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Supplementary Material Section 1: Plant Closures and Macroeconomic Cycles

To further assess the measurement validity of our exposure, we examined the relation between plant closures and broader macroeconomic cycles in Denmark between 1980 and 2017. We used historical data on bankruptcies ($n = 115,122$), retrieved from Statistics Denmark (available at: <https://www.statbank.dk/KONK9>), to approximate economic downturns during the study period. Examination of the temporal variation of plant closures in the private sector ($n = 36,662$) supports a positive correlation ($r = 0.41$, $P < .05$) between its prevalence and bankruptcies (lagged at 1 year), suggesting that plant closures vary positively with bankruptcies and broader economic downturns in Denmark.

Supplementary Material Section 2: Definition of Plant Closure and Job Loss

We used a similar strategy to Browning and Heinesen¹ to define plant closures and identify displaced fathers in Denmark between 1980 and 2017. We retrieved data from Denmark's Integrated Database for Labor Market Research (IDA) registries, which provide labor market and employment information at the individual, plant, and firm levels. We began by examining plant- and firm-level data (retrieved from IDAS and IDFI datasets, respectively) to identify private sector-plants in Denmark that closed between 1980 and 2017. The IDAS registry contains information about plants including the number of employees, the status of the plant relative to the following year (continuing or closed), and the firm under which the plant operates.² We defined a plant as closed if the closure occurred after at least three years of continuous operation ($n=407,736$). Additionally, after merging plants with firm-level data by firm ID, we restricted the analysis to plants in the private sector with at least ten employees, given that employees of downsizing plants in the public sector may be transferred to another public sector-plant ($n=36,662$).

The year that a plant finally closes does not necessarily represent the most appropriate year of closure for research concerned with effects at the employee level.¹ A plant may show a greater reduction in employment in the years preceding a closure than in the year of final closure. For example, a plant may reduce its number of employees from 50 to 10 in year t , from 10 to 5 in year $t + 1$, from 5 to 2 in year $t + 2$, and from 2 to 0 in year $t + 3$. Year t , as in this example, captures a substantially larger reduction in employment than the year of final closure ($t + 3$). Accordingly, and consistent with past work,¹ we define the year t of plant closure as the year with the greatest magnitude of employment loss (in terms of absolute number of employees), in any of the three years preceding the year of final closure. Supplementary Table S1 shows that most plants close quickly; over 50% of plants exhibit the greatest reduction in employment in the year of final closure. On average, plants shrank from 29.6 in the preceding year to 3.5 employees in the year defined as the year of closure.

Identification of Displacement Group

Next, we merged data on plants with individual-level data retrieved from the IDAN datasets, which contain annual employment information including person ID and plant ID, type of employment (i.e., primary job, secondary / "B" job, part-time job), and days worked for all persons employed in Denmark between 1980 and 2017.² We first identified a group of potentially displaced employees who worked at private sector-plants during the year of closure and not missing data on person ID or plant ID ($n=1,448,639$). We further restricted this group to workers with at least 1 year of primary employment (30 hours or more per week) at the plant prior to the year of closure ($n=899,870$), thus focusing on workers with stronger labor market attachment.¹ Next, we restricted the displacement group to employees who demonstrate job loss by working less than a full year ($< 365 / 366$ days) at the plant during the year of closure ($n=225,960$). We defined a date of displacement variable using information on the number of consecutive days an employee worked at a plant during the year of closure (starting Dec 1 of the preceding year and ending Nov 30 of the year of closure). For example, we calculated the date of displacement for an employee who worked for 63

days at a plant that closed in 1980 as February 1, 1980, whereas an employee who worked 365 days at the same plant during that year was not classified as displaced.

We tested the validity of the exposure (i.e., job displacement due to a plant closure) in a sample of 2,175,070 workers in Denmark in 2010. We compared the economic characteristics of employees classified as displaced based on the criteria described above ($n=19,809$) to employees who were not displaced but showed similar labor market attachment ($n=2,155,261$), on income and employment measures retrieved from Denmark's Income Register and the Integrated Database for Labor Market Research (Table S2, Figures S1-S3). Results suggest that displacement from private sector-plants precedes a decrease in income (Figure S1) and an increase in unemployment benefits (Figure S2) in the year of and year following displacement (in this example, 2010 and 2011, respectively). As expected, findings also show that a greater share of displaced workers exit the labor market resulting in higher prevalence of unemployment and early retirement, relative to non-displaced workers (Table S2, Figure S3).

We then merged these data with birth data ($n=2,192,742$) by person ID and year, therefore restricting the displacement group to *fathers* with strong labor market attachment who were displaced from private sector-plants during the year of infant birth ($n=9,556$). Finally, we used date of displacement and date of conception (defined by subtracting gestational age from date of birth) variables to refine the temporal resolution of the exposure to fathers whose displacement occurred after conception and before birth ($n=5,398$).

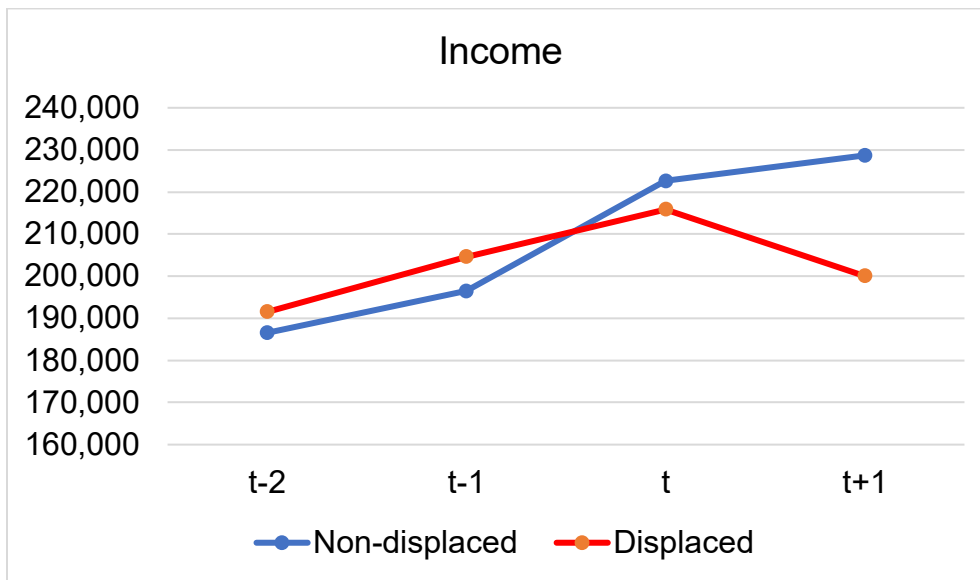
Supplementary Table S1. Descriptive statistics on the timing of plant closures in the private sector ($n=36,663$), Denmark, 1980-2017.

Year of final closure <i>relative to defined closure</i>	No.	%
<i>t</i> (same year)	18,430	50.27
<i>t</i> +1 (1 year following defined closure)	13,064	35.63
<i>t</i> +2 (2 years following defined closure)	3,081	8.40
<i>t</i> +3 (3 years following defined closure)	2,087	5.69

Supplementary Table S2. Change of employment relative to the following year by displacement status in Danish workers.

<i>For...</i>	Non-displaced	Displaced
	%	%
Other workplace in same company	4.45	4.74
Unlisted workplace in same company	0.71	0.31
Other company / other employment	10.73	10.61
Other employment from closed workplace	2.13	52.27
Unemployment	1.99	7.17
Outside of workforce (e.g., early retirement)	6.14	10.94
Death	0.69	0.79
Non-primary employee at workplace	0.91	0.06
Other	3.81	4.54
Non-preserved workplace	0.44	7.59
Unchanged	68.00	0.99

Supplementary Figure S1. Mean income^a (DKK) by displacement status^b in Danish workers, where year t (for displaced workers, the year of displacement) is 2010.

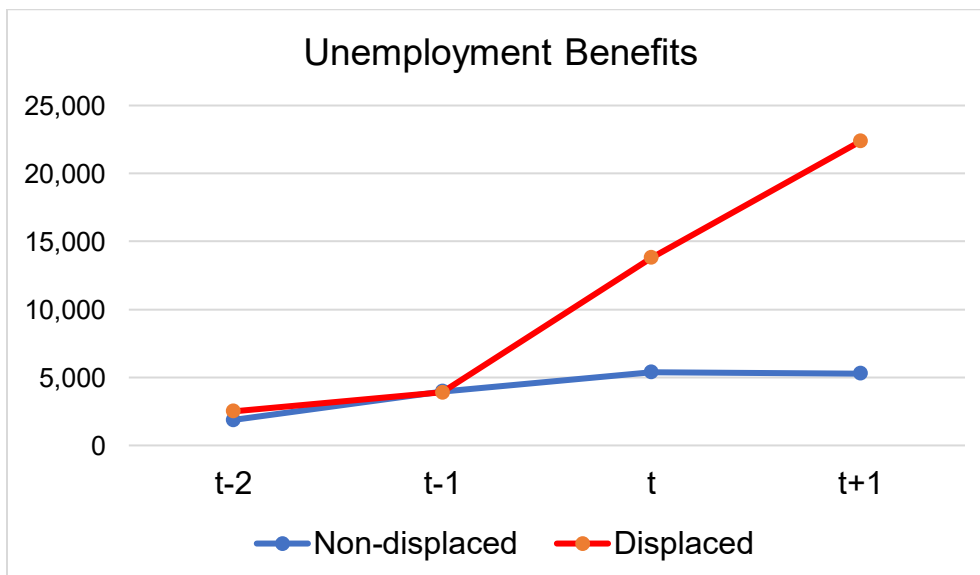


Abbreviations: DKK, Danish krone.

^a Total income (including benefits) minus tax and interest plus calculated home rental value.

^b "Non-displaced" workers may undergo job loss but not owing to plant closure.

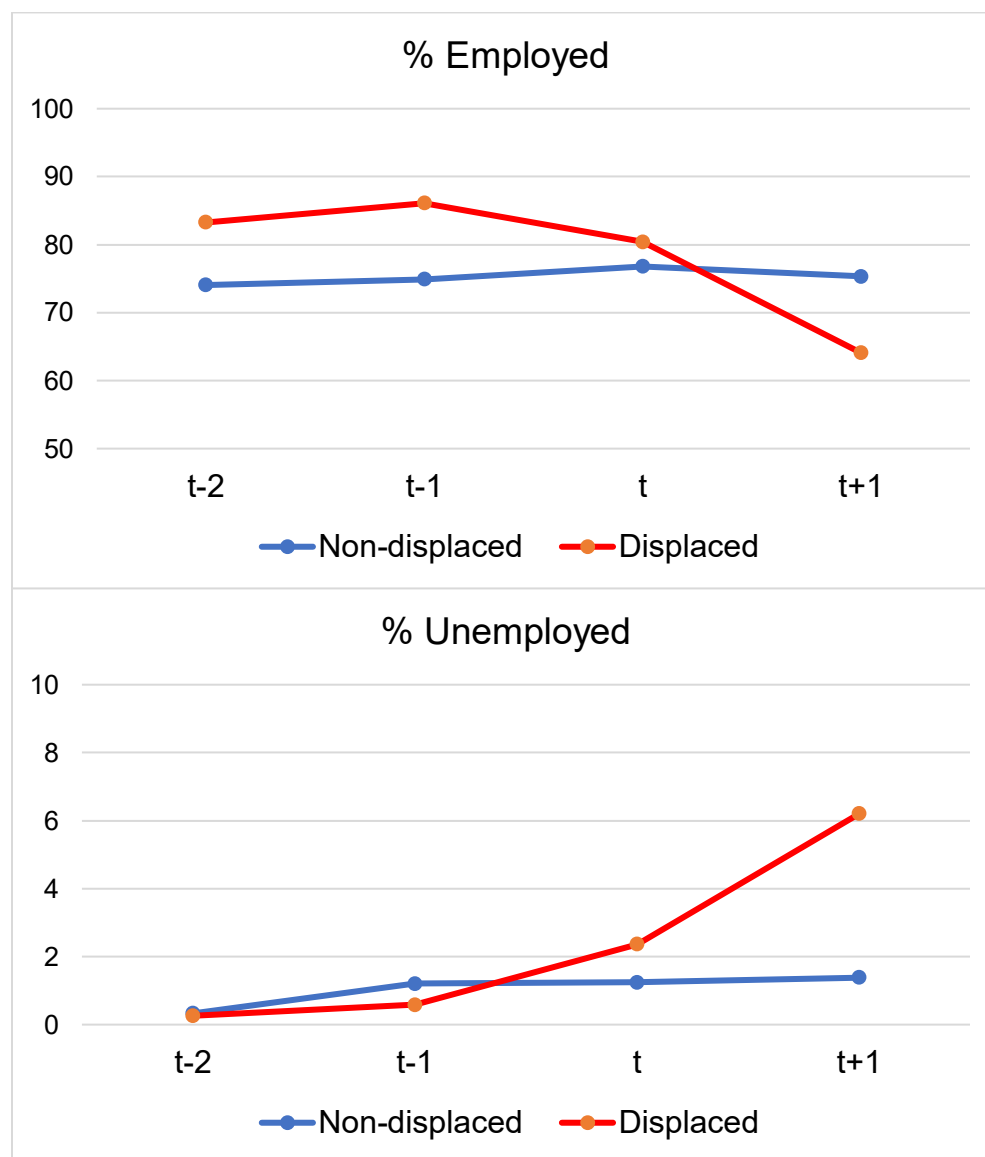
Supplementary Figure S2. Mean unemployment benefits (DKK) by displacement status^a in Danish workers, where year t is 2010.



Abbreviations: DKK, Danish krone.

^a "Non-displaced" workers may undergo job loss but not owing to plant closure.

Supplementary Figure S3. Percent employed (upper) and percent unemployed (lower) by displacement status^a in Danish workers, where year t is 2010.



^a "Non-displaced" workers may undergo job loss but not owing to plant closure.

References

1. Browning M, Heinesen E. Effect of job loss due to plant closure on mortality and hospitalization. *Journal of Health Economics* 2012;31(4):599–616.
2. Statistics Denmark, 1991. IDA – an integrated data base for labour market research – main report. Copenhagen.

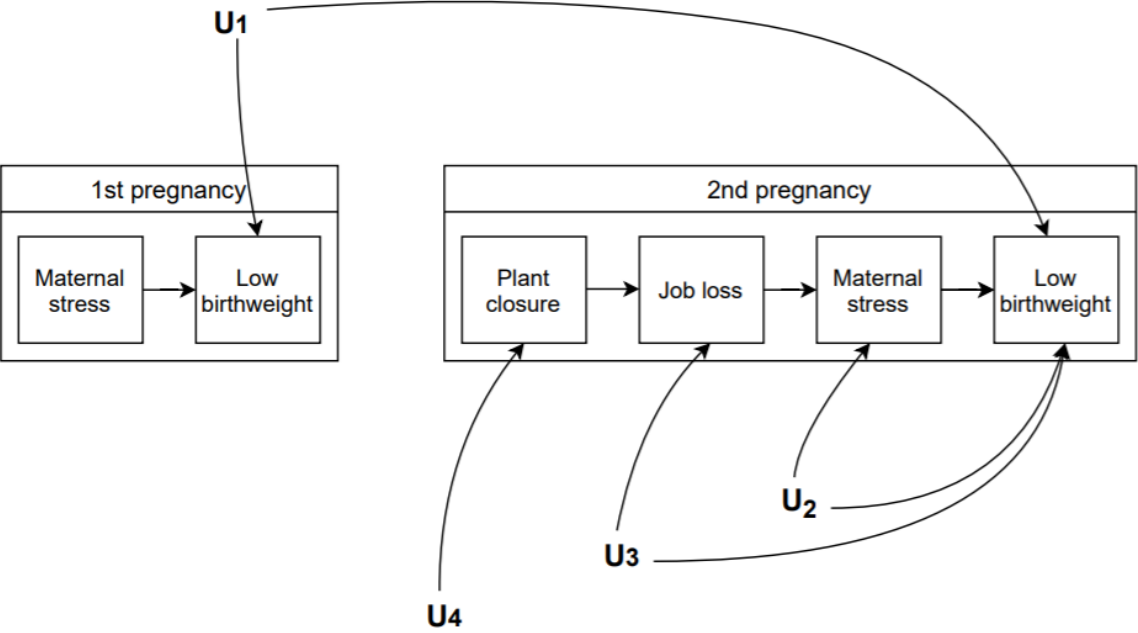
Supplementary Material Section 3: Causal Diagram

Supplementary Figure S4 shows the inferred relation between job loss and low birthweight and potential time-varying and time-fixed confounders (U1– U4). Our use of a matched sibling design controls for a mother’s tendency to deliver a low weight birth across siblings (U1). For instance, models automatically control for unobserved time-fixed characteristics of mothers, such as short maternal height and chronic hypertension (U1), that may increase her risk of low birthweight in both pregnancies. Additionally, parental characteristics including low socioeconomic status and non-white race/ethnicity may elevate maternal stress and increase risk of low birthweight (U2). The matched sibling design controls for time-fixed characteristics (e.g., race/ethnicity); models further adjust for parental factors that may vary across pregnancies, and affect both stress and birth outcomes, including education level (U2).

A limitation of most studies examining associations between exposure to job loss and birth outcomes involves confounding on a common cause (U3). For instance, a key confounder, or set of confounders, that may precede job loss and adverse birth outcomes includes pre-existing health issues. Alcohol use disorder in one or both parents, for example, may increase risk of both a father’s job loss and a low weight birth. We provide additional examples of health and social factors that typically confound the job loss/low birthweight association (U3) in ‘Statistical Analyses’ (p. 8).

The use of plant closures as an exogenous (or IV) variable minimizes confounding in that its timing is independent of common causes of job loss and adverse birth outcomes at the individual level. Region-specific trends over time (e.g., performance of the regional economy), however, may increase risk of plant closures (U4). Accordingly, models specified birth year and region control variables.

Supplementary Figure S4. Causal diagram depicting inferred relation between job loss and low birthweight including time-fixed and time-varying confounders.



Supplementary Material Section 4: Alternative Sibling-Control Model Specifications

Supplementary Table S3. Estimated associations between a father’s job loss due to plant closure and low birthweight (LBW) overall and by infant sex^a in the sibling-matched sample (n=743,574 sibling pairs), *not controlling for LBW in 1st sibling*, Denmark, 1980-2017.

Parameter	All		Males ^b			Females ^c		
	OR	95% CI	OR	95% CI		OR	95% CI	
Job loss	1.28	1.01, 1.64	1.55	1.04	2.30	1.19	0.78	1.83

Abbreviations: CI, confidence interval; LBW, low birthweight; OR, odds ratio.

^a Sex-specific analyses are restricted to sibling pairs born between 1997 and 2017, the time period during which sex information on the live birth is fully available.

^b Sample includes 185,582 sibling pairs born between 1997 and 2017 in which the 2nd sibling is male (n=371,164 total live births).

^c Sample includes 176,507 sibling pairs born between 1997 and 2017 in which the 2nd sibling is female (n=353,014 total live births).

We also examined whether the matched sibling design results agree with those using a mother fixed effects (FE) strategy, which enjoys more use in economics.¹ The logic of the maternal FE strategy is similar to that of a matched sibling design in that the approach controls for stable characteristics of the mother that affect birth outcomes of both children and the likelihood of having a spouse who experienced involuntary job displacement.² Inclusion of a mother FE term controls for any baseline tendency to exhibit LBW and provides a within-mother (counterfactual) comparison of the exposure / birth outcome relation across siblings.

Potential confounding in a mother FE analysis could include region-specific trends over time (in, for example, the performance of the regional economy) that could affect one sibling but not the other. To control for this possibility, we specified birth year and region control variables. Unlike the matched sibling analyses, we included relatively few maternal and infant variables under the assumption that the maternal FE “absorbs” these potential confounders.

The LBW and birthweight coefficients from the maternal FE analysis in Supplementary Table S4 generally agree with the main results reported in the manuscript. Standard errors, however, are less precise which coheres with previous literature that discusses limitations of FE models.¹⁻⁴

Supplementary Table S4. Estimated associations between a father’s job loss due to plant closure and (A) low birthweight (LBW) and (B) birthweight (in grams) in the sibling-matched sample (n=743,574 sibling pairs) *using maternal fixed effects models*, controlling for parental age, parity, birth year, region, and year*region, Denmark, 1980-2017.

Parameter	(A) LBW		(B) Birthweight (grams)	
	OR	95% CI	Coef.	95% CI
Job loss	1.26	1.002, 1.59	-11.46	-27.28, 4.36

Abbreviations: CI, confidence interval; LBW, low birthweight; OR, odds ratio.

Note: sample does NOT restrict on timing of exposure (i.e., includes sibling pairs in which 1st sibling exposed to job loss *in utero*).

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1. Wooldridge, JM. Chapter 10: Basic linear unobserved effects panel data models. In: Wooldridge, JM. *Econometric Analysis of Cross Section and Panel Data*. Boston, MA: MIT Press, 2010.
2. Strumpf EC, Harper S, Kaufman JS. Fixed effects and difference in differences. *Methods in Social Epidemiology*. 2017:341-68.
3. Kaufman JS. Commentary: Why are we biased against bias? *International Journal of Epidemiology* 2008;37(3):624-6.
4. Hill TD, Davis AP, Roos JM, French MT. Limitations of fixed-effects models for panel data. *Sociological Perspectives* 2020; 63(3):357-69.

Supplementary Material Section 5: Heterogeneity Tests by Infant Sex

Supplementary Table S5. Estimated relative excess risk due to interaction (RERI; additive scale) and 95% confidence interval (CI) of exposure to job loss due to plant closure and male (vs. female) infant sex in relation to low birthweight (LBW) in the sibling-matched sample, Denmark, 1997-2017.

	Model	
Parameter	Estimate	95% CI
Job loss * male (RERI)	0.36	-0.40, 1.15

Abbreviations: CI, confidence interval; RERI, relative excess risk due to interaction.

Supplementary Table S6. Odds ratios (ORs) and 95% confidence intervals (CI) predicting low birthweight (LBW) as a function of the interaction (multiplicative scale) between job loss due to plant closure and male (vs. female) infant sex in the sibling-matched sample. Denmark, 1997-2017.

	Model	
Parameter	OR	95% CI
Job loss * male	1.37	0.76, 2.48

Abbreviations: CI, confidence interval; LBW, low birthweight; OR, odds ratio.

Supplementary Material Section 6: Control for Infant Sex

Supplementary Table S7. Estimated association between a father's job loss due to plant closure and low birthweight (LBW) overall and by infant sex^a in the sibling-matched sample (n=743,574 sibling pairs), *controlling for infant sex*, Denmark, 1980-2017.

Parameter	All		Males ^b			Females ^c		
	OR	95% CI	OR	95% CI		OR	95% CI	
Job loss	1.46	1.09, 1.96	1.70	1.14, 2.53		1.24	0.80, 1.92	

Abbreviations: CI, confidence interval; LBW, low birthweight; OR, odds ratio.

^a Sex-specific analyses are restricted to sibling pairs born between 1997 and 2017, the time period during which sex information on the live birth is fully available.

^b Sample includes 185,582 sibling pairs born between 1997 and 2017 in which the 2nd sibling is male (n=371,164 total live births).

^c Sample includes 176,507 sibling pairs born between 1997 and 2017 in which the 2nd sibling is female (n=353,014 total live births).

Supplementary Material Section 7: Linear Regression Models

Supplementary Table S8. Estimated associations between a father's job loss due to plant closure and *birthweight (in grams)* overall and by infant sex^a in the sibling-matched sample (n=743,574 sibling pairs), Denmark, 1980-2017.

Parameter	All			Males ^b			Females ^c		
	β	95% CI		β	95% CI		β	95% CI	
Job loss	-22.81	-43.10	-2.51	-28.03	-62.29	6.24	-12.20	-45.51	21.11
Birthweight (1 st sib)	0.47	0.47	0.47	0.46	0.45	0.46	0.43	0.43	0.44
Maternal age	-0.42	-0.78	-0.06	-1.21	-1.89	-0.52	-0.03	-0.70	0.64
Paternal age	-0.21	-0.49	0.07	-0.29	-0.84	0.25	-0.06	-0.59	0.48
Maternal education									
Primary (ref)									
Upper secondary	47.53	43.81	51.24	61.87	53.70	70.03	52.58	44.65	60.50
Some higher	68.21	64.42	72.00	83.19	74.98	91.41	74.17	66.18	82.17
BA or higher	76.99	71.76	82.22	88.68	78.59	98.77	73.67	63.82	83.51
Paternal education									
Primary (ref)									
Upper secondary	23.24	19.94	26.54	27.24	20.29	34.19	23.78	16.98	30.59
Some higher	39.84	35.92	43.76	41.65	33.81	49.49	33.85	26.16	41.54
BA or higher	29.96	24.78	35.13	31.40	21.71	41.09	23.28	13.78	32.78
Parity									
2 births (ref)									
≥ 3 births	-44.38	-49.04	-39.72	-43.88	-55.21	-32.55	-44.04	-55.10	-32.98
Immigrant status									
Danish (ref)									
Immigrant	-69.64	-73.84	-65.44	-77.36	-84.74	-69.98	-78.39	-85.64	-71.14
Descendent	-96.95	-108.80	-85.10	-103.98	-121.65	-86.31	-107.80	-125.18	-90.42
Year of birth	0.83	0.69	0.97	-0.55	-0.99	-0.12	-0.89	-1.31	-0.46

Abbreviations: CI, confidence interval

^a Sex-specific analyses are restricted to sibling pairs born between 1997 and 2017, the time period in which sex information on the live birth is fully available.

^b Sample includes 185,582 sibling pairs born between 1997 and 2017 in which the 2nd sibling is male (n = 371,164 total live births).

^c Sample includes 176,507 sibling pairs born between 1997 and 2017 in which the 2nd sibling is female (n = 353,014 total live births).

Supplementary Table S9. Estimated associations between a father's job loss due to plant closure and *gestational age (in days)* overall and by infant sex^a in the sibling-matched sample (n=743,574 sibling pairs), Denmark, 1980-2017.

Parameter	All			Males ^b			Females ^c		
	β	95% CI		β	95% CI		β	95% CI	
Job loss	-0.23	-0.70	0.24	-0.80	-1.60	0.00	0.54	-0.24	1.32
GA (1 st sib)	0.27	0.27	0.27	0.27	0.27	0.27	0.25	0.25	0.26
Maternal age	-0.08	-0.09	-0.07	-0.08	-0.10	-0.07	-0.08	-0.09	-0.06
Paternal age	0.01	0.00	0.01	0.01	0.00	0.02	0.01	0.00	0.02
Maternal education									
Primary (ref)									
Upper secondary	0.75	0.66	0.84	1.07	0.88	1.26	1.01	0.82	1.19
Some higher	1.14	1.05	1.23	1.58	1.39	1.77	1.47	1.28	1.66
BA or higher	1.56	1.44	1.68	2.03	1.79	2.26	1.70	1.47	1.93
Paternal education									
Primary (ref)									
Upper secondary	0.31	0.23	0.38	0.34	0.18	0.50	0.22	0.06	0.38
Some higher	0.61	0.52	0.71	0.71	0.53	0.89	0.54	0.36	0.72
BA or higher	0.56	0.44	0.68	0.64	0.41	0.87	0.44	0.21	0.66
Parity									
2 births (ref)									
≥ 3 births	-0.77	-0.87	-0.66	-0.74	-1.00	-0.47	-1.14	-1.40	-0.88
Immigrant status									
Danish (ref)									
Immigrant	-1.04	-1.14	-0.94	-0.68	-0.85	-0.51	-1.08	-1.25	-0.91
Descendent	-1.04	-1.31	-0.76	-0.90	-1.31	-0.49	-1.32	-1.73	-0.91
Year of birth	-0.06	-0.06	-0.05	0.01	0.00	0.02	0.02	0.01	0.03

Abbreviations: CI, confidence interval; GA, gestational age.

^a Sex-specific analyses are restricted to sibling pairs born between 1997 and 2017, the time period in which sex information on the live birth is fully available.

^b Sample includes 185,582 sibling pairs born between 1997 and 2017 in which the 2nd sibling is male ($n = 371,164$ total live births).

^c Sample includes 176,507 sibling pairs born between 1997 and 2017 in which the 2nd sibling is female ($n = 353,014$ total live births).

Supplementary Material Section 8: Negative Control Analysis

Supplementary Table S10. Estimated associations between a father's job loss due to plant closure *occurring after infant's date of birth (i.e., false exposure)* and low birthweight (LBW) overall and by infant sex^a in the sibling-matched sample (n=743,574 sibling pairs), Denmark, 1980-2017.

Parameter	All		Males ^b			Females ^c		
	OR	95% CI	OR	95% CI		OR	95% CI	
Job loss	1.15	0.79, 1.67	1.45	0.83, 3.24		0.79	0.35, 1.82	

Abbreviations: CI, confidence interval; LBW, low birthweight; OR, odds ratio.

^a Sex-specific analyses are restricted to sibling pairs born between 1997 and 2017, the time period during which sex information on the live birth is fully available.

^b Sample includes 185,582 sibling pairs born between 1997 and 2017 in which the 2nd sibling is male (n=371,164 total live births).

^c Sample includes 176,507 sibling pairs born between 1997 and 2017 in which the 2nd sibling is female (n=353,014 total live births).

Supplementary Material Section 9: Restrictive Definition of Job Loss Exposure

Estimates of date of conception, especially using last menstrual period dating, are measured with uncertainty. To ensure that any results which rejected the null did not arise from misclassified timing of job loss *before* the conception date, we performed a sensitivity analysis by using a more restrictive definition of exposure to job loss *in utero*. We restricted the starting point for job loss to at least *one month after* the estimated date of conception, resulting in the exclusion of 128 births to fathers whose job loss occurred within the first month of conception (new exposed infants $n = 2,208$). Analyses using this more restrictive definition yield similar results to initial analyses (Supplementary Table S11). Findings show a positive association between exposure to job loss *in utero* and the risk of LBW (OR = 1.40, 95% CI: 1.09, 1.79), which holds in sex-specific analyses for males (OR = 1.74, 95% CI: 1.16, 2.61) but not females (OR = 1.27, 95% CI: 0.81, 1.98).

Supplementary Table S11. Estimated associations between a father's job loss due to plant closure *at least one month after conception* and low birthweight overall and by infant sex^a in the sibling-matched sample ($n=743,574$ sibling pairs), Denmark, 1980-2017.

Infant sex	OR	95% CI	
All	1.40	1.09	1.79
Male ^b	1.74	1.16	2.61
Female ^c	1.27	0.81	1.98

Abbreviations: CI, confidence interval; OR, odds ratio.

^a Sex-specific analyses are restricted to sibling pairs born between 1997 and 2017, the time period in which sex information on the live birth is fully available.

^b Sample includes 185,582 sibling pairs born between 1997 and 2017 in which the 2nd sibling is male ($n = 371,164$ total live births).

^c Sample includes 176,507 sibling pairs born between 1997 and 2017 in which the 2nd sibling is female ($n = 353,014$ total live births).

Supplementary Material Section 10: Propensity Score Matching

Job loss due to plant closure represents a plausibly exogenous shock (for reasons outlined in the Introduction). However, certain characteristics of fathers may correspond with both the decision to seek employment in a vulnerable occupation or workplace (i.e., plants susceptible to closure during macroeconomic downturns) *and* a pregnant spouse's risk of reduced birthweight and/or shorter duration of gestation. For example, in our sample of 2,364,461 births in Denmark between 1980 and 2017, fathers who undergo job loss due to plant closures during pregnancy ($n=5,398$) were slightly younger and less educated than fathers who did not face unexpected job loss. Since factors such as low socioeconomic status (SES) may elevate the risk of adverse birth outcomes, the potential selection of younger, lower SES fathers into plants that subsequently close may bias results on the effects of involuntary job loss away from the null. We, therefore, used propensity score matching to model and match fathers on the likelihood of unexpected job loss due to plant closure during a spouse's pregnancy.

We first matched fathers who were exposed to plant closures resulting in unexpected job loss during pregnancy ($n=5,398$) to fathers who were not exposed to plant closures. We achieved this result by deriving propensity scores based on values of personal income and unemployment benefits in the fiscal year preceding the year of infant birth (at baseline), highest educational attainment, and age. We fit a logistic regression model (i.e., to estimate the probability of exposure to involuntary job loss during pregnancy as a function of baseline covariates) and chose to match with a "greedy nearest neighbor" algorithm using a caliper of ± 0.01 on the probability scale.¹⁻³ This process successfully matched all exposed fathers to unexposed fathers, where the largest propensity score difference between matched pairs is 0.00327, yielding a dataset of 10,796 fathers. Next, we evaluated the balance in the distributions of the logit propensity score and the baseline covariates in the matched sample. Supplementary Table S12 shows the effectiveness of the matching procedure in reducing covariate imbalance between exposed and unexposed fathers. The standardized difference in means for all baseline covariates falls below the 10% threshold considered sufficient for covariate balance.⁴

Using this matched dataset, we estimated the conditional logit (i.e., log-odds) of LBW as a function of father's unexpected job loss during pregnancy, controlling for sociodemographic characteristics (i.e., age of mother and father, educational status of mother and father, immigrant status of mother, and parity) and year of birth, by infant sex. Consistent with results of the matched sibling design analyses, Supplementary Table S13 shows that the positive association between job loss and LBW remains statistically detectable in the matched sample overall (OR = 1.25, 95% CI: 1.001, 1.56) and among males (OR = 1.60, 95% CI: 1.09, 2.34) but not females (OR = 1.03, 95% CI: 0.72, 1.48).

Supplementary Table S12. Reduction in covariate imbalance after matching on propensity score (likelihood of unexpected job loss during pregnancy).

Variable	Sample	Mean Difference (Treated–Control)	Standardized Difference	%Bias^a Reduction
Logit Propensity Score	All	0.10	0.32	
	Matched	0.00	0.00	100.00
Age of father in years	All	-0.85	-0.16	
	Matched	0.07	0.01	92.26
Income in DKK (Y-1)	All	-3,579.35	-0.03	
	Matched	-411.83	0.00	88.49
Unemployment benefits in DKK (Y-1)	All	5,705.02	0.26	
	Matched	52.64	0.00	99.08
Educational attainment				
Primary	All	0.04	0.08	
	Matched	0.00	0.00	90.91
Secondary	All	-0.03	-0.07	
	Matched	-0.02	-0.04	39.31
Higher	All	-0.02	-0.08	
	Matched	0.00	0.00	90.97

Abbreviations: DKK, Danish krone.

^a Percent reduction in bias is represented by the percent reduction in the standardized differences before and after matching.⁴

Supplementary Table S13. Estimated associations between a father’s job loss and low birthweight (LBW) overall and by infant sex^a in the propensity score matched sample (n=10,796), Denmark, 1980-2017.

Infant sex	OR	95% CI
All	1.25	1.001, 1.56
Male ^b	1.60	1.09, 2.34
Female ^c	1.03	0.72, 1.48

Abbreviations: CI, confidence interval; LBW, low birthweight; OR, odds ratio.

^a Sex-specific analyses are restricted to sibling pairs born between 1997 and 2017, the time period during which sex information on the live birth is fully available.

^b Sample include 3,460 male live births.

^c Sample include 3,475 female live births.

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