Discussion of:
DIVERGING TRENDS
IN NATIONAL AND LOCAL CONCENTRATION

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Nicholas Trachter

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NBER Macro Annual

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Motivation

This is an interesting and thought-provoking paper

Main take-away
1. Dichotomy: National Concentration ↑ ↔ Local Concentration ↓
2. Main Conclusion: large national firms induce competition in local markets
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**Main take-away**

1. Dichotomy: National Concentration ↑ ↔ Local Concentration ↓
2. Main Conclusion: large national firms induce competition in local markets

Some remarks to guide the discussion for future research

I. Concentration Measures
II. The 4 Facts revisited
III. Unobserved Market Structure in Macro
I. Concentration Measures
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- Market power:
  
  "the ability of a firm to profitably raise the market price of a good/service over marginal cost"

- Problem:
  
  - How to measure MC?
  - Profits? Accounting profits are not economic profits
  
  ⇒ Use indirect concentration measures: $\text{HHI} = \sum_i s_i^2 \in [0; 10,000]$
I. Concentration Measures

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• Concentration = Market Power?
  1. Depends on the model of firm behavior
     Yes, Cournot: Market Power increases HHI; Not in Melitz (2003), Melitz-Ottaviano (2008)
  2. Depends on the Market Definition: who are the competitors?
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  2. Depends on the Market Definition: who are the competitors?
    ⇒ Answer:
      • DOJ: yes, HHI > 3,000
      • Macro/Labor?
I. Concentration Measures

Who are the Competitors?

What constitutes a market in the Macro sense?

- HHI is mechanically related to number of firms/establishments
  - HHI increases in coarseness of market def: ZIP > county ≤ MSA > State > Nation
    → Can normalize and use change
  - Missing data is a problem (NETS)

- Standard unit of market: “SIC × Geo”
  - One size doesn’t fit all: Coffee shops (ZIP) vs Furniture (MSA) vs Manufacturing (Nation)
    - Cannot use same “SIC × Geo” market definition for all
  - Those markets are typically very large ($N > 10,000$) ⇒ HHI is very small ($< 1$)
    - Imperfect Competition: $N > 20$ is perfect competition
    - DOJ starts at $HHI > 3,000$, $N = 3...$
I. Concentration Measures
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    - DOJ starts at HHI \(> 3,000\), \(N = 3\)...

→ HHI is even more challenging in Macro than in IO
I. Concentration Measures

Intertemporal Comparisons

- Using fixed market definitions over time is a challenge
  - The number of competitors changes for mechanical reasons
I. Concentration Measures

Intertemporal Comparisons

• Using fixed market definitions over time is a challenge
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• 4 Premises about demographics:
  1. there is population growth
  2. the average establishment size is constant
  3. the ratio of establishments to firms has increased
  4. the industry-location grid (local market definition) is constant
I. Concentration Measures

Intertemporal Comparisons

1. Employment

2. Establishment Size
I. Concentration Measures
INTERTEMPORAL COMPARISONS

3. Ratio of Establishments to Firms
I. Concentration Measures
Intertemporal Comparisons: A Toy Example

### 1980 – Baseline Economy

<table>
<thead>
<tr>
<th>SIC×Geo 1</th>
<th>SIC×Geo 2</th>
<th>Aggregate Local</th>
<th>National</th>
</tr>
</thead>
<tbody>
<tr>
<td>Markets (10 est)</td>
<td>1,000 est</td>
<td>1,000 est</td>
<td>2,000 est</td>
</tr>
<tr>
<td>Markets (10 est)</td>
<td>1,···,100</td>
<td>1,···,100</td>
<td>1,···,200</td>
</tr>
<tr>
<td>Local HHI</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>HHI$_{SIC \times Geo}$</td>
<td>1,000</td>
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**Intertemporal Comparisons: A Toy Example**

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#### 2020 – Increase Population; Decrease Competition; Multi-est Firms

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<tr>
<td>2,000 est</td>
<td>2,000 est</td>
<td>4,000 est</td>
<td></td>
</tr>
<tr>
<td>Markets (5 est)</td>
<td>1,⋯,400</td>
<td>1,⋯,400</td>
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\[\rightarrow \text{Local } HHI_{SIC\times Geo} \downarrow - \text{National } HHI_{SIC\times Geo} \uparrow\]
II. The 4 Facts Revisited
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Fact 1  Diverging Trend on Local vs. National
  Divergence of HHI for SIC×Geo ⇒ divergence in market power

Fact 2  Pervasive Diverging Trends
  Services: role of national chains

Fact 3  The Role of Top Firms: makes the effect more pronounced
  Superstar firms + Reallocation: Rising market power may be welfare enhancing

Fact 4  When a Top Firm Comes to Town
  Walmart opens where population grows (Holmes 2011)
III. Unobserved Market Structure in Macro
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- Problem: market structure not observed
  - # competitors
  - firm behavior
  - preferences/technology
  - geography,...

- Able to do it for cement and breakfast cereal, but not for the macro economy
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• Comparison with Productivity:
  • model + observe inputs and prices
    \Rightarrow\text{TFP is the residual}
III. Unobserved Market Structure in Macro

- Market Power in model of the Macroeconomy:
  - Observe: Revenue, inputs, wages,...
  - Can estimate model to match macro moments: markups, profits,...
  \[\Rightarrow\] ‘Residual’ is market structure (\# competitors, entry costs,...) – through lens of model

- Can evaluate why markups change, do counterfactuals, policy interventions,...
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⇒ Treat Market Structure like a Solow Residual: in Macro, admit we cannot observe it
Take Away

1. HHI has limitations
   - Demographics mechanically lead to local-national divergence in HHI
     ⇒ using HHI in macro is even more of a challenge than in IO
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2. What we learn
   - Divergence in Market Power Local vs National? More work is needed
   - Superstar firms + reallocation: evidence hints technological change is driver: rise of MP can enhance welfare (e.g. chain-v-chain competition): crucial productivity dispersion

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\Delta \text{Welfare} = \Delta \text{Reallocation} + \Delta \text{Deadweight loss} + \Delta \text{Selection}
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3. In Macro: market structure (demand, # competitors, conduct) is not observable
   ⇒ Like TFP, **estimate market structure**
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∴ This paper has and continues to stimulate new research
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