Discussion of: Imperfect Competition and the Transmission of Shocks: The Network Matters

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Main Contributions

- Cool data on firm-to-firm linkages
  - Suppliers have customer-specific market shares
  - Customer-specific market shares are related to variable markups
  - China shock associated with considerable supplier churn
- New theory on firm-to-firm relationships with oligopolies
  - Atkeson and Burstein (2008) inside the firm
  - Variable markups depend on supplier-specific market share
  - Network irrelevance to aggregate shocks does not hold
- Estimation and counterfactual predictions on how a foreign input price shock affects the domestic price index
  - Role of markups (constant and variable)
  - Role of endogenous network formation

Comment 1: What drives customer-specific shares?

- Firms input shares are highly skewed
- Customer-supplier rankings not driven by general supplier ranking
- Match-specific component is new and exciting!

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- Firms input shares are highly skewed
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- Match-specific component is new and exciting!
- What drives this matching component?
  - Multi-product firms and suppliers?
  - Search frictions for inputs?
  - Hold-up concerns and contracting frictions?
  - Quality heterogeneity in outputs and inputs?
- Helpful to relate this fact to:
  - Invariance property in Bernard et al. (forthcoming, 2017)
  - Non-homotheticities in Blaum et al. (forthcoming)
  - Industry characteristics

Comment 2: How should we interpret markups?

- Markups: $\mu_{i,t} = \mathit{Sales}_{i,t} / (\mathit{InpPurch}_{i,t} + \mathit{Wages}_{i,t})$
  - Do not observe prices or product composition
  - Cannot allocate inputs across customers
  - Not a firm-specific markup
- Estimate how markups relate to suppliers' average input shares:

$$\mu_{i,t} = \beta \mathit{SctrMktSare}_{i,t} + \gamma \overline{s^m_{i,t}} + \phi X_{i,t} + \delta_t + \epsilon_{i,t}$$

  - Suppliers' avg markups increasing in avg customer-specific shares
- Consistent with strategic interaction. Also consistent with:
  - Customization of inputs and quality differences
  - Bundling of other services that entail fixed costs

Comment 3: The markup result is not ex-ante obvious

- "The demand for anything is likely to be less elastic, the less important is the part played by the cost that thing in the total cost of some other thing, in the production of which it is employed."
  - Marshall, Principles of Economics, 1890

Comment 3: The markup result is not ex-ante obvious

- "The demand for anything is likely to be less elastic, the less important is the part played by the cost that thing in the total cost of some other thing, in the production of which it is employed."
  - Marshall, Principles of Economics, 1890
- But... "It is 'important to be unimportant' only when the consumer can substitute more easily than the entrepreneur."
  - Hicks, The Theory of Wages, 1932

Comment 4: Interpreting China shock estimates

- Estimate impact of Chinese sourcing on domestic sourcing

$$\Delta Y_i = \beta \Delta CS_i + \gamma X_{i,t_0} + \delta_{s(i)} + \epsilon_i$$

  - ΔY_i: change in supplier shares
  - ΔCS_i: growth in firm i's Chinese imports over initial period inputs
  - Instrument for ΔCS_i using Chinese market share growth by industry in other countries
  - Firm-level shock based on firm's pre-period industry input shares

- One SD change in ΔCS_i associated with:
  - Dropping 13% of domestic suppliers
  - Adding 11% of domestic suppliers

But, the exclusion restriction is likely violated

- China shock to firm's inputs directly affects its suppliers
  - Suppliers face increased import competition
  - Some suppliers may offshore to China
- Danish firms responded to Chinese competition by offshoring

Dep var is indicator equal to one if firm *i* offshores from 2001-2006 to:

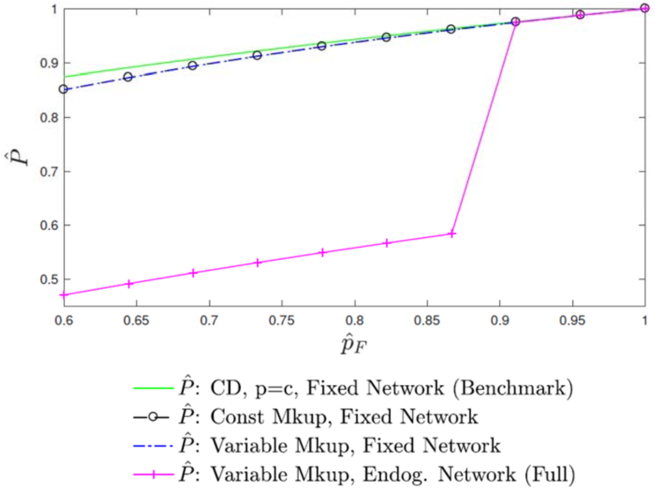
	China		EU12	
$\Delta ChImpPen_j^{2001-2006}$	**1.111****	**1.225***		**2.543*****
	(0.537)	(0.594)		(0.613)
$\Delta EU12ImpPen_j^{2001-2006}$		0.393	-0.006	0.329
		(0.266)	(0.652)	(0.430)

From Bernard et al. (2017) Controls for initial firm size.

- Is supplier churn due to firms' cost shock or to supplier shocks?
- These data are well-suited to assess these channels!

Comment 5: Understanding supplier churn important

Figure 9: $\hat{P}$ from the estimated model



How do firm-specific shares interact with churn?

- Median firm churns 20% of the value of its suppliers annually
- How do input shares and markups relate to churn?
  - High share relationships last longer
  - Do they grow in importance over time?
  - Do average markup premia vary over relationship length?
- Is there pass-through from lower foreign prices?
  - Are firms adding suppliers with lower markups?
  - Are firms' new suppliers importing directly?
  - Do firms with larger imported price falls decrease domestic sourcing the most?
- Great to focus on a specific industry