Discussion of 'Causal Effects of Closing Businesses in a Pandemic'

by Barrot, Bonelli, Grassi and Sauvagnat

Juan Carluccio, Banque de France and U. of Surrey.

Motivation and Research Questions

- Unprecedented crisis in scope and nature

- Unprecedented "whatever it takes" policy response:
  - Government-imposed social distancing measures: business mandatory closings, work-at-home, school closures.
  - Large-scale support to business and individuals

- We can now look back and evaluate the policies:
  - Did social distancing measures reduce the virus spread?
  - Were these were efficient from a cost-benefit perspective?

$\rightarrow$ **Very important questions** for which answers can have tremendous impact on the public debate.

Aim of the research

- Identify **causal effects** of **govt-mandated business closures** on **economic** and **health** outcomes in the US.

- **US** provides a **convenient setup** given **heterogeneity across states** in the timing and sectoral composition of the measures

- Compare **more exposed vs less exposed units** by a continuous dif-in-dif.

- Two sets of exercises:
  - **At the firm-level**
  - **At the "Commuting-zone (CZs)" level**

Methodological approach

❶ Measure the labor restrictions by combining geographical and sectoral specialization of firms and industry composition of CZs, adjusted by the possibility to work at home.

$$Restricted\_Labor_f = \sum_{ind} \sum_{state} \omega_{ind,state}.Closed_{ind,state}.(1-\text{work-at-home}_{ind})$$

$$Restricted\_Labor_{cz} = \sum_{ind} \sum_{c \in cz} \omega_{ind,c}.Closed_{ind,c,state}.(1-\text{work-at-home}_{ind})$$

❷ Use a time varying measures of *Restricted_Labor* as continuous treatment accounting for vectors of fixed-effects.

$$Y_{y,t} = \mu + \epsilon Restricted\_Labor_y \times I_{shutdown} + FE + \epsilon_{y,t}$$

Identifying assumption: *Restricted_Labor_y* uncorrelated with $\epsilon_{y,t}$ in expectation.

Main results

1. **Firms**. 10% increase in RL associated to: -2% in sales, -1% in assets, -3% in stock market value
   - Identified using sector/quarter and state/quarter FE.

2. **CZs**. 1 std increase in RL associated to: 33% of std in weekly incidence rates and 63% std in death rates.
   - Identified using CZ/week, State/week FE and CZ/week controls.

In both cases, effects tend to take some time to materialize.

High-level comments

- Very interesting and thorough empirical work, with important contributions to the literature and the policy debate

- Rich set of results looking at a wide set of outcomes at two different levels of interest

- In particular, quantifying the consequences of labor supply restrictions is very important for policy and for modeling

- Framework and data can be readily extended to look at other policies and outcomes.

Comment on identification

- Nice to confirm no prior trends.Might not be enough in light of the ▸ complexity of the shock
- Are supply shocks correlated with *Restricted _ Labor*?
- At what level are demand shocks relevant?
    - Identification within states goes a long way if demand is regional (eg state-wide income support policies)
    - Nice also to control for *National Closure*
- Choice by States on which sectors to close is key: can you say more on this?
- Minor: can the effect be non-linear? (ie it kicks in when $RL > 0.3$ say).

The Role of Production Networks

- Supply and demand shocks affecting CZs might arise from differential exposures to production networks.

- Simple and nice extension here would be to account for $Restricted\_Labor_{Upstream}$ and $Restricted\_Labor_{downstream}$ in the same vein as the spillovers analysis
  - See eg Stumpner JIE 2019 that combines interregional trade flows with national IO tables.

- Would nicely complement previous work using equilibrium effects (Barrot, Grassi, Sauvagnat, 2020)

- Do contact-intensive industries tend to source/sell to contact-intensive industries?

- Super interesting to evaluate impact of **other policies**
    - Do **higher vaccine rates** improve economic performance? (the trillion-dollar question)
    - Mask usage across regions?

- Evaluate **heterogenous** impacts by **type of population**
    - Important debates about unequal labor market effects in terms of race, social status and skills
    - Data should be available at the CZ level (ie opportunity insights)

General comments

- Great and much needed work!

- In future work I would center the analysis around health outcomes and do extensions along those lines

- Really liked the results on firms and employment as intermediary step

    - But very data demanding (ie Homebase biased towards food services sectors).

The Covid 'shock(s)'

- Covid = agg. and relative (sector) supply and demand shocks (eg Guerrieri et al 2020; Baqaee and Farhi 2020).

- **Supply shocks**:
    - **Labor supply restrictions** (workplace and school closures)
    - Productivity (work-at-home)
    - Supply disruptions (inputs, transport cost, distribution issues, access to imports)

- **Demand shocks**:
    - Changes in sectoral consumption patterns
    - Downstream through value chains
    - Aggregate: income losses

Shocks stem both from **policies** and individual **self-restrictions**
.