Advance Layoff Notices and Worker Outcomes

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Preliminary and incomplete

Motivation

- Displaced workers face large and persistent earnings losses, especially after mass layoff (Jacobson, LaLonde, and Sullivan, 1993; Davis and von Wachter, 2011)
- Advance notice has long been proposed as a way to mitigate these losses
  - Ehrenberg and Jakubson (1988)
  - English common law since 1500s, Canada and Western Europe legislation since 1970s (Ruhm, 1992; Kuhn, 1993)
- Proposed benefits to workers include:
  1. Increased job search $\Rightarrow$ direct employment transitions and less joblessness
  2. Retraining and outplacement services $\Rightarrow$ better subsequent matches
- But we know little about the causal effects of advance notice on worker outcomes, especially in the US
  - Policy-relevant topic: Senators Brown and Murray introduce the *Fair Warning Act* to strengthen US advance notice legislation (Nov. 2023)

The US WARN Act and Our Research Question

- We study the Worker Adjustment Retraining and Notification (WARN) Act
  - Passed in 1988, effective as of 1989
  - Large firms provide layoff notices to workers and state governments
  - 60 days' advance notice before mass layoffs

Federal WARN Act Details

> *[Advance notice under the WARN Act] provides workers and their families some transition time to adjust to the prospective loss of employment, to seek and obtain alternative jobs and, if necessary, to enter skill training or retraining. . . WARN also provides for notice to State dislocated worker units so that dislocated worker assistance can be promptly provided.*
>
> *29 U.S.C 2107(a), Part 639*

- **Research question**: Does WARN notification improve labor market outcomes for workers?

Related Literature

- US evidence about advance notice effects mixed and mostly dated
  - Advance notice helps some workers avoid joblessness; has little effect on unemployment duration conditional on job loss for others (Addison and Protugal, 1992; Ruhm, 1992; Malik, 2022)
  - Wage effects might be small/large (Ehrenberg and Jakubson, 1988; Nord and Ting, 1991; Ruhm, 1994)
  - CPS-DWS: Endogeneity of voluntary advance notice (Fallick, 1994; Jones and Kuhn, 1995)
  - Incidence of lengthy notification did not rise after WARN (Addison and Blackburn, 1994)
- Other countries
  - Candian workers covered by advance notice laws find new employment sooner than workers not covered (Friesen, 1997)
  - Production gain from longer AN (shorter unemp. dur. & higher reemp. wages) exceeds adverse productivty effects (Cederlöf, Fredriksson, Nekoei, and Seim, 2023)
- Exposure to WARN can create "operational inflexibility that hinders innovation and growth" (Geurnsey, Kim, and Lin, 2023)

Our Project: Data

- Focuses on the US; uses administrative data
- WARN notice-level data + data on workers and firms from the US Census Bureau's Longitudinal Employer-Household Dynamics (LEHD) program
  - WARN notifications include: Name and address of establishment, notice date, expected date of first separation & the # of affected employees
    WARN Data Collection | Cleaning WARN Addresses
  - LEHD data: matched worker-firm earnings; monthly establishment employment
- Use fuzzy-matching algorithm to merge WARN data with LEHD data
  - Based on name and address (Kline, Petkova, Williams, and Zidar, 2019; Wang and Young, 2023) Details
  - Algorithm matches the vast majority of our WARN notices

Sample

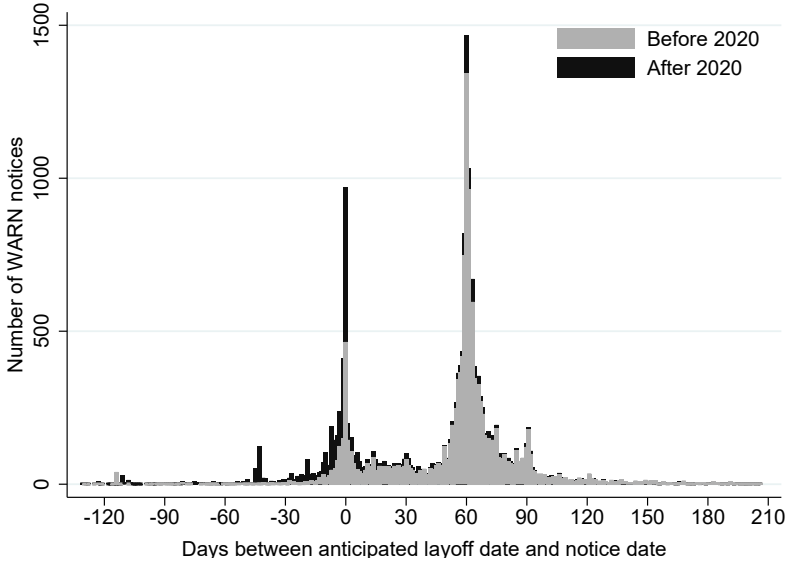
Restrict WARN data to five large states with no mini-WARN Acts (data start year in brackets)

- FL (1998), NC (1996), OH (1996), PA (2001), and TX (1999)
- $\sim$20k notices; $\sim$16,000 before 2020 and $\sim$4,000 since then
- $\sim$2.5 million affected workers

Main analysis omits notices filed after 2019

- Notices and economic environment in 2020-2021 meaningfully different e.g., government shutdown, less advance notice, temporary layoffs

Advance Notice Differences Before and After 2020

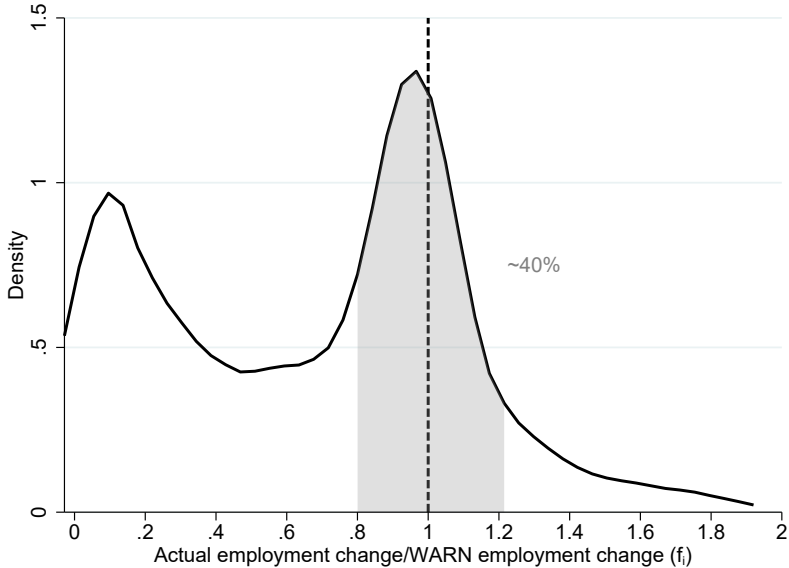


Unrealized WARN Notices

- Researchers have used WARN notices as a measure of local demand shocks (Acton, 2021)
- But how often are WARN notices unrealized?
- We use merged WARN-LEHD data and restrict attention to:
  - The first WARN notification at an establishment
  - WARN notices that have positive advance notice
  - WARN notices with at least 50 affected workers
- Conditional on a WARN notice at establishment i in month t, what is the max decline in employment over the next 6 months?
  - Report as a share of the anticipated number of affected workers in WARN announcement ($numWARN_t$).

$$f_i = \frac{\max_{k=1,\ldots,6} \left(emp_{i,t} - emp_{i,t+k}\right)}{numWARN_{i,t}}, \ \forall i$$

Employment Changes after WARN



Conclusions and Future Work

Today:

- WARN data collection effort
- Matching to LEHD data
- Advance notice largely congruent with the law
- Many WARN notices are unrealized

Future of this project:

- Study worker outcomes using fuzzy RD approach based on the WARN Act's discontinuities in coverage
  - Fuzzy partly because of confusion about when WARN should be filed: "over-compliers" and "non-compliers"; uncertainty
- Turnover and attrition at notifying establishments
- Information vs. resource effects

Appendix Slides

Federal WARN Act Details

- Applies to employers with 100 or more full-time workers. Triggered for reductions of 50 or more full-time employees.
  1. "Plant closings" affecting at least 50 workers
  2. "Mass layoffs" affecting ≥ 500 workers, or 50-499 workers if $\geq 1/3$ of employment
  3. Does not cover federal, state, local government or temporary employment
- The penalty for issuing too little notice can be severe: Employer owes back pay and benefits up to 60 days and a civil penalty of $500 per day.
- Some states and localities have stricter rules (mini-WARN Acts)
  - e.g., NY state requires 90 days notice, effective February 2009
- Three exceptions exist to 60 days' notice rule

Research Question

WARN Data Collection

Establishment-level data collected from state dislocated worker units

- No federal repository for WARN notices; each state is different
- Contacting state officials, digitizing historical records, scraping state websites
- As of February 2022: ∼80,000 notices affecting over 9 million workers
- 33 states: includes 23 of 25 largest states (not GA or MA) Coverage
- Maintain database of state-level monthly panel on the number of workers affected by WARN notices
  - Updated twice a month on openICPSR
- Unbalanced panel: MI begins Jan 1990, CA begins Jan 2006, etc.

WARN data are highly correlated with other layoff data from MLS and JOLTS, and improve forecasts of the unemployment rate and private employment changes (Krolikowski and Lunsford, 2023)

Data

WARN Address Cleaning

Address information differs across states

- Sometimes street address, sometimes zip code, sometimes city and/or county.

Broad steps to clean the data:

- Bing search using address and company name (Python)
- Standardize addresses (e.g., remove "suite," "building," "floor," etc.)
- Manually clean addresses (e.g., misspellings)
- Geocode using US Census Bureau batch geocoder

Data

Merge Details

1. Name and address matching yields LBDNUM, which is an establishment identifier that is longitudinal in nature
   - 1.1 Borrow algorithm from Wang and Young (2023), which builds on Kline, Petkova, Williams, and Zidar (2019): Soft TF-IDF algorithm, which computes a match score between two firm names that increases with similarity and overweights similarities in uncommon words.
   - 1.2 Algorithm gives us top two matches, manually select the more appropriate
2. Map the LBDNUM to an employer identification number (EIN) within a given year
3. Map EIN to state EINs; restrict to state in which WARN notice was filed
4. Use the WARN lat/long from geocoding and internal establishment geo. information to pick the establishment that is closest to the WARN lat/long. This establishment gets a flag that it filed a WARN notice in a given month.

Data

Coverage of WARN Act

- From 1990 to 2014, 60% to 65% of employment located in firms with 100 or more employees
- WARN notices cover
  - About 1.5% of all private-sector layoffs and discharges (JOLTS)
  - About 2% of all initial UI claims

WARN Data Collection Back to Data