The Present Value of Future Market Power

Cho, Grotteria, Kremens & Kung

Discussion by Matthieu Gomez
May 2024,
Columbia University

Paper Context

- De Loecker et al (2020) provide methodology to measure markups using Compustat data
- Uses firm cost minimization:

$$\text{Firm Markup} = \theta \times \frac{\text{Sales}}{\text{Variable Costs}}$$

where θ is the output elasticity of variable factor

De Loecker et al (2020)

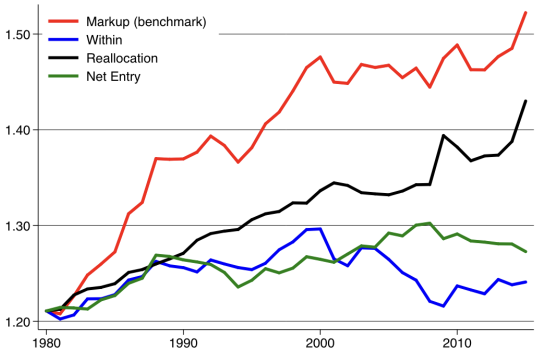

Figure 1: Aggregate Markup $= \sum_i$ Sales Weight$_i \times$ Firm Markup$_i$

De Loecker et al (2020)

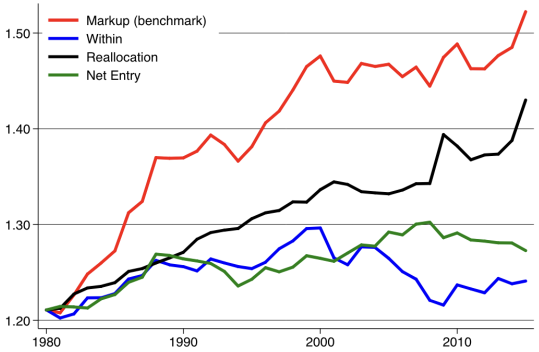

Figure 1: Aggregate Markup $= \sum_i$ Sales Weight$_i \times$ Firm Markup$_i$

1 Relatively small increase in within (sharp rise for few firms, no rise for most)

De Loecker et al (2020)

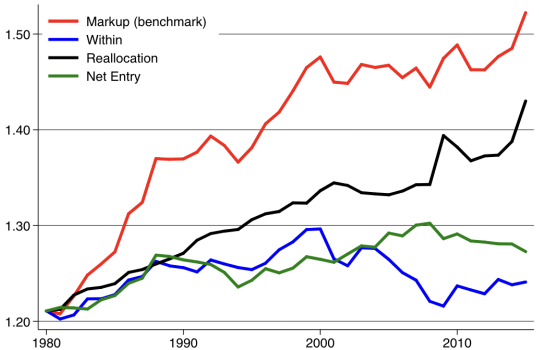

Figure 1: Aggregate Markup $= \sum_i$ Sales Weight$_i \times$ Firm Markup$_i$

2 High reallocation term (reallocation of sales from low to high markup firms)

De Loecker et al (2020)

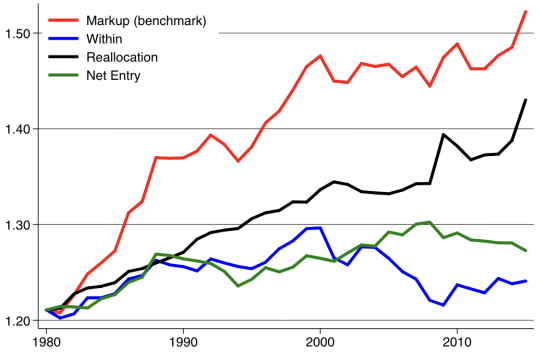

Figure 1: Aggregate Markup $= \sum_i$ Sales Weight$_i \times$ Firm Markup$_i$

3 High net entry term markups for entering firms relative to exiting firms

Some Push-backs in the Literature

1. Weighting w.r.t. costs gives much smaller increase than weighting w.r.t. sales
2. Focusing on public firms may overstate aggregate markups for economy
3. Markup sensitive on what is counted as fixed v.s. variable cost (e.g. SG&A)

Paper Contribution

Cho, Grotteria, Kremens & Kung use valuations to answer two questions

1. Role of markup in valuations
   - Does heterogeneity in markups explain heterogeneity in valuations?
   - Can the rise in expected markups account for the rise in valuations since 1980?
2. Measure expected markups (rather than realized markups)
   - Document rise in average expected markup (but not in realized markups)
   - Mergers increase expected markups (but not realized markups)

Comment 1: Role of Markups for Valuations

- The return of owning a firm is

$$R_{t+1} = \frac{CF_{t+1} + M_{t+1}}{M_t}$$

- Log-linearizing and solving forward gives usual Campbell-Shiller:

$$\log M_t \approx \kappa + \underbrace{(1-\rho)\sum_{k=1}^{\infty} \rho^k \log CF_{t+k+1}}_{\text{higher future cashflows}} \underbrace{- \sum_{k=1}^{\infty} \rho^k \log R_{t+k+1}}_{\text{lower future discount rates}}$$

Comment 1: Role of Markups for Valuations

- This paper further decomposes the cash-flow term into three parts

$$CF_t = Y_t - VC_t - FC_t = Y_t \left(1 - \frac{VC_t}{Y_t} - \frac{FC_t}{Y_t}\right)$$

  Y_t is total sales, VC_t is variable costs and FC_t is fixed costs (incl. investment)

- Using the De Loecker et al (2020)

$$\mu_t = \theta_t \frac{Y_t}{VC_t} \implies CF_t = Y_t \left(1 - \frac{\theta_t}{\mu_t} - \frac{FC_t}{Y_t}\right)$$

- Log-linearizing gives

$$\log CF_t = \alpha + \log Y_t + \frac{\overline{\theta}}{\overline{\mu}} \log \mu_t - e^{\overline{fc}} fc_t \tag{1}$$

  (Omitting fluctuations in θ?)

Comment 1: Role of Markups for Valuations

$$\log M_t \approx \tilde{\kappa} + \underbrace{(1-\rho)\sum_{k=1}^{\infty}\rho^k \log Y_{t+k+1}}_{\text{higher sales}}$$

$$+ \underbrace{(1-\rho)\frac{\overline{\theta}}{\overline{\mu}}\sum_{k=1}^{\infty}\rho^k \log \mu_t}_{\text{higher markups}} \underbrace{-(1-\rho)e^{\overline{fc}}\sum_{k=1}^{\infty}\rho^k fcy_t}_{\text{lower fixed costs}}$$

$$\underbrace{-\sum_{k=1}^{\infty}\rho^k \log R_{t+k+1}}_{\text{lower discount rates}}$$

Comment 1: Role of Markups for Valuations

- Important limitation of Campbell-Schiller decomposition: atheoretical
- What does it mean to have “market power term”?
  - Term does not move if market power does not move
  - Yet, does it represent economic/causal contribution of market power on valuations?

Comment 1: Role of Markups for Valuations

- For example, an alternative decomposition for cash-flows could be

$$\begin{aligned} CF_t &= Y_t - VC_t - FC_t \\ &= \underbrace{Y_t - \frac{1}{\mu_t} Y_t}_{\text{Monopoly rents}} + \underbrace{\frac{1}{\mu} Y_t - VC_t - FC_t}_{\text{Ricardian rents}} \end{aligned}$$

- Would lead to different decompositions and importance of market power

Comment 2: Cross-Sectional vs Aggregate

- One key limitation of the De Loecker (et al) article relates to firm composition
  - Weighting by costs versus sales
  - Heterogeneity
- Given this, not sure how to interpret homogeneous VAR with firm-level data
  - valuation to sales is different over firms (ρ in paper)
  - Average market up very different across industries (ϕ_1 in paper)

Comment 3: Predicting Markup

- One of the most interesting results is $\neq$ realized vs predicted markups
- Empirically: this could be treated as a “simple” prediction problem
  - Maybe could use something more transparent than the VAR framework
  - Maybe explain more what is explaining your results
- Theoretically: what does it mean for a firm to have high expected market power tomorrow but not today?

Conclusion

- Great paper: clear, topical, & interesting
- Would encourage the authors to
  1. Clarifies the causal effect of markups in firm valuation
  2. Makes more transparent the variation in data that generates their results