

Labor Market Dynamism and the Distribution of Job Loss

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Introduction

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- ▶ **Job loss necessarily happens, but it hurts:** Job loss can have persistent negative earnings effects
- ▶ **Job destruction is concentrated (firms):** Davis & Haltiwanger (1991), with the LRD,
“Relative to job creation, job destruction exhibits greater concentration at establishments that experience dramatic [negative] growth rates.”



Source: BDS-HG.

- Rapidly contracting firms ($DHS \leq -0.2$ or traditional growth rate ≤ -0.5) represent 24% of all firms, yet they account for 60% of total job destruction.

Introduction

► Job loss rates *may* be geographically concentrated:

- * Concentration of job destruction among small share of firms
- * Residential co-location of co-workers (Bayer, Ross, and Toppa, 2008)
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► Why should we care about geographic concentration? Because neighborhoods matter:

- * Neighborhoods play an important role in shaping long-run outcomes of residents (Chetty et al. 2014; Chetty et al. 2018a, 2018b; Chin and Katz, 2022) and
- * adult employment rates are strongly correlated with children's outcomes (Chetty et al. 2024). 

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Questions:

1. To what extent are job loss rates geographically concentrated?
2. Are there spillover effects of job loss on indirectly exposed residents (adults and children)? If so, what are the transmission mechanisms?

County-level analysis with public data

- ▶ Cross-county distribution of job separations
- ▶ Event study of mass separation events on adults
- ▶ Long-run outcomes of children

Neighborhood-level analysis with microdata

- ▶ Mass separations of residents driven by firm-level shocks
- ▶ Impacts on directly and indirectly exposed adults
- ▶ Impacts on adulthood outcomes of directly and indirectly exposed children
- ▶ Identification of spillover mechanisms

Literature Review

- ▶ **Firm Dynamics:** Extensive literature showing impacts of firm dynamics on productivity, employment growth, innovation.

- * Davis, Haltiwanger, & Schuh (1998), Foster, Haltiwanger, & Krizan (2001), Cooper, Haltiwanger, Willis (2007), Foster, Haltiwanger, & Syverson (2008), Haltiwanger, Jarmin, & Miranda (2013), Decker et al. (2014), Aghion & Howitt (1992), Hopenhayn & Rogerson (1993), Akcigit & Kerr (2018), Acemoglu et al. (2018), among many others

Our contribution:

- * We provide new evidence on how the “lumpiness” of job destruction generates concentrated shocks to small geographies.
 - * We document long-run adverse consequences of job destruction, shedding light on the winners and losers from creative destruction.

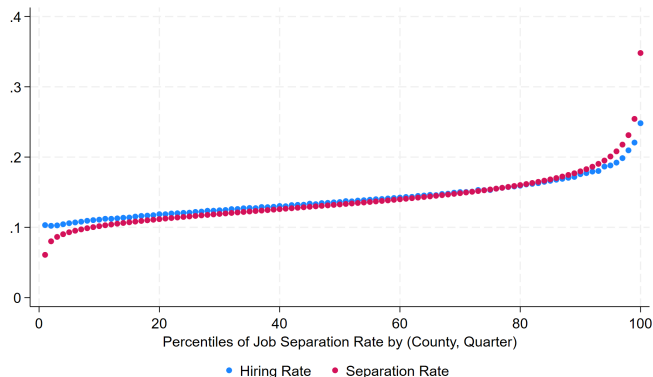
- ▶ **Impact of Neighborhoods:** Many studies showing the causal impact of place on individual outcomes. Local labor market conditions strongly correlate with changes in outcomes, but mechanisms are unclear.

- * Jencks & Mayer (1990), Cutler & Glaeser (1997), Sampson, Morenoff, & Gannon-Rowley (2002), Chetty et al. (2014), Chetty & Hendren (2018a, 2018b), Chetty et al. (2024)

Our contribution: (We hope to provide) causal estimates of employment shocks to adults and both direct and indirect impacts of those shocks.

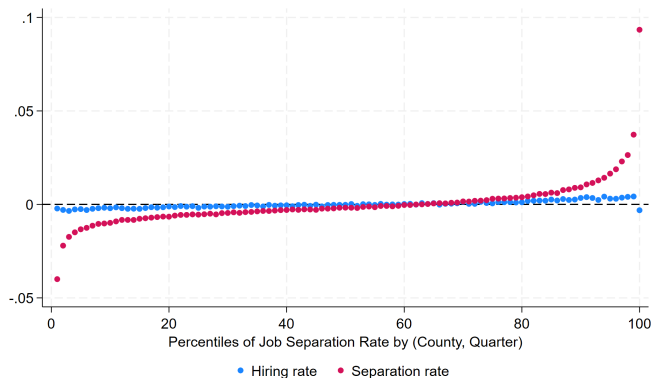
County-level Analysis

Spatial Concentration of Job Separation Rates



- ▶ X axis: Percentiles of job separation by (county, quarter)
- ▶ Large dispersion with upward skewness at the top (exceptionally high separation rates)
- ▶ Counties with high separations also have high hiring rates (dynamic labor markets).

Spatial Concentration of Excess Job Separation Rates



- ▶ Control for county FE and state x time FE
 - * purges the role of permanent county differences and aggregate fluctuations.
 - * explains much of the variation, especially in hiring rates.
- ▶ Still, some counties exhibit exceptionally high excess separation rates.

Robustness and Potential Sources

- ▶ This empirical pattern persists when we:
 - * control for county size 
 - * use employment weighted distribution 
 - * use E→N and N→E flows (CBSA level) 
 - * use JDR and JCR (BDS) 

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 - * **Firm-level shocks** propagated into local areas (e.g., mass layoffs, large plant closings)
 - + We need microdata to measure firm-level shocks

Mass Separation Events

- ▶ We want to see what happens to a county after a mass separation event.
 - * Does the area recover relatively quickly?
 - * What happens to people who keep their jobs?
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- ▶ A county is *treated* in quarter t if it experiences a mass separation event for the first time in t .

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 - + poverty rate
 - + personal income per capita

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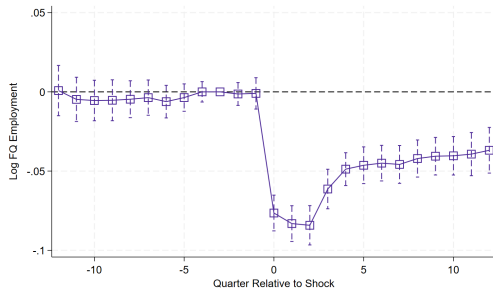
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- * These matching variables are known to be strongly correlated with adulthood outcomes of children (Chetty et al., 2018; Chin and Katz, 2022).
- ▶ We employ a TWFE event study specification ± 12 quarters around the treatment quarter:

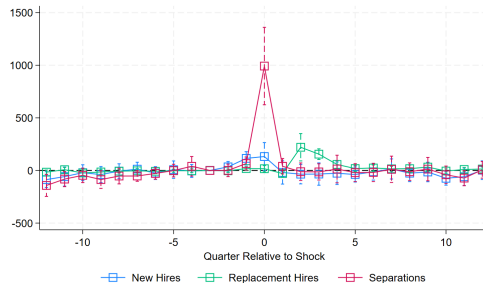
$$Y_{ct} = \sum_{k=-12}^{12} \lambda_k \mathcal{I}_k + \sum_{k=-12}^{12} \delta_k \mathcal{I}_k \times \text{Treat}_c + \alpha_c + \tau_t + \epsilon_{ct}$$

where τ_t is the matched pair x time FE.

Effects on employment



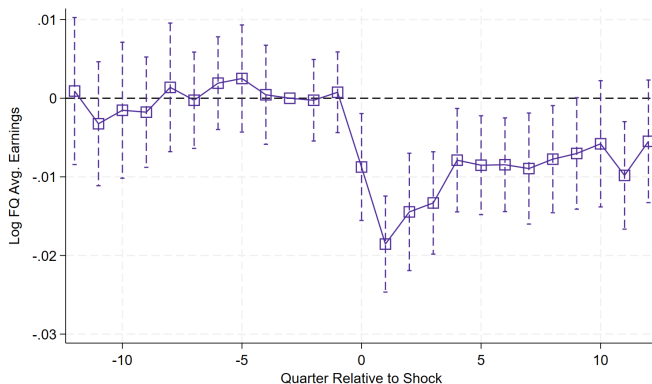
(a) Employment



(b) Hires and separations

- ▶ A sharp decline in employment with a sluggish recovery.
 - * A large spike in separations with a mild contemporaneous increase in hires.
 - * Separations partially undone by subsequent replacement hires, but not new hires.

Effects on earnings



- ▶ A mild decrease in earnings for (full-quarter) employed as well.
- ▶ This pattern is consistent with a mild spillover, but we cannot rule out other channels.
 - * We need microdata to better identify the sources of the shocks and spillovers.

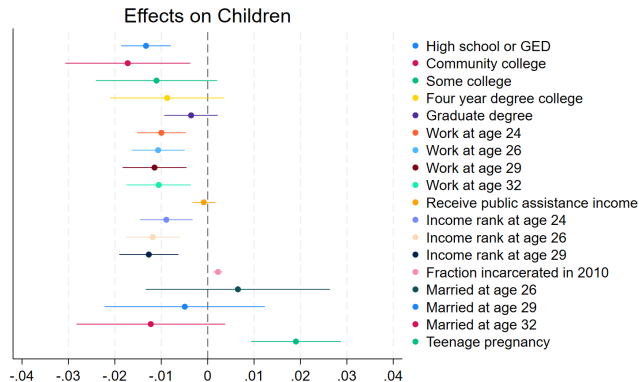
Effects on Children: Specification

- ▶ Motivated by previous studies, we examine whether the mass separation event affects children's long-run outcomes.
- ▶ We get data on outcomes of children born between 1978 and 1983 from Opportunity Atlas.
 - * Each child is assigned to counties proportional to the time he/she spent the childhood before 23.
- ▶ We restrict to counties that were treated between 1990 and 2000 and their controls.
 - * The oldest cohort was 22 in 2000.

$$Y_c = \textit{Treat}_c + \epsilon_c$$

- ▶ We control for matched pair FE.

Effects on Children: Results



- Children in the treated counties are more likely to:
 - * attain lower levels of education, work less, and earn lower income
 - * experience incarceration and teenage childbirth

Firm-Level Shocks and Spillovers

Data Sources

- ▶ 2000 Decennial Census ⇒ parent-child linkages
- ▶ LEHD ⇒ individual earnings and employer characteristics

Key Variables

- ▶ *Parental Earnings*: quarterly earnings records from the LEHD
- ▶ *Parental Employer*: the SEIN that contributes the most earnings in a quarter
- ▶ *Residential Address*: annual address data of the parents from the LEHD
- ▶ *Adults Earnings of Child*: annual earnings measured at age 30

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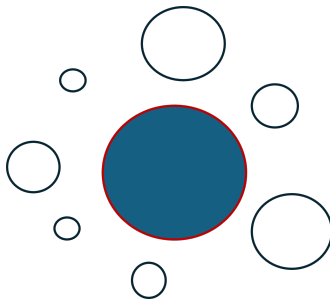
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- ▶ For each treated tract, use matching to find a non-treated comparison tract that is **observably similar** and **has a similar top employer**
- ▶ While not identical, our approach has close parallels to the GIV estimator (Gabaix and Koijen, 2024)

Groups of Interest

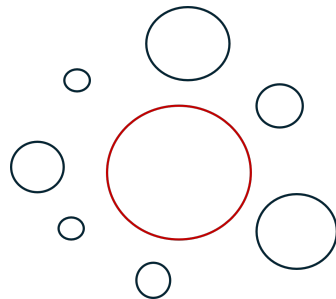
	Directly exposed	Indirectly exposed
Adult		
Children		

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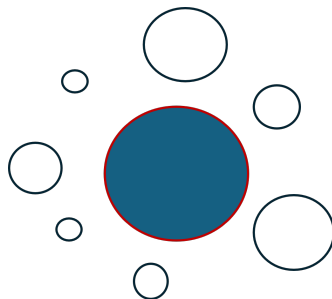
(a) Treated neighborhood



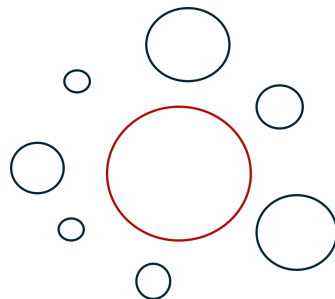
(b) Control neighborhood

Groups of Interest

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Children		



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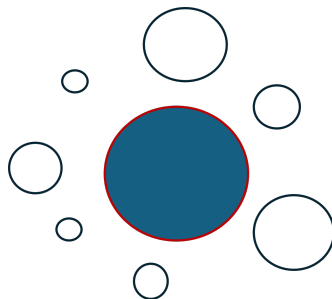


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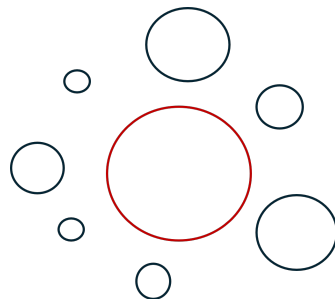
- Event study for employment and earnings for adults.

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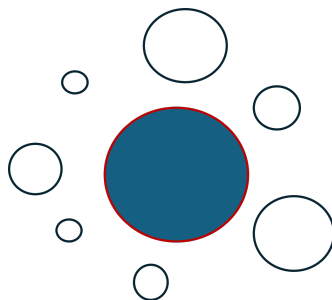


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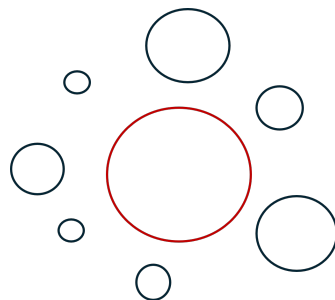
- Event study for employment and earnings for adults.
 - * Micro data also allows us to track residential moves over time, decomposing the changes in average income into impacts on original residents and changes in migration flows.

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- ▶ Event study for employment and earnings for adults.
 - * Micro data also allows us to track residential moves over time, decomposing the changes in average income into impacts on original residents and changes in migration flows.
- ▶ Cross-sectional regression for adulthood outcomes for children.
 - * Micro data allow is to identify the exact set of children who lived there right before the shock, and differentiate between those directly and indirectly impacted.

Mechanisms: Impact on Neighboring Adults

	Directly exposed	Indirectly exposed
Adult		
Children		

- If a large number of your neighbors lose their jobs, does this affect your earnings?

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 - * Local demand channel: Are the effects more pronounced for individuals employed in local service industries?

Mechanisms: Impact on Neighboring Adults

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- ▶ If a large number of your neighbors lose their jobs, does this affect your earnings?
 - * Local demand channel: Are the effects more pronounced for individuals employed in local service industries?
 - * Residential networks (Bayer et al., 2008; Hellerstein et al., 2011): Are the effects stronger among individuals residing on the same block or sharing similar demographic characteristics (e.g., race)?

Mechanisms: Impact on Own Children

	Directly exposed	Indirectly exposed
Adult		
Children		

- If parents lose their jobs, does this impact the long-run outcomes of their children (Oreopoulos, et al., 2008)?

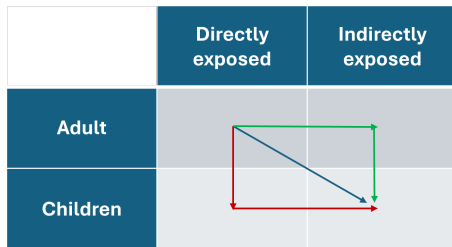
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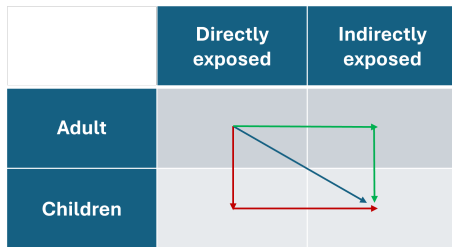
- If a large number of neighbors lose their jobs, does this impact the long-run outcomes of children who live there (whose parents are only indirectly exposed)?

Mechanisms: Impact on Neighboring Children



- If a large number of neighbors lose their jobs, does this impact the long-run outcomes of children who live there (whose parents are only indirectly exposed)?
 - * Are the effects stronger for indirectly exposed children **who are more likely to interact with directly exposed children measured by same sex, race, year of birth, and school district?**

Mechanisms: Impact on Neighboring Children



- If a large number of neighbors lose their jobs, does this impact the long-run outcomes of children who live there (whose parents are only indirectly exposed)?
 - * Are the effects stronger for indirectly exposed children **who are more likely to interact with directly exposed children measured by same sex, race, year of birth, and school district?**
 - * Are the effects stronger for indirectly exposed children **whose parents are more likely to interact with directly exposed adults?**

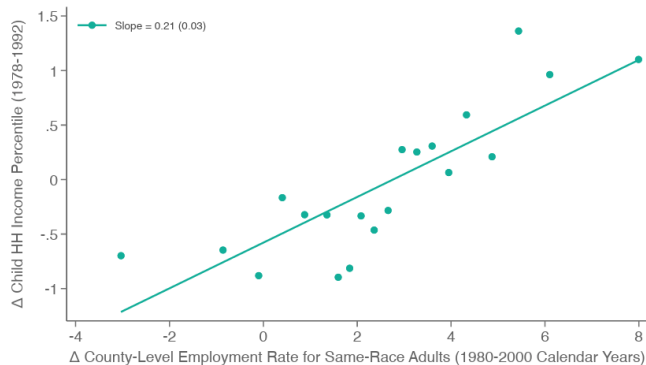
Concluding Remarks

- ▶ A healthy pace of job reallocation is essential for sustained economic growth.
- ▶ However, the lumpiness of job destruction—combined with residential sorting among co-workers—can generate geographically concentrated adverse shocks.
- ▶ We document new evidence on long-run adverse consequences associated with the destructive side of this process, which also help us better understand the winners and losers from creative destruction.
- ▶ We provide causal evidence on the long-term impacts of large-scale employment shocks on children's outcomes, along with evidence on key spillover mechanisms.
 - * Perhaps the evidence calls for policies that facilitate the reallocation process.

Appendix

Employment Rates and Children's Outcomes

Changes in Children's Household Incomes in Adulthood versus Changes in Employment Rates for Same-Race Adults by County



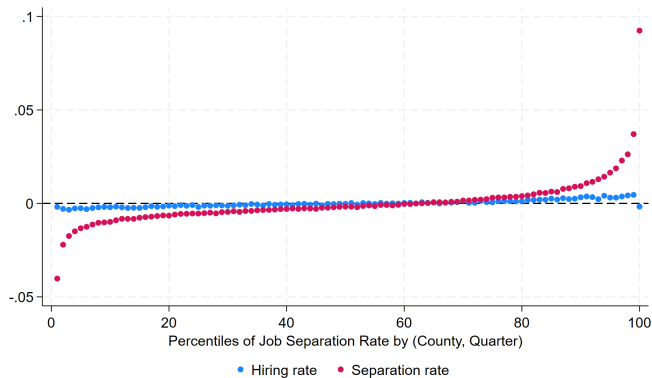
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Balance of Characteristics

	Control	Treated	Diff	p-value
Employment (FQ)	11,502.55	11,077.12	-425.43	0.827
% Below poverty	0.17	0.17	0.00	0.828
Personal income per capita	48,138.89	48,321.11	182.22	0.747
Population (15+)	34,972.45	37,000.57	2,028.12	0.708
Median age	38.84	38.75	-0.10	0.697
Diff = Treated - Control; * p<0.10, ** p<0.05, *** p<0.01				

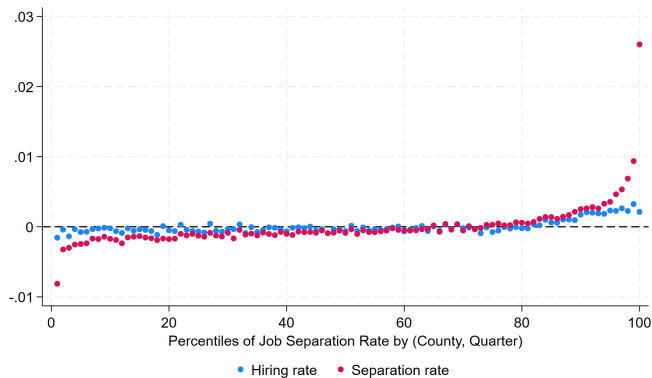
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Distribution of Excess Job Separation Rates (Emp. Control)



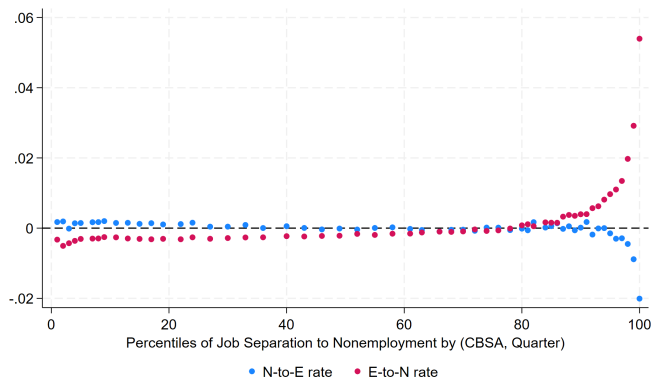
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Distribution of Excess Job Separation Rates (Emp. Weighted)



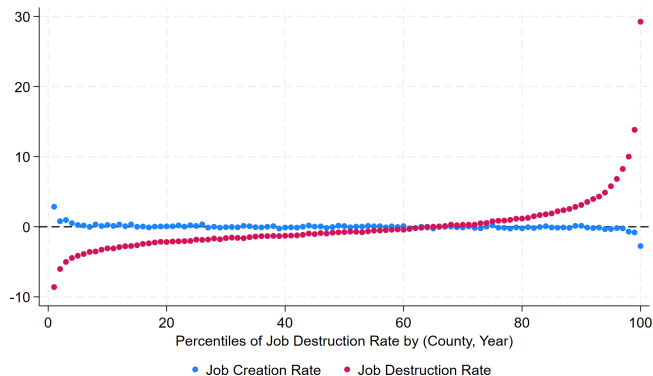
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Distribution of Excess Job Separation Rates into Nonemployment (CBSA)



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Distribution of Excess Job Destruction Rates (BDS)



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