Scalable Expertise

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[1]The views expressed in this presentation are solely those of the author and should not be interpreted as reflecting the views of the Board of Governors of the Federal Reserve System or any other person associated with the Federal Reserve System.

This paper

Question: What drives variation in firm size (revenue/employment) and scope (number of products/establishments)?

Theory: Hopenhayn model in which firms choose *scope* (number of products), *expertise* (tfp of each product), and *scalability* (ease of expansion)

Implications of theory:

1. log size is convex in log productivity
2. scalable firms exhibit stronger responses to common shocks

Empirical test: higher size and scope associated with higher elasticity of size and scope to demand shocks

Overview of model (special case)

Firm problem:

$$\max_{N_i, x_i, y_i} \; G \; A_i \underbrace{N_i}_{\text{scope}} \underbrace{Z(x_i, y_i)}_{\text{expertise}} - F N_i \quad \text{s.t.} \quad \underbrace{x_i}_{\text{scalable}} + \underbrace{N_i y_i}_{\text{local}} \leq 1$$

where

$$Z(x, y) = \left(x^{\frac{\sigma-1}{\sigma}} + y^{\frac{\sigma-1}{\sigma}} \right)^{\frac{\sigma}{\sigma-1}}$$

Firms with more scalable knowledge can increase scope at a lower cost.

Key prediction: Firms with higher size or scope are the most responsive to common demand shocks

Overview of empirics

This paper:

- Test **key prediction** in Nielsen scanner data and NETS establishment-level data.
- Demand shocks: House price shocks and China import penetration

Results:

- Firms with higher size and scope exhibit higher elasticity of size and scope to demand shocks
- Scalability rises with size and scope
- More scalable firms adjust size, scalability, and scope by more to demand shocks

Policy implications

1. Rising concentration
   - Authors argue "a symmetric demand increase will raise concentration"
   - **How much can it explain?** What's the role of entry?
   - Are business cycles becoming more volatile?
2. Distortions to resource allocation
   - Think: capital misallocation due to financial frictions
   - Mechanism implies losses are larger than previously estimated
3. Markups
   - A source of resource misallocation
   - Constant markups in this paper. **How big could distortions due to markups be**?
   - Variable markups limit the size of large firms. How does this interact with the present mechanism?

Suggestions

Paper presents:

- A novel and parsimonious theory of firm size
- An empirical test of that theory

Suggestions:

1. Quantifying the model: have rich microdata. Why not calibrate/estimate the model?
2. Authors mention a number of policy implications. But no evaluation of them. Room in this paper, or leave for future work?