## Discussion "On the Cleansing Effect of Recessions and Government Policy"

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## **Cleansing vs Scarring Pandemic**

Interesting contribution to the debate on <u>scarring vs cleansing effects</u> of Pandemic revolving around questions like

- What production system can be expected to emerge in the post-COVID19 world?
- Would potential growth be enhanced in the aftermath? (see "The impact of COVID-19 on potential output in the euro area" <u>ECB Economic Bulletin, Issue 7/2020</u>.)
- What is the role of Government measures in steering the economy amidst and out of Pandemic?

The study unveils the cleansing effects of Pandemic on Portuguese production system and <u>finds that most productive firms were less</u> <u>likely to be heavily affected and less likely to resort to public</u> <u>support."</u>

## A simplified model

Key features:

- N is the only factor of production (no role for intermediate inputs, nor for K)
- Firms face adjustment costs in N
- The pandemic shock is modelled as a fall in p(p/w)

Key model predictions depend on adj. costs:

- <u>Prediction 1</u>:  $\xi$  of S and of N to p decreasing in Z
  - Without adjustment costs: constant across Z
- <u>Prediction 2</u>:  $\xi$  of S to p less dispersed across Z than  $\xi$  of N to p

## Matching theory and empirics

- Unidentified channels of transmission of the Pandemic to S and N. (S= p/w\*Y)
- Containment measures of Pandemic resulted in a mix of demand and supply shocks differing not only across sectors but also within sector.
- Difficult to formulate policy prescriptions.
- TFPi computation based on CRS assumption;  $\alpha < 1$  implies DRS in the model.
- Sample selection issues arise from the treatment of permanently closed firms (dropped from the sample); is Tobit best suited for the analysis?
- No exact quantification of  $\Delta S$  and  $\Delta N$  in the surveys, firms are only asked to indicate a range for them.

The model predicts "how much"; the empirical analysis "how likely"

#### What we learn from the Portuguese Pandemic

- It spared most productive firms; % drop in sales and employment's lay-off were smaller.
- The likelihood of very large % drops is decreasing in productivity (prediction 1).
- Some supportive evidence that %change in S are less dispersed across Z than %change in N (prediction 2).
- Findings often driven by the differential effects on firms in the top versus the bottom TFP quartile.
- Government measures were more likely used by least productive firms; most productive were less likely to rely on public support

#### The rationale for government support

Two good reasons why government may want to support also low productivity firms:

- No Firm is an island (role of intermediates);
- Delayed and cancelled investment plans have fallout on future growth, steady state unemployment rate, TFP and potential growth.

In some countries (e.g. Germany and Italy) firms were to prove their financial soundness to be eligible for public support. Was this also the case in Portugal?

## No Firm is an island: the role of M

• <u>Intermediates (M)</u> are not modelled, however they act as a powerful <u>channel of transmission of shocks across firms</u>

See L. Laeven, July 2020, <u>"</u>Pandemics, Intermediate Goods, and Corporate Valuation", cepr discussion paper 15022.

See Di Nino V. and Veltri B., Dec. 2020, "The viral effects of euro area trade", Compnet policy note.

- The  $\xi$  of TFP is the largest to intermediates (see Table D5).
- How would predictions change in a model with intermediates?

# K bridges past shocks and future productivity

- Uncertainty spiked during pandemic; as a consequence investment plans were delayed, cancelled or reformulated.
- Investments remain the most depressed of GDP components.
- Modelling uncertainty and investment decisions may be helpful to make predictions on TFP structural changes
- Some policy measures targeted investments (e.g. credit lines) in order to avoid that temporary liquidity constraints have long lasting consequences.

### Follow up questions

- Why did Pandemic spare most productive companies?
  - A competitive hedge in digitalisation, advantages in distributions? Have production network represented a safety net for most productive ones?
- Looking forward, what would be the post-Pandemic cleansed aggregate TFP? Its distribution and dispersion?
- Are there good reasons for governments to oppose the destructive creation of Pandemic?
- Did COVID-19 accelerate ongoing reorganisation of production processes or did it operate a revolution? What are the eventual implications for design and calibration of public policy measures?