Concentration and Markups in International Trade

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Discussion by Kunal Sangani

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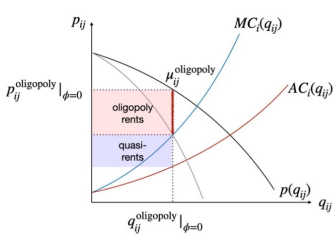
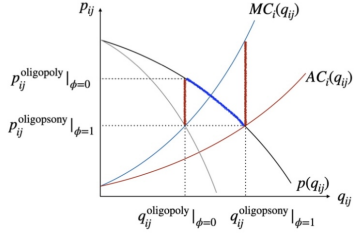
- Third wave: Granular relationships.
  - Two-sided “B2B” markets.
  - Large sellers and large buyers. Who trades with who matters.
- This paper (and authors’ prior work, *“Two-Sided Market Power in Firm-to-Firm Trade”*) build framework for third wave.

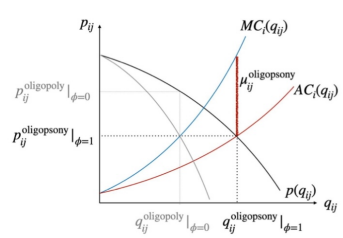
One-slide overview



(A) $\phi = 0$



(B) $\phi \in (0,1)$



(C) $\phi = 1$

- Price-cost margin is a weighted average between oligopoly and oligopsony markups.

$$\mu_{ij} = (1 - \omega_{ij})\mu^{\text{oligopoly}}(s_{ij}) + \omega_{ij}\mu^{\text{oligopsony}}(x_{ij}).$$

- Weight ω_{ij} depends on bargaining power ϕ and outside options, summarized by λ_{ij}.

- With some algebra, express cost-weighted agg. markup in terms of $\text{HHI}^{\text{suppliers}} = \sum_j \varphi_j \sum_i s_{ij}^2$ and $\text{HHI}^{\text{buyers}} = \sum_i \varphi_i \sum_j x_{ij} x_{ij}^R$.

Discussion

1. What are the implicit assumptions about variation in HHI across markets / over time?

2. A suggestion: Approximation of aggregate markup.

What are we assuming about source of variation?

- Why does concentration vary across markets or over time?
- This paper: firms' relative productivities (k_i, φ_j) and firm-to-firm network (Z_i, Z_j).
- Production technology (returns-to-scale θ, cost shares γ, elasticity ρ) constant.
- Mapping from HHI to markups hinges on k_i, φ_j, Z_i, Z_j being source of variation in data.

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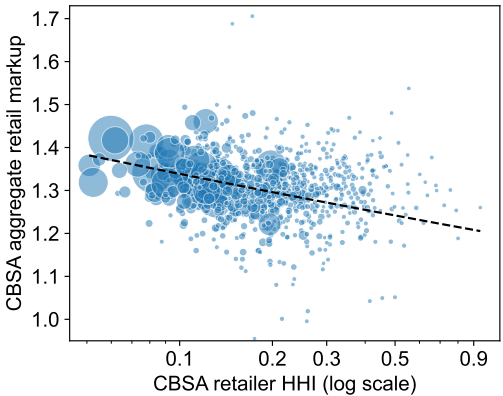
- Consider Atkeson–Burstein with symmetric firms, expenditures E, and entry cost F.

$$\text{HHI} = \frac{1}{N} = \frac{\sigma}{\sigma + (E/F - 1)}, \qquad \text{and} \qquad \mu = \frac{\sigma}{\sigma - 1} \frac{E/F}{E/F - 1}.$$

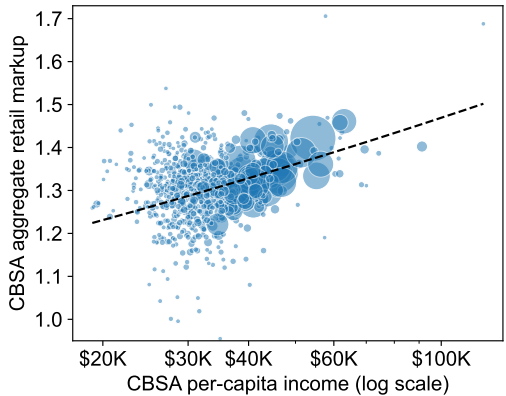
  - HHI and markup are positively correlated if variation across markets is in E/F, not σ.

What are we assuming about source of variation?

- E.g., across U.S. cities, retail markups *negatively* correlated with HHI. (Sangani 2022).
- Happens if variation in HHI comes from variation in elasticity of substitution, σ.



(a) Agg. retail markup vs. retailer HHI.



(b) Agg. retail markup vs. income.

What are we assuming about source of variation?

- Authors are clear-headed about this.
- pg. 3–4: *"[The mapping between HHI and markups] relies on structural parameters [...that] are assumed to remain stable. However, concentration is itself an equilibrium outcome that may reflect underlying shifts in economic fundamentals. For this reason, caution is warranted when interpreting the observed trends."*
- Hopefully future work is just as clear on these implicit assumptions!

Approximate expression for aggregate markup: A suggestion

- Expression for aggregate markup uses two assumptions:
  1. Bargaining weight constant across all markets, i.e., $\omega_{ij} \approx \omega$ (and thus $\lambda_{ij} \approx \lambda$).
  2. Harmonic mean $\approx$ sales-weighted mean.
- Effectively, expression is approximation around pt with no dispersion (let's call this X).
- Unclear if approximations for $\mu_A - \mu_X$ and $\mu_B - \mu_X$ informative for $\mu_A \lessgtr \mu_B$.

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- Alternative: Log-linearize economy, and consider perturbation of $(k_i, \varphi_j, Z_i, Z_j)$.
  - Both change in aggregate markup and HHIs will be linear functions of $d\log k_i, d\log \varphi_j, \ldots$.
  - Valid first-order approximation from point A to point B.

Conclusion

- B2C economy is only about 1/3 of all sales in the economy.
- Understanding two-sided markets (supplier–buyer relationships) unlocks 2/3rds of all economic activity for analysis.
- Promising agenda to build a framework for analyzing these markets.