Employment Adjustment and COVID:
Some Thoughts on Theory and Reality

Benjamin Schoefer
UC Berkeley

Thursday 15th October, 2020
CEPR-IZA-OECD Workshop:
Employment Support Strategies during COVID-19
A Separation: Micro

Firm’s and worker’s present values from the job:

\[
V_{\text{Firm}}^{\text{now}} = p_{\text{now}} - w_{\text{now}} + \beta V_{\text{Firm}}^{\text{later}}
\]

\[
V_{\text{Worker}}^{\text{now}} = a_{\text{now}} + w_{\text{now}} + \beta V_{\text{Worker}}^{\text{later}}
\]

Separate if either value is smaller than respective outside options, \( O_{\text{Firm}}^{\text{now}} \), \( O_{\text{Workers}}^{\text{now}} \).

Privately inefficient separation: firm & worker could have found a wage \( w \) to bribe each other into continuing.

Can think of COVID shock as

Static: Marginal revenue product of labor ↓

- Friction: wage rigidity
- Policy remedy: payroll tax cuts; short-term work

Dynamic: Firm’s \( \beta \) ↓

- Friction: financial constraints – “wrong discount factor”
- Policy remedy: liquidity provision (loans, transfers, equity)
A Separation: Micro with Layoff Taxes $\tau$ and STW $\sigma$

Firm’s and worker’s present values from the job:

$$V_{\text{Firm}}^{\text{now}} = p_{\text{now}} - (w_{\text{now}} - \sigma) + \beta_{\text{Firm}} V_{\text{Firm}}^{\text{later}}$$

$$V_{\text{Worker}}^{\text{now}} = a_{\text{now}} + w_{\text{now}} + \beta V_{\text{Worker}}^{\text{later}}$$

Separate if either value is smaller than respective outside options, $O_{\text{Firm}}^{\text{now}} - \tau$, $O_{\text{Workers}}^{\text{now}}$.

Privately inefficient separation: firm & worker could have found a wage $w$ to bribe each other into continuing.

Can think of COVID shock as

Static: Marginal revenue product of labor ↓
- Friction: wage rigidity
- Policy remedy: payroll tax cuts; short-term work

Dynamic: Firm’s $\beta$ ↓
- Friction: financial constraints – “wrong discount factor”
- Policy remedy: liquidity provision (loans, transfers, equity)

Hall Lazear JLE 1984, Jaeger Schoefer Zweimueller WP 2020
STW: Challenges & Alternatives

- France
  - Cahuc Kramarz Nevoux WP 2018
- Germany
  - Baleer Gehrke Lechthaler Merkl EER 2016
- Italy
  - Giupponi Landais WP 2020
- Switzerland
  - Kopp Siegenthaler WP 2019
- Austria
  - Jaeger Osterwalder Schoefer Zweimueller ≥2021

Policy alternatives:

- Wage rigidity: payroll tax cuts for incumbents
  - Saez Schoefer Seim AER 2019, WP 2020
- Preserving matches: temp layoffs & recalls
  - Nekoei Weber WP 2020
- Insurance: UI
- Liquidity provision: loans, transfers
  - Granja Makredis Yannelis Zwick WP 2020

Challenges:

- Hard to measure surplus ⇒ diagnose ineff sep’s
  - Jaeger Schoefer Zweimueller WP 2020
- High replacement rates of STW vs. UI
- How transitory is the COVID shock really?
Separations: Macro Aspects

An EU separation moves one more worker from employment into unemployment...

Externalities:

○ Search externalities, augmented Hosios conditions, ...  Lalive Landais Zweimueller AER 2015

○ Aggregate consumer demand channel  Lorenzoni Guerreri Straub Werning WP 2020

Key Q: effect of EU sep’ns on unemployment (!)  Mercan Schoefer Sedlacek WP 2020

○ Standard search and matching (DMP) models: extremely short half life of sep-induced disturbance to unemployment

○ Data: large & persistent effects on unemployment of EU separations

○ Consistent with non-standard “congestion” models  Mercan Schoefer Sedlacek WP 2020
Slow Reall’n: “Congestion” in IRF to Sep’s ↑

Unemployment

Market Tightness ⇒ Job Finding Rate

Vacancies

UE Flows
FIGURE 1. Annual employment changes in the event firm before and after a mass layoff. The figure plots annual changes in log employment in the mass layoff firm, weighted by employment in the pre-event period ($/FS$).

In light of such regulations, it is not surprising that older workers are strongly overrepresented among displaced workers (panel B of Table 1). The table further reveals that workers who get displaced in a mass layoff are slightly less educated than workers who remain with the event plant. Prior to the mass layoff, displaced workers also earn lower wages and exhibit a lower worker fixed effect than their coworkers in the mass layoff firm.

Figure 1 displays the timing of employment changes (in logs) in the event plant four years before and after the mass layoff event. The figure shows no employment decline in the event firm prior to the actual mass layoff (which occurs between 0 and 1). Employment reductions are, however, substantial in the mass layoff year: a mass layoff destroys on average 1,702 jobs, corresponding to a decline in firm size of 39% (0.33 log-points) and a decline in total employment in the district of 1.9% (see also panel A of Table 1).

What types of shocks trigger such large reductions in firm size? Panel A of Table 2 shows that during mass layoff years total employment in the average district...
(a) Regional and Spillover Effects in the Long-Run

Figure 4. Long-run effects of mass layoffs on local employment. The figure plots, based on a variant of equation (9), the long-run effects of mass layoffs on overall local employment (light gray line) and on local employment excluding the event firm (black line). Panel (b) plots the effects on employment in the tradable sector (medium gray line), the nontradable sector (light gray line) and in the same broad industry as the mass layoff firm (black line). Regressions are estimated at the 2-digit industry/STX district level and control for district/STX industry fixed effects, event period fixed effects and 2-digit industry/year fixed effects, and trace out the effects of mass layoffs on local employment up to 10 years (as opposed to 4 years in the baseline specification) after the event. Since we have to drop events occurring after 1998, the sample reduces to 55 (as opposed to 62) events and their control districts.

Neither employment in the tradable or nontradable sector (columns (2) and (3)), nor employment in the same broad industry (column (4)) are affected by a mass layoff in a neighboring district. The negative spillover effects of mass layoffs therefore appear to be spatially concentrated in firms located in the same district as the mass layoff firm.
(a) Regional and Spillover Effects in the Long-Run

Panel (a) plots the long-run effects of mass layoffs on overall local employment (light gray line) and on local employment excluding the event firm (black line). Panel (b) plots the effects on employment in the tradable sector (medium gray line), the nontradable sector (light gray line) and in the same broad industry as the mass layoff firm (black line). Regressions are estimated at the 2-digit industry/2STX district level and control for district/2STX industry fixed effects, event period fixed effects and 2-digit industry/2STX year fixed effects, and trace out the effects of mass layoffs on local employment up to 10 years (as opposed to 4 years in the baseline specification) after the event. Since we have to drop events occurring after 1998, the sample reduces to 55 (as opposed to 62) events and their control districts.

Neither employment in the tradable or nontradable sector (columns (2) and (3)), nor employment in the same broad industry (column (4)) are affected by a mass layoff in a neighboring district. The negative spillover effects of mass layoffs therefore appear to be spatially concentrated in firms located in the same district as the mass layoff firm.
Reallocation is Slow Everywhere: Meta-Analysis

Mercan and Schoefer AERI 2020

-1.5 -1 -0.5 0 0.5 1 1.5
dEmp^{Spillover}/dEmp^{Direct}

- de Blasio, Menon (2011)
- Jofre-Monseny et al. (2018)
- Giupponi, Landais (2018)
- Marchand (2012)
- Acemoglu et al. (2016)
- Black et al. (2005)
- Cahuc et al. (2017, jobs)
- Zou (2017)
- Cahuc et al. (2017, firms)
- Mian, Sufi (2014)
- Moretti (2010)
- Jofre-Monseny et al. (2016)
- Cerqua, Pellegrini (2018)
- Gathmann et al. (2018)
- Weinstein (2018)
- Moretti, Thulin (2013)
Reallocation is Slow in the Data

Labor Market Tightness IRF to Separation Rate Shock
Slow Reall’n: “Congestion” in IRF to Sep’s ↑

Unemployment

Vacancies

Market Tightness ⇒ Job Finding Rate

UE Flows
Beyond the Labor Market

Perhaps most importantly, displacement, particularly in recessions, is associated with negative effects on

- Well being
- Health & mortality
- Family outcomes

see Davis von Wachter 2011 for lit review
“If not now, when else?”
vs.
“If now yes, should we ever not?”

“We should blanket-subsidize (STW etc.) match preservation in response to COVID, which is perhaps among the largest (transitory?) shocks imaginable.”

⇒ “We should blanket-subsidize (STW etc.) match preservation in response to all transitory shocks.”

Uncomfortable implication (at least in simple models) – perhaps not in the presence of informational frictions etc... I do not see a clear answer.