Discussion of “Financial Frictions in Production Networks”
Bigio and La’O (2015)

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Main question:

- Importance of financial frictions in business cycle fluctuations
- Already a large literature
  (going all the way back to Bernanke and Gertler, 1989)

This paper:

- Thinking about financial frictions without taking input-output linkages into account can be misleading (specially quantitatively).
- There is a “network liquidity multiplier”: an aggregate tightening of liquidity constraints has differential impacts across different economies.
The two economies are observationally equivalent in the absence of pledgeability constraints.

But behave very differently if

$$\text{expenditure}_i \leq \phi_i \cdot \text{sales}_i$$

An identical, aggregate shock to the constraints has a much larger impact in the vertical economy.
More General Setting

- A general economy of size $n$, with input-output matrix $W = [w_{ij}]$.
- Firm $i$ can only pledge a fraction $\phi_i$ of its sales.
- In the competitive equilibrium of the economy:

  $$\log(GDP) = \sum_{j=1}^{n} v_i (\log A_i + \log \phi_i),$$

  where

  - $v_i$ is the $i$-th column sum of the Leontief inverse $L = [I - W]^{-1}$.  

Comment 1: Liquidity Multiplier

- The horizontal vs. vertical example shows that
  - more transactions between firms $\rightarrow$ more liquidity necessary.

- But is it only about the volume or transactions or the distribution of transactions matters too?
Comment 1: Liquidity Multiplier

- **macro equivalence**: in the absence of frictions, both economies have identical aggregate outputs.
- **micro equivalence**: but also all firms are of equal sizes.
- What happens if we now introduce the frictions?
Comment 2: Aggregate vs. Idiosyncratic Shocks

- The paper mostly focuses on the response of aggregate variables to an aggregate tightening of the liquidity constraints.

- But the setup is rich enough to also study the role of idiosyncratic shocks (after all, not all sectors rely on credit equally).
  - again, studied in the context of the vertical and horizontal economies, but can be done more generally too.
Comment 3: Micro vs. Macro Effects

- The vertical vs. horizontal example shows clearly that two economies
  (i) can be observationally equivalent in the absence of frictions.
  (ii) but behave very differently in the presence of frictions.

- Focus on aggregate variables (output, liquidity multiplier, aggregate labor wedge).

- Again, the setup is rich enough to study how firm-level variables (say, output or sales) are impacted.

- Would provide a deeper understanding of how these frictions “propagate” and impact other firms is still missing.
Summary

- Super interesting paper
  (caution: subject to the discussant’s bias!)

- Comments: leverage the more general characterization to learn more about
  - the aggregate effects of *idiosyncratic* shocks
  - the *micro effects* of (aggregate and idiosyncratic) shocks.
  - whether it is only the aggregate transaction amount that matters or is it truly a network story?