Monopsony and Concentration in the Labor Market: Evidence from Vacancy and Employment Data

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Employer Markdowns on Labor

- HMY apply IO methods to estimate employer markdowns (MRP/Wage - 1) in the U.S. manufacturing sector from 1976 to 2014.

- Previous efforts to quantify wage markdowns rely on estimated employer-level labor supply elasticities, often by implementing a flow-based approach due to Manning (2003).

  – Sokolova and Sorensen (2018) conduct a meta-analysis of 801 estimates from 38 studies. They conclude there is strong evidence of markdowns, but the central tendency of their preferred estimates is much smaller than that of HMY.

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HMY Markdown Estimation: Key Assumptions

Markdown formula:

$$\underbrace{\frac{\varepsilon_S + 1}{\varepsilon_S}}_{\text{markdown}} = \underbrace{\mu^{-1}}_{\text{markup}} \cdot \underbrace{\theta_N}_{\substack{\text{output}\\\text{elasticity}}} \cdot \underbrace{\alpha_N^{-1}}_{\substack{\text{labor}\\\text{share}}}$$

A1 Firms engage in cost minimization

A2 Production function is continuous and twice differentiable

A3 Production function is $Y(N, K, M, E)$ and translog

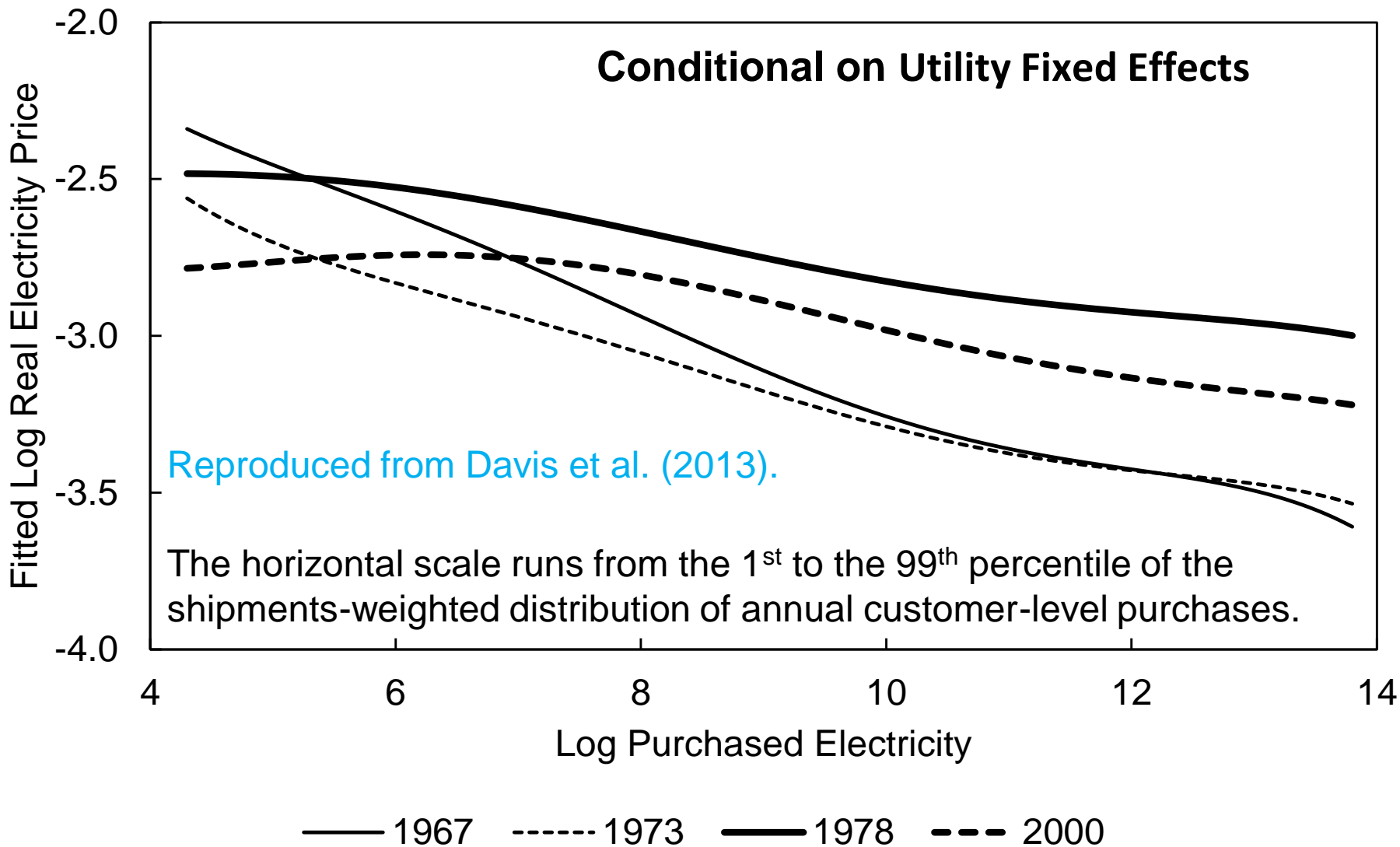A4 Material inputs M are free of adjustment costs and monopsony power

Adjustment Costs and Dynamics

- The theory abstracts from adjustment costs. It describes long-run relationships.

- Does abstracting from adjustment costs matter? How?

- Does the periodicity of data observations matter for the markdown estimates?

- Suppose you pool the plant-level data over N consecutive years before estimation?
  - Do the markdown estimates vary much with N?
  - If so, what should we make of differences by N?

Do Larger Firms Pay Less for Materials?

1. Wal-Mart is famous for using its market clout to squeeze suppliers on pricing. See, e.g., "Wal-Mart Ratchets Up Pressure on Suppliers to Cut Prices," *Wall Street Journal,* 31 March 2015.

2. Anecdotal and survey evidence suggest that larger purchasers pay lower unit prices for intermediate inputs more broadly (Munson and Rosenblatt, 1998).

3. There is high-quality evidence that larger purchases of electricity pay a lot less per kWh in the U.S. manufacturing sector. See next slide.

4. Since large input purchasers tend to be large, these facts suggest that larger manufacturers have more monopsony power in non-labor input markets than smaller employers.

Large Electricity Purchasers in U.S. Manufacturing Pay Much less Per kWh

Conditional on Utility Fixed Effects

Reproduced from Davis et al. (2013).

The horizontal scale runs from the 1st to the 99th percentile of the shipments-weighted distribution of annual customer-level purchases.

Fitted Log Real Electricity Price

Log Purchased Electricity

——— 1967   - - - - - 1973   ——— 1978   - - - 2000

Tell Us More about the Markdown Components

$$\underbrace{\frac{\varepsilon_S + 1}{\varepsilon_S}}_{\text{markdown}} = \underbrace{\mu^{-1}}_{\text{markup}} \cdot \underbrace{\theta_N}_{\substack{\text{output} \\ \text{elasticity}}} \cdot \underbrace{\alpha_N^{-1}}_{\substack{\text{labor} \\ \text{share}}}$$

Take logs and express average markdown as the sum of the average values of the inverse product markup, output elasticity, and inverse labor share.

How do these quantities vary by industry and over time?

Tell Us More about
the Markdown Variation, 1

- You have roughly 1.5 million plant-year data points on markdowns.

- More than enough to characterize how markdowns vary by plant size, firm size, plant share of local market, local market HHI, national reach of the firm, scope for outsourcing abroad, extent of foreign competition, plant age, firm age, capital intensity of the industry or plant, etc.

- Paint a rich picture of the markdown structure.

Tell Us More about the Markdown Variation, 2

- Do it nonparametrically.

  – Why stop at regressing the log(markdown) on log(plant share of local market employment)? Maybe this linear spec does violence to the data, maybe not. Easy to check by fitting a nonparametric or flexible parametric specification.

  – Show us the relationships in pictures, with and without conditioning on controls. Display results in log-log form, so we can read local elasticities directly from the pictures.

- Need not pick a single "labor market" definition.

Would Workers Benefit by Restricting Monopsony Power? Perhaps Not, 1

HMY Figure 2 (translog case) says that the average markdown in U.S. manufacturing rose from 1.83 in the early 1990s to 2.07 in 2014 (i.e., from 60 to 73 log points).

Suppose policymakers had intervened to prevent this fall in wages relative to MRP.

Would that have benefited manufacturing workers and their communities?

Would Workers Benefit by Restricting Monopsony Power? Perhaps Not, 2

Consider:

1. Manufacturing workers earn wage premia relative to similar workers in other industries (e.g., Krueger and Summers, 1988). Manufacturers offer "good" jobs in this sense.

2. Many displaced workers suffer large, persistent earnings losses (e.g., JLS, 1993 and Davis & von Wachter, 2012). Evidence points to bigger earnings losses for job losers in manufacturing.

3. Labor–saving technological advances and foreign competition displaced many manufacturing workers in recent decades, with large negative effects on job losers and their localities (e.g., Autor, Dorn and Hanson, 2013).

Would Workers Benefit by Restricting Monopsony Power? Perhaps Not, 3

These observations suggest that efforts to restrict the monopsony power of U.S. manufacturers would have:

1. Worsened the shake out in the U.S. manufacturing sector in recent decades.
2. Increased the number of displaced manufacturing workers.
3. Reduced the number of "good" jobs for workers with middling levels of schooling.
4. Increased earnings inequality among observationally similar workers.

Would Workers Benefit by Restricting Monopsony Power? Perhaps Not, 4

These remarks do not amount to a general argument against policies that restrict the exercise of monopsony power in the labor market.

Non-compete and no-poaching provisions in employee contracts warrant the scrutiny of antitrust authorities, as does the potential for mergers to unduly increase monopsony power.

Would Workers Benefit by Restricting Monopsony Power? Perhaps Not, 5

My remarks do highlight reasons for caution when contemplating policy interventions:

1. Compelling employers to raise wages lowers profitability, leading to more job loss and less job creation.
2. Foreign competition and foreign outsourcing options make it more likely that policy-induced wage hikes would lead to a loss of U.S. manufacturing jobs.

3. Manufacturing facilities are costly to build and require large fixed costs to operate. To cover these costs and earn a normal return on investment, manufacturers must generate positive operating profits through some combination of P>MC and W<MRP.

    • Otherwise, they won't survive.

    • And they won't invest in new U.S. plants.

Falling Labor Market Concentration

1. HMY make a strong case that local labor market concentration fell in recent decades:
   1. For vacancy postings: Local = occ X MSA
   2. For employment: Local = ind X county
   3. More to come: Gross Job Creation
2. This is a big fact.
3. Is it (mainly) a straightforward consequence of urbanization? Large urban areas tend to have less employer concentration by virtue of greater size and a broader mix of productive activities.
   - If so, the fall in local labor market concentration is one more (subtle) benefit of urbanization.

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