or the probability of being separated from the base year spouse for worker i in base year sample b at time t. The variables $D_{ib,t+j}$ are the variables of main interest. These are dummy variables indicating whether a displacement occurred in year $t+j$, t being the observation year. The associated parameters measure the earnings or income differentials in pre- and post-displacement years, $j \in [-3, ..., 10]$, of displaced workers relative to non-displaced workers. The model has a full set of time dummy $\times$ base year dummy interactions, γ_{bt}, and base-year specific individual fixed effects, α_{ib}. X_{ib} is a vector of the observable parent, plant and family characteristics from the base year: age and age squared, years of tenure and tenure squared, indicators for education level (6 categories) and field (10 categories), marital status, dummy for spouse's employment, spouse's annual income, spouse's

age and age squared, plant size, and indicators for region (21 categories) and industry (2-digit-level). I use indicators for the number of children two years before job loss and indicators for the age of the youngest child in base year to control for permanent differences in fertility between displaced and non-displaced workers. When including worker-base-year fixed effects, I cannot include any time-invariant base-year controls, but X_{ib} includes current year age and age squared.

I plot the fixed-effects estimates of δ_j for both the maternal and paternal job loss samples in Figure 1, in panels A) and B), respectively. For both mothers and fathers, I find a large negative effect on employment. The initial drop is over 30 percentage points, meaning that there is a 30 percent drop in employment one year after the job loss. The effect on employment is persistent and five years later there is still a more than 10 percentage points smaller probability of being employed. The shock to earnings is also prominent and long-lasting for both the maternal and paternal job loss samples.

Job loss typically results in higher divorce and separation rates. However, for these mothers, I do not find an effect on separation rates, measured as being with the same spouse as in base year b. This might be because both the mothers and the children are older. For fathers, job loss results in an increased probability of being separated from their base year spouse.

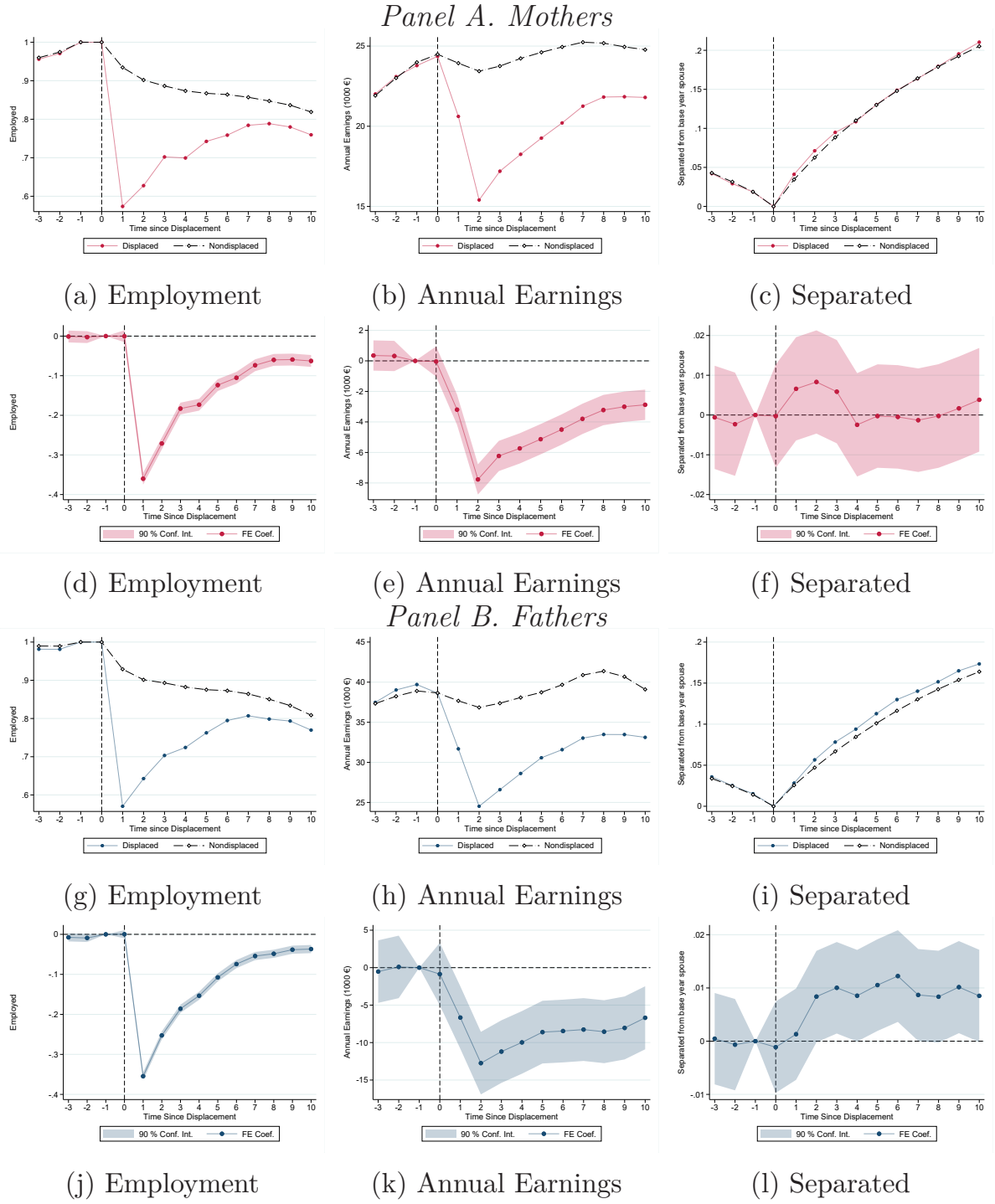


Figure 1: Job Loss and Labor Market and Family Outcomes

Notes: The figure plots the employment, annual earnings, and share of workers being separated from their base year spouse by displacement status and gender of worker. Solid lines describe the outcomes of displaced workers. Dashed lines are the outcomes of non-displaced workers. Upper (red) Panel A) is for the mother sample and the lower (blue) Panel B) for the father sample. The lower figures in each panel plot the fixed effects estimates of δ_j obtained using equation 1. Standard errors are clustered at the worker-base-year level.

To sum, both maternal and paternal job loss result in a large negative shock to the parent's career, resulting in a considerable income shock for their children during their childhood. However, it also potentially allows children to spend more time with their parents due to the reduced employment rate of these parents. Furthermore, a father's job loss results in a higher probability of parents getting separated. Does this shock to families affect children's fertility outcomes later in adulthood?

3.2 Effect of Parental Job Loss on Child's Fertility Outcomes

To estimate the effects of parental job loss on children's fertility outcomes, I estimate the following specification:

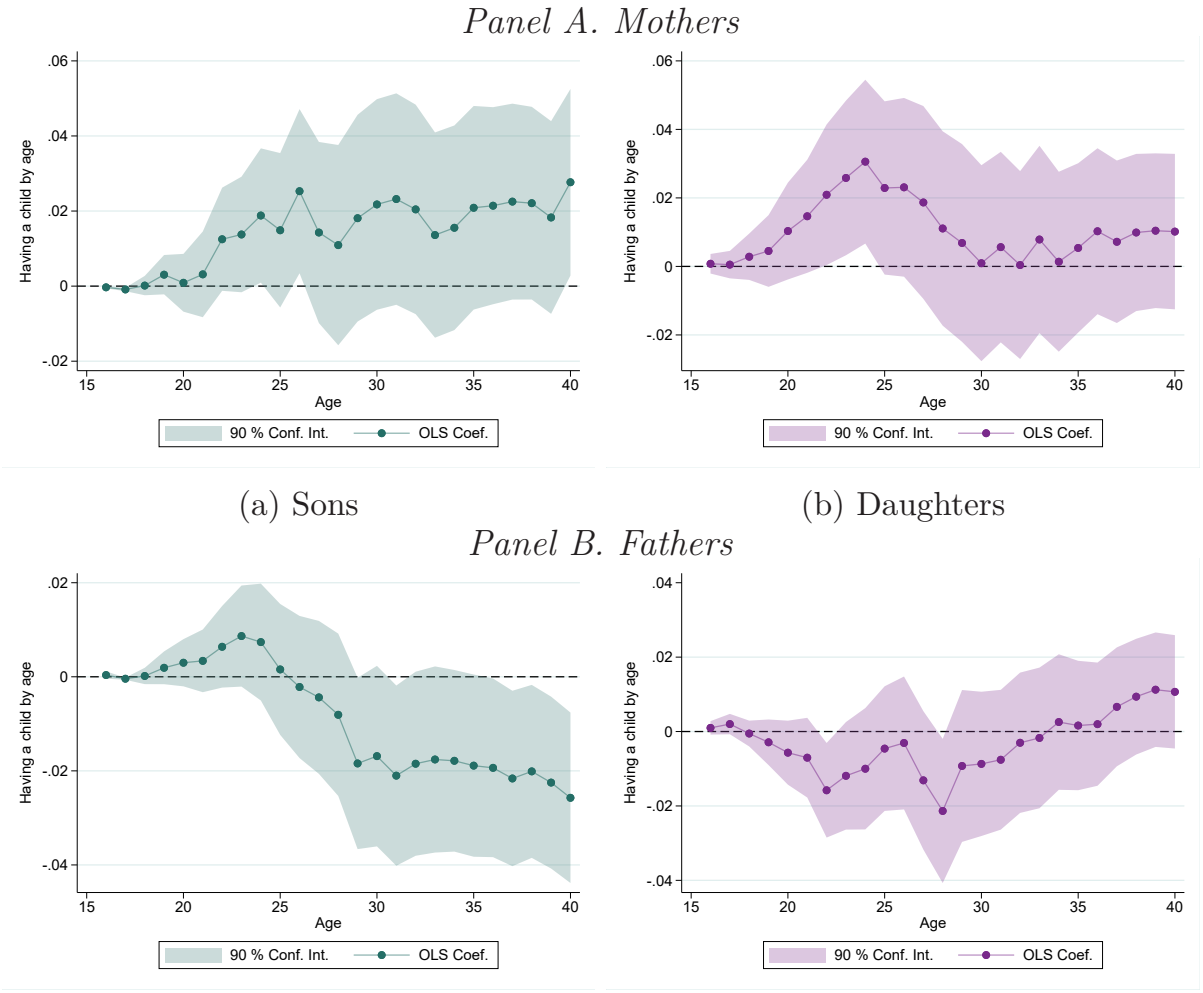
$$Y_{i,a} = \alpha + \beta_1 D_{ib} + \beta_2 X_{ib} + \epsilon_{i,a}, \tag{2}$$

where the dependent variable, $Y_{i,a}$ is an indicator variable for having a child by age a for individual i, where $a \in [16, ..., 40]$. As before, X_{ib} is a vector of observable pre-displacement parent, plant and family characteristics from the base year b, and includes the same variables as in equation 1 and a full set of child age in base year dummies.[8] Variable D_{ib} is the variable of our main interest. This is a dummy variable indicating whether child i's parent's job displacement occurred in base year b.

[8] In equation 1, or for the parental outcomes, I included the age dummies for the **youngest** child.

Effects of Parental Job Loss on Child Fertility I plot the estimates for β_1 from equation 2 for ages 16 to 40 in Figure 2 for both maternal and paternal job loss samples and separately for sons and daughters. Results for selected ages can also be found from the Appendix Table A2. For sons, Panel A. of Figure 2 indicates a notable impact of maternal job loss on fertility: there is a 2.8 percentage point increase in the likelihood of becoming a parent by age 40. In contrast, daughters affected by maternal job loss tend to have children earlier. This effect on the timing of childbirth is most pronounced around the age of 25, after which the probability gradually aligns with that of their peers whose mothers did not experience job loss.

For paternal job loss, I find opposite results. For sons, a father's job loss is linked with a decrease in fertility. Specifically, this negative effect becomes more pronounced with age, leading to a 2.6 percentage point reduction in the likelihood of sons having children by the age of 40. This represents a significant decrease of approximately -3.8%, considering that the baseline probability of being a parent in the non-displaced sample is 68.5%. Conversely, for daughters, paternal job loss primarily leads to a delay in childbearing. However, unlike the case with sons, this postponement does not translate into a significant difference in the probability of daughters having children by age 40.



(a) Sons (b) Daughters

(c) Sons (d) Daughters

Figure 2: Parental job loss and child fertility outcomes

Notes: The figure plots the estimates of β_1 and 90% confidence intervals obtained using equation 2 for ages 16 to 40 separately for both parents and separately for sons and daughters. Children in the sample were 11–18 years old in the base year.

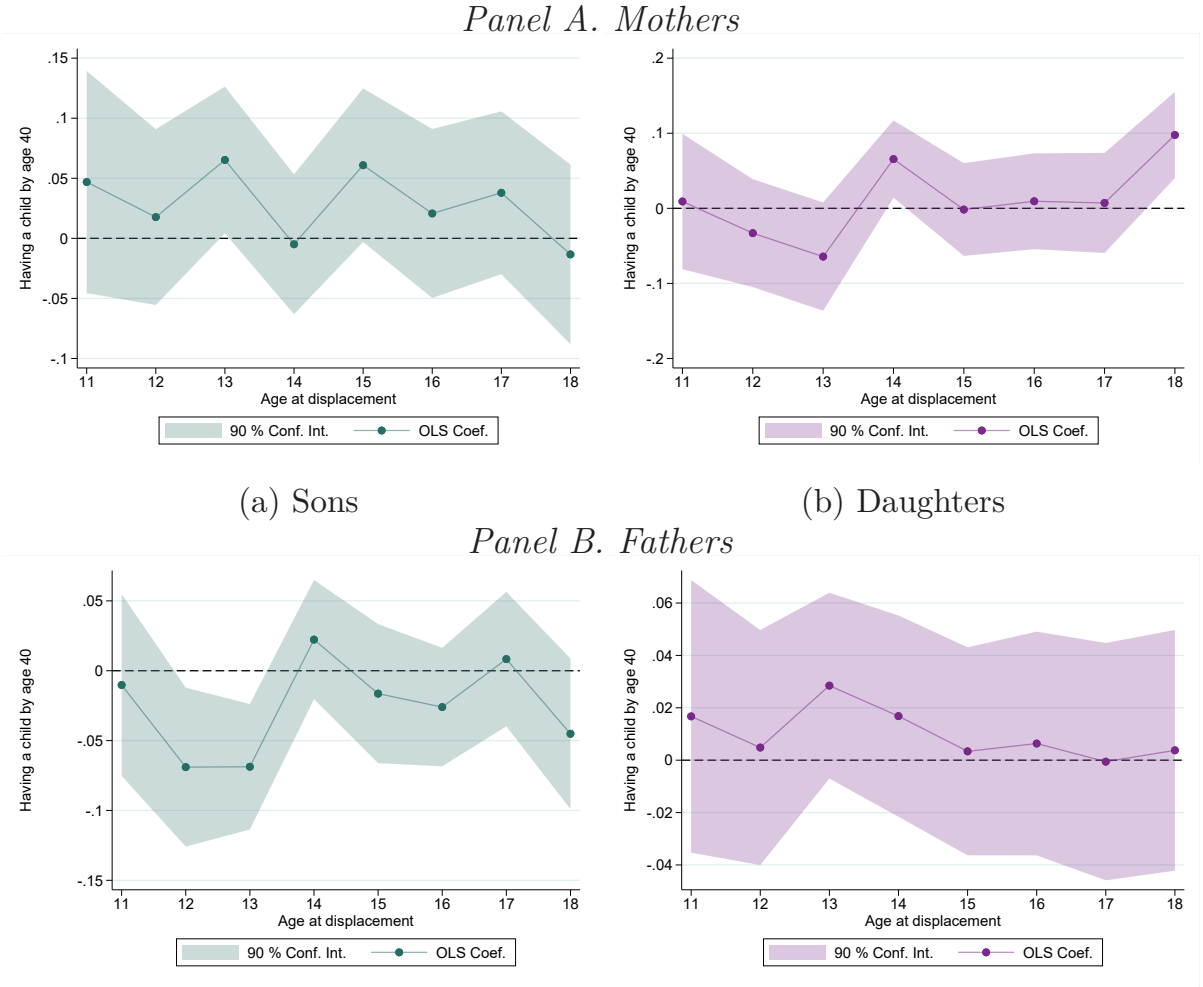
Timing of Job Loss Next, I study whether the effects on fertility differ by the age of the child at the parental job loss event to see whether children of certain ages are more sensitive to the shock than others. In Figure 3, I plot the coefficients for the interaction between the child's age during the base year and the parental displacement indicator. One key result emerges; sons who are 13 years old at the time of either maternal or paternal job loss show

particularly pronounced effects on their future fertility outcomes. This age coincides with the typical transition to upper comprehensive school in Finland. Other studies, such as, Mörk et al. (2020) and Huttunen and Riukula (2019) also find more prominent effects (on compulsory school gpa and earnings at age 30, respectively) for children who were 13 years old at the time of parental job loss.

Beyond the age thirteen, there are no consistently distinct age groups where fertility outcomes are notably affected for both maternal and paternal job loss samples. For paternal job loss, sons aged 12, 13 and 18 react most in terms of fertility outcomes. 14- and 18-year-old daughters react the most to maternal job loss; the probability of them having a child by age 40 increases significantly.

Effects by Parental Education In the Appendix Table A3, I investigate the existence of heterogeneous effects by parental education by adding an interaction term between whether the displaced parent has more than compulsory/primary education and the displacement dummy, and a dummy for the parent being high educated. The findings reveal a notable divergence based on the educational background of the parents. For maternal job loss, the effect on sons' fertility outcomes is completely driven by the sons of highly educated mothers. They have a 6.2 pp higher probability of being a parent by age 40 due to maternal job loss, while the overall effect of maternal job loss is small and imprecisely estimated. Conversely, the impact of paternal job loss on the fertility outcomes of sons is largely confined to those with fathers who have lower educational attainment.

When considering daughters, those with highly educated mothers appear to be less affected by maternal job loss. As for the effects of paternal job loss on daughters' fertility outcomes by age 40, these are less precisely determined in the analysis.



(a) Sons (b) Daughters

(c) Sons (d) Daughters

Figure 3: Parental job loss and child fertility outcomes

Notes: The figure plots the estimates of D_{ib} interacted with base year child age dummies and 90 confidence intervals obtained using equation 2 for outcomes measured at age 40 separately for both parents for all children, and separately for sons and daughters. Children in the sample were 11–18 years old in the base year.

4 Mechanisms

The study finds that parental job loss impacts children's fertility outcomes, with the effects varying by the gender of both the child and the parent. However, the underlying mechanisms driving these outcomes remain unclear. It could be a direct effect from childhood, like more time with parents or changes in family dynamics, which alters views or (perceived) costs of having children. Alternatively, it could be an indirect effect through changes in the child's education, career, or marriage market prospects. It's possible that the effects are a result of a combination of these factors.

Effect of Parental Job loss on Children's Other Outcomes First, I explore how parental job loss affects children's outcomes in employment, education, earnings, and spousal relationships, which may in turn impact their fertility decisions. For instance, increased educational attainment in women following parental job loss may lead to delayed childbearing (see, for example, Monstad et al., 2008), while unemployment might reduce the likelihood of having children (Currie and Schwandt, 2014; Adsera, 2005). In their recent overview, Doepke et al. (2022) provide a contemporary overview, indicating that the factors driving fertility decisions in advanced economies have evolved. Their work highlights the reversed relationship between labor market participation, education, and fertility, underscoring the importance of balancing family life with career as a critical determinant of fertility in high-income countries.

Research focusing specifically on men's fertility and the influence of factors

such as education is unfortunately less extensive. Nonetheless, male education and employment may impact fertility through mechanisms like assortative mating. As De Hauw et al. (2017) note, the demographic shift where more highly educated women than men are reaching reproductive ages has led to an increased number of men remaining single. Additionally, Ahn and Mira (2001) demonstrate that unemployment spells have a significant negative effect on marriage prospects for men. Consequently, if parental job loss leads to prolonged unemployment or affects educational pathways for males, it could indirectly influence their mating opportunities and, thereby, their fertility outcomes.

Table 1 presents the results on the effects of maternal job loss on child earnings, employment, relationship status, and education at the ages of 25, 30 and 35 separately for daughters and sons. Contrary to expectations, there are no statistically significant effect of maternal job loss on these outcomes for either gender.[9] This is in line with Huttunen and Riukula (2019), who also reported no significant impact of parental job loss on children's earnings or education, with the exception of intergenerational correlation of study choices. Consequently, it seems that maternal job loss does not directly influence children's labor market and educational trajectories in ways that might explain the observed changes in fertility outcomes. Notably, despite the significant fertility effects found among sons of highly educated mothers, there is no corresponding significant effect on their labor market or educational outcomes (as

[9]Labor market outcomes are trackable only up to 2016, limiting observations to a maximum age of 35 years.

Table 1: Maternal job loss and child outcomes

	Empl. 25	Empl. 30	Empl. 35	Cohab. 25	Cohab. 30	Cohab. 35	Earn. 25	Earn. 30	Earn. 35	High edu 25	High edu 30	High edu 35
						Panel A. Sons						
Mother displaced	0.020	0.007	0.007	0.002	0.014	0.015	367.182	384.597	579.732	0.002	0.008	0.007
	(0.016)	(0.012)	(0.013)	(0.017)	(0.017)	(0.015)	(509.700)	(644.171)	(860.776)	(0.013)	(0.012)	(0.012)
Mean (not displaced)	0.727	0.848	0.843	0.446	0.635	0.698	19640.312	31086.792	35949.816	0.844	0.859	0.866
Standard deviation	0.445	0.359	0.364	0.497	0.481	0.459	13659.815	19964.085	25246.634	0.363	0.348	0.341
Observations	43939	43536	43069	43939	43536	43069	43939	43536	43069	43939	43536	43069
						Panel B. Daughters						
Mother displaced	-0.001	-0.002	-0.010	-0.006	-0.013	-0.010	46.639	-181.666	-469.312	0.000	-0.002	0.003
	(0.016)	(0.016)	(0.013)	(0.018)	(0.017)	(0.016)	(409.281)	(595.372)	(642.266)	(0.011)	(0.010)	(0.009)
Mean (not displaced)	0.677	0.787	0.834	0.575	0.717	0.752	14105.724	20701.088	24669.414	0.906	0.922	0.932
Standard deviation	0.468	0.409	0.372	0.494	0.450	0.432	11170.774	15745.755	18297.476	0.292	0.268	0.251
Observations	41606	40954	40629	41606	40954	40629	41606	40954	40629	41606	40954	40629

Notes: The table shows the impact of parental job loss on child outcomes. Children in the sample were 11–18 years old during the base years. Controls include indicators for base year and child age in base year, base year tenure and tenure squared, base year age and age squared, education level in base year (6 categories), field of education (11 categories), dummy for being married, number of kids in t=-2, spouse employed dummy, spouse's annual income, spouse's age and age squared, plant size, and indicators for province (21 categories) and industry (2-digit). Standard errors, presented in parentheses, are clustered at the base-year-plant level.

Table 2: Paternal job loss and child outcomes

	Empl. 25	Empl. 30	Empl. 35	Cohab. 25	Cohab. 30	Cohab. 35	Earn. 25	Earn. 30	Earn. 35	High edu 25	High edu 30	High edu 35
						Panel A. Sons						
Father displaced	-0.016	-0.030	-0.029	-0.027	-0.027	-0.025	-64.925	-1641.697	-1386.145	-0.034	-0.037	-0.040
	(0.011)	(0.009)	(0.009)	(0.012)	(0.012)	(0.012)	(355.458)	(494.267)	(613.343)	(0.009)	(0.009)	(0.008)
Mean (not displaced)	0.718	0.848	0.844	0.443	0.637	0.700	19485.461	32001.475	37435.421	0.864	0.877	0.882
Standard deviation	0.450	0.359	0.363	0.497	0.481	0.458	14225.058	21075.247	26879.998	0.343	0.329	0.323
Observations	67575	66744	66149	67575	66744	66149	67575	66744	66149	67575	66744	66149
						Panel B. Daughters						
Father displaced	0.011	0.006	0.008	0.020	0.015	0.007	-47.341	-52.573	-300.761	0.008	0.012	0.013
	(0.011)	(0.010)	(0.010)	(0.011)	(0.011)	(0.011)	(279.477)	(387.054)	(426.557)	(0.008)	(0.007)	(0.006)
Mean (not displaced)	0.654	0.777	0.822	0.571	0.713	0.756	13604.109	20653.609	24387.510	0.916	0.931	0.939
Standard deviation	0.476	0.416	0.383	0.495	0.452	0.430	11326.487	16124.981	18988.346	0.277	0.254	0.239
Observations	64092	63186	62755	64092	63186	62755	64092	63186	62755	64092	63186	62755

Notes: The table shows the impact of parental job loss on child outcomes. Children in the sample were 11–18 years old during the base years. Controls include indicators for base year and child age in base year, base year tenure and tenure squared, base year age and age squared, education level in base year (6 categories), field of education (11 categories), dummy for being married, number of kids in t=-2, spouse employed dummy, spouse's annual income, spouse's age and age squared, plant size, and indicators for province (21 categories) and industry (2-digit). Standard errors, presented in parentheses, are clustered at the base-year-plant level.

detailed in Appendix Table A4).[10]

In the context of paternal job loss, the results, particularly concerning sons, are revealing, as shown in Table 2. There are consistently negative and significant effects across all examined outcomes, including employment, cohabitation status, earnings, and education. Notably, from the age of 25, sons whose fathers experienced job loss are 1.6 percentage points less likely to be employed. Furthermore, paternal job loss appears to hinder higher educational attainment; by age 40, there's a 4.0 percentage point reduction in the likelihood of sons achieving higher education. These factors collectively may influence sons' chances of finding a spouse. Indeed, the probability of sons having a spouse is negatively impacted at all ages examined. By age 35, the likelihood of sons cohabiting is reduced by 2.5 percentage points due to paternal job loss. This decline in cohabitation could reflect not only the diminished marital prospects but also a shift in attitudes towards family life and partnership. In contrast, the impact of paternal job loss on daughters is markedly different; the coefficients for all outcomes are small and statistically insignificant.

Asymmetric Effects of Paternal and Maternal Job Loss The differing impacts of paternal and maternal job loss might be best be interpreted in the light of spousal role theories from the field of sociology (Jahoda et al., 1982; Gallie et al., 1994) following Rege et al. (2011). Essentially, the loss of a job by a father might be particularly stressful due to societal expectations around the male breadwinner role, thereby affecting offspring. Research,

[10]While the estimates are positive, their lack of statistical significance suggests that the channels influencing fertility changes are not directly linked to labor market or educational outcomes. This is especially relevant given the significant fertility effects observed.

including Kuhn et al. (2009), has indicated that men often experience more severe mental distress following job displacement compared to women. This is further supported by Gathmann et al. (2021), who discovered a striking gender asymmetry: while male job displacement leads to significant, enduring health impacts, the same severe consequences are not observed when women lose their jobs. Conversely, mothers may adapt more readily to job loss. Societal norms often view non-employment more acceptably for women, potentially allowing them to focus more on their caregiver roles. This shift in focus is supported by Gough and Killewald (2011), who found notable gender differences in adjustments to household labor during periods of unemployment. Specifically, when wives are unemployed, there's a more significant increase in their housework hours compared to their unemployed husbands. Therefore, a mother's increased presence at home might enhance the quality of the parent-child relationship, which could, in turn, influence children's perspectives on family life and parenthood.

Parental Unemployment and Separation due to Job Loss Parental job loss resulted in prolonged unemployment for both mothers and fathers and also higher separation rates for the paternal job loss sample. Having a parent staying at home might be beneficial for the parent-child relationship quality if it is not stressful for the parent to be unemployed. Next, I explore whether certain outcomes, such as parental divorce or unemployment due to job loss, are associated with changes in the probability of being a parent. To do this, I regress the outcome variable – the probability of a child having children by

ages 25, 30, 35, or 40 – against the same set of controls used previously. Additionally, I will include an interaction of the job displacement indicator with variables such as parental unemployment post-job loss and parental separation, as well as these indicator variables independently. I acknowledge that this exercise provides purely associations and not causal estimates.

I find that maternal unemployment in $t+3$, in general, is negatively associated with sons' fertility outcomes as shown in Panel A. in Appendix Table A5. However, having a mother unemployed *due to* a plant closure is *positively* associated with the probability of a son having any children by the age of 40. This suggests that the presence of a mother at home, who would otherwise be employed if not for the plant closure, positively influences sons' decisions about parenthood. In contrast, no similar significant association is observed between maternal unemployment and daughters' fertility outcomes, as indicated in Panel A. of Appendix Table A6). Paternal unemployment due to a plant closure is negatively associated with sons' fertility outcomes at the age 40 (see Panel B. in Appendix Table A5).

Parental separation, defined as parents not living together in $t+5$, due to fathers' job loss is strongly and negatively associated with sons' fertility outcomes, while separation due to maternal job loss is not significantly associated with son's fertility outcomes (see Appendix Table A7). Hence, parental separation due to paternal job loss might also be driving the effects on sons' fertility outcomes either through affecting other outcomes negatively or on its own by changing the views on having a family. Parental separation due to fathers' job loss is strongly and positively associated with daughters' fertility outcomes,

while separation due to maternal job loss is not significantly associated with daughters' fertility outcomes (see Appendix Table A8).

5 Conclusions

While there is a substantial body of literature discussing the impact of childhood income shocks on later outcomes, such as education and earnings, the focus on the effects of these shocks on fertility outcomes has been notably limited. Furthermore, our understanding of the determinants of fertility decisions remains somewhat lacking. This gap is significant because fertility decisions are complex and have far-reaching implications for demographic trends and societal structures.

This paper contributes to the literature on the consequences of job displacement by providing novel evidence on how childhood shocks influence fertility outcomes in adulthood. Utilizing data from plant closures in Finland during 1991-93, I find that maternal job loss increases the fertility of sons, yet it does not impact their other outcomes. In contrast, paternal job loss leads to lower employment, earnings, education, and probability of having a spouse for sons and has a negative effect on their fertility. For daughters, parental job loss primarily influences the timing of fertility but it does not affect their completed fertility or the likelihood of being a parent by the age of 40, nor does it affect their other outcomes. Notably, 13-year-old sons are especially sensitive to both maternal and paternal job loss.

The findings suggest that economic shocks experienced during childhood

can impact fertility outcomes in adulthood, especially for sons. These effects may not be solely attributable to influences on education and labor market outcomes, but could also be mediated through the quality of parent-child relationships or the overall atmosphere during childhood.

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A Additional Tables and Figures

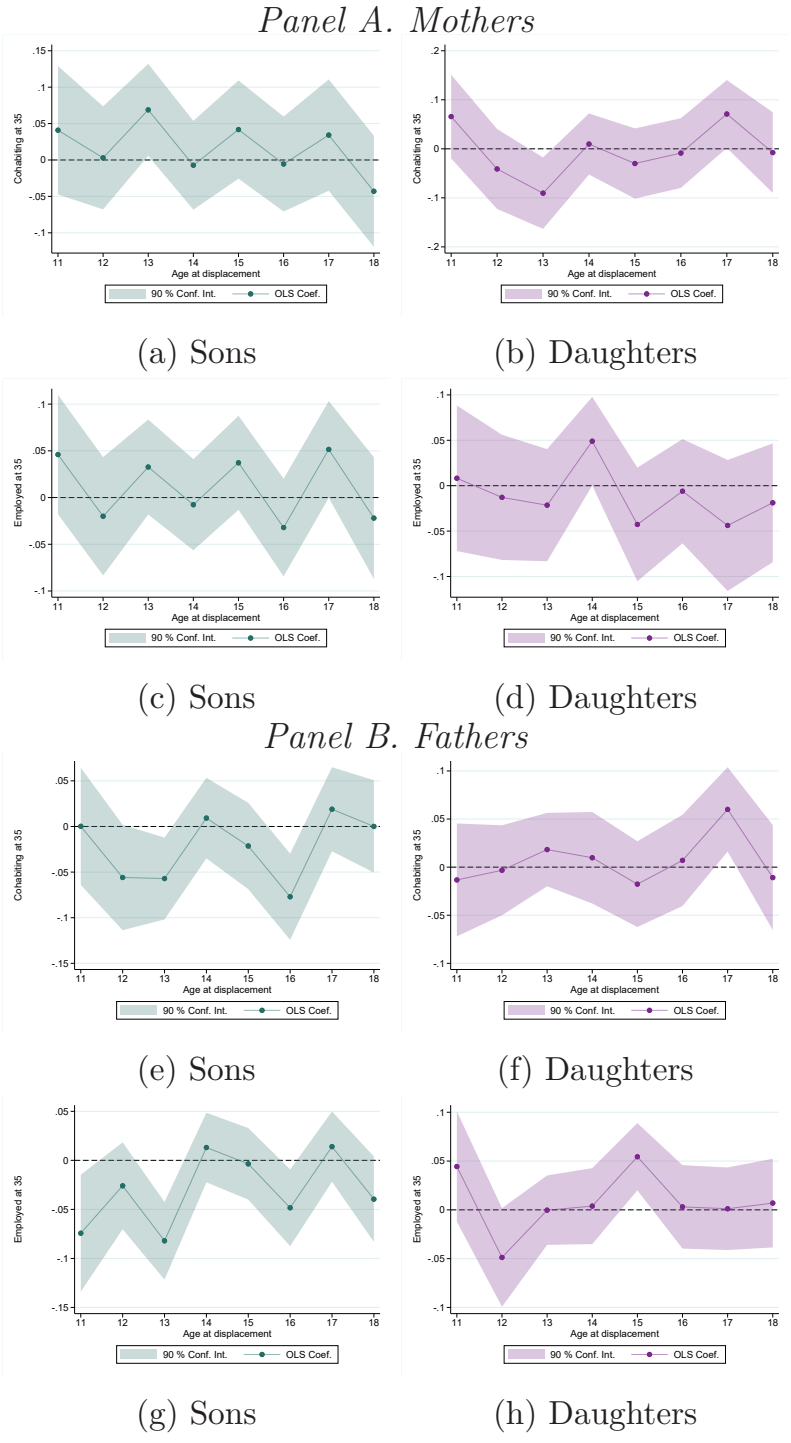

Figure A1: Parental job loss and child employment and cohabitation status at age 35

Notes: The figure plots the estimates of D_{ib} interacted with base year child age dummies and 90 confidence intervals obtained using equation 2 for outcomes measured at age 35 separately for both parents for all children, and separately for sons and daughters. Children in the sample were 11–18 years old in the base year.

Table A1: Base year characteristics of workers and their children

	Displaced	Not displaced	P-value
Panel A. Mothers			
Age	40.68	41.07	0.00
Compulsory ed.	0.53	0.52	0.23
Secondary ed.	0.28	0.29	0.42
Tertiary ed.	0.19	0.20	0.56
Annual income	25.41	25.46	0.86
Annual earnings	24.32	24.51	0.40
Annual family income	59.72	58.77	0.15
Plant size	62.55	107.34	0.00
Tenure	2.68	3.01	0.00
Spouse employed	0.81	0.81	0.66
Married	0.90	0.90	0.97
Children	2.20	2.24	0.11
Observations	1852	89181	91033
Child age	14.71	14.87	0.00
Child female	0.48	0.49	0.43
Observations	2357	112409	114766
Panel B. Fathers			
Age	42.65	42.72	0.47
Compulsory ed.	0.45	0.45	0.56
Secondary ed.	0.23	0.24	0.64
Tertiary ed.	0.32	0.31	0.29
Annual income	40.84	40.55	0.57
Annual earnings	38.75	38.85	0.79
Annual family income	62.59	62.27	0.57
Plant size	65.19	127.39	0.00
Tenure	2.68	3.07	0.00
Spouse employed	0.79	0.79	0.89
Married	0.92	0.92	0.39
Children	2.39	2.41	0.24
Child age	14.68	14.76	0.01
Child female	0.48	0.49	0.34
Observations	4761	159560	164321
	5705	178799	184504

Notes: The table shows the base year characteristics of displaced and non-displaced mothers and fathers, who had a child aged 11–18 years in base year b, along with the gender and age of these children during the same year.

Table A2: Parental job loss and child fertility outcomes

	Child 20	Child 25	Child 30	Child 35	Child 40
Panel A. Maternal Job Loss and Sons					
Mother displaced	0.001	0.015	0.022	0.021	0.028
	(0.005)	(0.013)	(0.017)	(0.017)	(0.015)
Mean (not displaced)	0.015	0.144	0.392	0.600	0.683
Standard deviation	0.123	0.351	0.488	0.490	0.465
Observations	44811	44811	44811	44811	44811
Panel B. Maternal Job Loss and Daughters					
Mother displaced	0.010	0.023	0.001	0.005	0.010
	(0.009)	(0.015)	(0.017)	(0.015)	(0.014)
Mean (not displaced)	0.049	0.244	0.536	0.722	0.783
Standard deviation	0.216	0.429	0.499	0.448	0.413
Observations	42506	42506	42506	42506	42506
Panel C. Paternal Job Loss and Sons					
Father displaced	0.003	0.002	-0.017	-0.019	-0.026
	(0.003)	(0.008)	(0.012)	(0.012)	(0.011)
Mean (not displaced)	0.015	0.135	0.386	0.601	0.685
Standard deviation	0.120	0.342	0.487	0.490	0.465
Observations	68752	68752	68752	68752	68752
Panel D. Paternal Job Loss and Daughters					
Father displaced	-0.006	-0.005	-0.009	0.002	0.011
	(0.005)	(0.010)	(0.012)	(0.011)	(0.009)
Mean (not displaced)	0.047	0.238	0.532	0.724	0.787
Standard deviation	0.213	0.426	0.499	0.447	0.409
Observations	65580	65580	65580	65580	65580

Notes: The table shows the impact of parental job loss on children's fertility outcomes. Children in the sample were 11–18 years old during the base years. Controls include indicators for base year and child age in base year, base year tenure and tenure squared, base year age and age squared, education level in base year (6 categories), field of education (11 categories), dummy for being married, number of kids in t=-2, spouse employed dummy, spouse's annual income, spouse's age and age squared, plant size, and indicators for province (21 categories) and industry (2-digit). Standard errors, presented in parentheses, are clustered at the base-year-plant level.

Table A3: Heterogeneity by parental education

	Any birth by age 40
Panel A. Maternal Job Loss and Sons	
Mother displaced	-0.004
	(0.023)
Mother displaced*Mother high educated	0.062
	(0.031)
Mean (not displaced)	0.683
Standard deviation	0.465
Observations	44811
Panel B. Maternal Job Loss and Daughters	
Mother displaced	0.032
	(0.020)
Mother displaced*Mother high educated	-0.044
	(0.028)
Mean (not displaced)	0.783
Standard deviation	0.413
Observations	42506
Panel C. Paternal Job Loss and Sons	
Father displaced	-0.040
	(0.018)
Father displaced*Father high educated	0.025
	(0.022)
Mean (not displaced)	0.685
Standard deviation	0.465
Observations	68752
Panel D. Paternal Job Loss and Daughters	
Father displaced	0.014
	(0.015)
Father displaced*Father high educated	-0.006
	(0.019)
Mean (not displaced)	0.787
Standard deviation	0.409
Observations	65580

Notes: The table shows the impact of parental job loss on children's fertility outcomes. Children in the sample were 11–18 years old during the base years. Controls include indicators for base year and child age in base year, base year tenure and tenure squared, base year age and age squared, education level in base year (6 categories), field of education (11 categories), dummy for being married, number of kids in t=-2, spouse employed dummy, spouse's annual income, spouse's age and age squared, plant size, and indicators for province (21 categories) and industry (2-digit). Standard errors, presented in parentheses, are clustered at the base-year-plant level.

Table A4: Maternal job loss and child outcomes: High educated mothers

	Empl. 25	Empl. 30	Empl. 35	Cohab. 25	Cohab. 30	Cohab. 35	Earn. 25	Earn. 30	Earn. 35	High edu 25	High edu 30	High edu 35
Panel A. Sons												
Mother displaced	0.040	0.023	0.021	-0.001	0.030	0.021	628.866	618.353	1319.790	0.001	0.003	0.006
	(0.021)	(0.017)	(0.016)	(0.023)	(0.022)	(0.022)	(646.207)	(931.271)	(1192.473)	(0.017)	(0.016)	(0.015)
Mean (not displaced)	0.710	0.856	0.854	0.440	0.642	0.713	18903.341	32299.180	38042.996	0.877	0.890	0.895
Standard deviation	0.454	0.351	0.353	0.496	0.479	0.452	13700.258	20473.478	26918.850	0.329	0.313	0.307
Observations	22871	22682	22415	22871	22682	22415	22871	22682	22415	22871	22682	22415
Panel B. Daughters												
Mother displaced	0.015	-0.004	0.008	-0.030	-0.013	0.001	376.650	399.885	-126.585	0.009	0.001	0.009
	(0.024)	(0.022)	(0.019)	(0.026)	(0.025)	(0.023)	(640.003)	(951.635)	(993.300)	(0.014)	(0.013)	(0.010)
Mean (not displaced)	0.677	0.794	0.838	0.558	0.717	0.757	14099.336	21681.457	25719.335	0.929	0.944	0.951
Standard deviation	0.468	0.405	0.369	0.497	0.450	0.429	11273.926	16698.689	19476.396	0.257	0.231	0.215
Observations	21629	21144	20984	21629	21144	20984	21629	21144	20984	21629	21144	20984

Notes: The table shows the impact of parental job loss on child outcomes. Children in the sample were 11–18 years old during the base years. Controls include indicators for base year and child age in base year, base year tenure and tenure squared, base year age and age squared, education level in base year (6 categories), field of education (11 categories), dummy for being married, number of kids in t=-2, spouse employed dummy, spouse's annual income, spouse's age and age squared, plant size, and indicators for province (21 categories) and industry (2-digit). Standard errors, presented in parentheses, are clustered at the base-year-plant level.

Table A5: Job loss, parental unemployment and son's fertility

	Child 25	Child 25	Child 25	Child 30	Child 30	Child 30	Child 35	Child 35	Child 35	Child 40	Child 40	Child 40
Panel A. Maternal job loss												
Mother displaced	0.015	0.013	0.021	0.022	0.024	0.026	0.021	0.026	0.015	0.028	0.034	0.029
	(0.013)	(0.013)	(0.014)	(0.017)	(0.017)	(0.019)	(0.017)	(0.017)	(0.018)	(0.015)	(0.015)	(0.017)
Unemployed at 3		0.009	0.011		-0.020	-0.019		-0.038	-0.041		-0.048	-0.049
		(0.008)	(0.008)		(0.010)	(0.011)		(0.010)	(0.011)		(0.010)	(0.010)
DisplacedUnemployed at 3			-0.033			-0.008			0.049			0.023
			(0.028)			(0.040)			(0.038)			(0.037)
Mean (not displaced)	0.142	0.142	0.142	0.392	0.392	0.392	0.603	0.603	0.603	0.687	0.687	0.687
Standard deviation	0.349	0.349	0.349	0.488	0.488	0.488	0.489	0.489	0.489	0.464	0.464	0.464
Observations	44811	44703	44703	44811	44703	44703	44811	44703	44703	44811	44703	44703
Panel B. Paternal job loss												
Father displaced	0.002	0.001	0.004	-0.017	-0.016	-0.011	-0.019	-0.018	-0.011	-0.026	-0.024	-0.015
	(0.008)	(0.009)	(0.009)	(0.012)	(0.012)	(0.013)	(0.012)	(0.012)	(0.013)	(0.011)	(0.011)	(0.012)
Unemployed at 3		0.006	0.007		-0.007	-0.005		-0.020	-0.018		-0.021	-0.018
		(0.006)	(0.007)		(0.009)	(0.009)		(0.009)	(0.009)		(0.009)	(0.009)
DisplacedUnemployed at 3			-0.013			-0.026			-0.030			-0.044
			(0.020)			(0.029)			(0.029)			(0.028)
Mean (not displaced)	0.134	0.134	0.134	0.386	0.386	0.386	0.603	0.603	0.603	0.687	0.687	0.687
Standard deviation	0.340	0.340	0.340	0.487	0.487	0.487	0.489	0.489	0.489	0.464	0.464	0.464
Observations	68752	68341	68341	68752	68341	68341	68752	68341	68341	68752	68341	68341

Notes: Children in the sample were 11–18 years old during the base years. Controls include indicators for base year and child age in base year, base year tenure and tenure squared, base year age and age squared, education level in base year (6 categories), field of education (11 categories), dummy for being married, number of kids in t=-2, spouse employed dummy, spouse's annual income, spouse's age and age squared, plant size, and indicators for province (21 categories) and industry (2-digit). Standard errors, presented in parentheses, are clustered at the base-year-plant level.

Table A6: Job loss, parental unemployment and daughter's fertility

	Child 25	Child 25	Child 25	Child 30	Child 30	Child 30	Child 35	Child 35	Child 35	Child 40	Child 40	Child 40
Panel A. Maternal job loss												
Mother displaced	0.023	0.021	0.020	0.001	0.002	0.002	0.005	0.007	0.003	0.010	0.011	0.009
	(0.015)	(0.015)	(0.017)	(0.017)	(0.017)	(0.020)	(0.015)	(0.015)	(0.018)	(0.014)	(0.014)	(0.016)
Unemployed at 3		0.018	0.018		0.000	0.000		-0.011	-0.012		-0.007	-0.008
		(0.009)	(0.010)		(0.010)	(0.011)		(0.009)	(0.009)		(0.009)	(0.009)
DisplacedUnemployed at 3			0.004			-0.002			0.017			0.011
			(0.037)			(0.041)			(0.038)			(0.035)
Mean (not displaced)	0.240	0.240	0.240	0.535	0.535	0.535	0.723	0.723	0.723	0.784	0.784	0.784
Standard deviation	0.427	0.427	0.427	0.499	0.499	0.499	0.447	0.447	0.447	0.411	0.411	0.411
Observations	42506	42409	42409	42506	42409	42409	42506	42409	42409	42506	42409	42409
Panel B. Paternal job loss												
Unemployed at 3		0.029	0.029		0.001	0.001		-0.004	-0.002		-0.002	-0.001
		(0.008)	(0.009)		(0.009)	(0.009)		(0.008)	(0.008)		(0.007)	(0.008)
DisplacedUnemployed at 3			-0.003			0.001			-0.030			-0.009
			(0.026)			(0.028)			(0.025)			(0.023)
Mean (not displaced)	0.234	0.234	0.234	0.530	0.530	0.530	0.724	0.724	0.724	0.787	0.787	0.787
Standard deviation	0.423	0.423	0.423	0.499	0.499	0.499	0.447	0.447	0.447	0.409	0.409	0.409
Observations	65580	65230	65230	65580	65230	65230	65580	65230	65230	65580	65230	65230

Notes: Children in the sample were 11–18 years old during the base years. Controls include indicators for base year and child age in base year, base year tenure and tenure squared, base year age and age squared, education level in base year (6 categories), field of education (11 categories), dummy for being married, number of kids in t=-2, spouse employed dummy, spouse's annual income, spouse's age and age squared, plant size, and indicators for province (21 categories) and industry (2-digit). Standard errors, presented in parentheses, are clustered at the base-year-plant level.

Table A7: Job loss, parental separation and son's fertility

	Child 25	Child 25	Child 25	Child 30	Child 30	Child 30	Child 35	Child 35	Child 35	Child 40	Child 40	Child 40
Panel A. Maternal job loss												
Mother displaced	0.015	0.015	0.007	0.022	0.023	0.018	0.021	0.022	0.022	0.028	0.027	0.030
	(0.013)	(0.013)	(0.013)	(0.017)	(0.017)	(0.018)	(0.017)	(0.017)	(0.018)	(0.015)	(0.015)	(0.016)
Separated by 5		0.022	0.021		0.014	0.013		-0.008	-0.008		-0.016	-0.015
		(0.007)	(0.008)		(0.009)	(0.010)		(0.009)	(0.010)		(0.009)	(0.009)
DisplacedSeparated by 5			0.059			0.037			-0.006			-0.021
			(0.045)			(0.049)			(0.048)			(0.045)
Mean (not displaced)	0.139	0.139	0.139	0.389	0.389	0.389	0.601	0.601	0.601	0.686	0.686	0.686
Standard deviation	0.346	0.346	0.346	0.487	0.487	0.487	0.490	0.490	0.490	0.464	0.464	0.464
Observations	44811	44571	44571	44811	44571	44571	44811	44571	44571	44811	44571	44571
Panel B. Paternal job loss												
Father displaced	0.002	0.003	0.005	-0.017	-0.019	-0.018	-0.019	-0.021	-0.012	-0.026	-0.027	-0.016
	(0.008)	(0.009)	(0.009)	(0.012)	(0.012)	(0.013)	(0.012)	(0.012)	(0.013)	(0.011)	(0.011)	(0.012)
Separated by 5		0.017	0.017		-0.007	-0.007		-0.020	-0.018		-0.029	-0.026
		(0.006)	(0.006)		(0.008)	(0.009)		(0.008)	(0.009)		(0.008)	(0.008)
DisplacedSeparated by 5			-0.023			-0.011			-0.089			-0.109
			(0.026)			(0.036)			(0.039)			(0.037)
Mean (not displaced)	0.132	0.132	0.132	0.386	0.386	0.386	0.603	0.603	0.603	0.688	0.688	0.688
Standard deviation	0.338	0.338	0.338	0.487	0.487	0.487	0.489	0.489	0.489	0.463	0.463	0.463
Observations	68752	67924	67924	68752	67924	67924	68752	67924	67924	68752	67924	67924

Notes: Children in the sample were 11–18 years old during the base years. Controls include indicators for base year and child age in base year, base year tenure and tenure squared, base year age and age squared, education level in base year (6 categories), field of education (11 categories), dummy for being married, number of kids in t=-2, spouse employed dummy, spouse's annual income, spouse's age and age squared, plant size, and indicators for province (21 categories) and industry (2-digit). Standard errors, presented in parentheses, are clustered at the base-year-plant level.

Table A8: Job loss, parental separation and daughter's fertility

	Child 25	Child 25	Child 25	Child 30	Child 30	Child 30	Child 35	Child 35	Child 35	Child 40	Child 40	Child 40
Panel A. Maternal job loss												
Mother displaced	0.023	0.024	0.010	0.001	0.002	-0.003	0.005	0.006	-0.002	0.010	0.010	0.006
	(0.015)	(0.015)	(0.016)	(0.017)	(0.017)	(0.019)	(0.015)	(0.015)	(0.017)	(0.014)	(0.014)	(0.015)
Separated by 5		0.039	0.038		0.021	0.020		0.001	-0.000		-0.002	-0.002
		(0.009)	(0.009)		(0.009)	(0.009)		(0.008)	(0.009)		(0.008)	(0.008)
DisplacedSeparated by 5			0.088			0.034			0.052			0.025
			(0.048)			(0.047)			(0.041)			(0.036)
Mean (not displaced)	0.234	0.234	0.234	0.530	0.530	0.530	0.721	0.721	0.721	0.783	0.783	0.783
Standard deviation	0.423	0.423	0.423	0.499	0.499	0.499	0.449	0.449	0.449	0.412	0.412	0.412
Observations	42506	42295	42295	42506	42295	42295	42506	42295	42295	42506	42295	42295
Panel B. Paternal job loss												
Father displaced	-0.005	-0.006	-0.003	-0.009	-0.010	-0.013	0.002	0.002	-0.003	0.011	0.011	0.003
	(0.010)	(0.010)	(0.011)	(0.012)	(0.012)	(0.013)	(0.011)	(0.011)	(0.011)	(0.009)	(0.009)	(0.010)
Separated by 5		0.033	0.034		0.008	0.007		-0.006	-0.008		-0.008	-0.010
		(0.008)	(0.008)		(0.009)	(0.009)		(0.008)	(0.008)		(0.007)	(0.008)
DisplacedSeparated by 5			-0.021			0.024			0.038			0.060
			(0.030)			(0.033)			(0.030)			(0.026)
Mean (not displaced)	0.231	0.231	0.231	0.529	0.529	0.529	0.724	0.724	0.724	0.788	0.788	0.788
Standard deviation	0.421	0.421	0.421	0.499	0.499	0.499	0.447	0.447	0.447	0.409	0.409	0.409
Observations	65580	64871	64871	65580	64871	64871	65580	64871	64871	65580	64871	64871

Notes: Children in the sample were 11–18 years old during the base years. Controls include indicators for base year and child age in base year, base year tenure and tenure squared, base year age and age squared, education level in base year (6 categories), field of education (11 categories), dummy for being married, number of kids in t=-2, spouse employed dummy, spouse's annual income, spouse's age and age squared, plant size, and indicators for province (21 categories) and industry (2-digit). Standard errors, presented in parentheses, are clustered at the base-year-plant level.

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