Discussion of "Common Ownership and Competition in the Ready-To-Eat Cereal Industry"

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An Important and Well-executed Paper

- Significant methodological contribution to the rich literature on firm conduct estimation
  - "Proof of concept" for conduct estimation with a different firm objective function
- But also a much-needed contribution to the exploding literature on common ownership
  - Economists should not cede this research to law professors and corporate governance experts
  - Paper dispositively tells us where common ownership does **not** matter
- **Disclosure Statement**
  - I hold a portfolio of index funds containing several industry competitors.
  - I am incredibly biased in favor of this paper!

Common Ownership is a Big Antitrust Challenge

Institutional investors often hold shares of competing firms. Recent scholarship has considered whether such common ownership has anticompetitive effects. Antitrust theorists have long suggested that the interests of a common concentrated owner (CCO) differ from those of an owner of a single firm and that a CCO might be able to induce firms in which it holds a stake to further these interests.[1] Recent empirical evidence, finding that CCOs are associated with higher prices and lower output, seems to support this theory.[2]

This new evidence, along with the dramatic growth in institutional investors' holdings over the last several decades, has stimulated a major rethinking of antitrust enforcement. The Department of Justice has acknowledged concerns about the anticompetitive effects of common ownership and investigated common ownership of competing airlines.[3] In 2018, the Federal Trade Commission took these concerns a step further, conducting an all-day hearing on the subject.[4] In Europe, antitrust enforcers have taken a more aggressive approach: in addi-

Hemphill and Kahan (Yale Law Journal 2020)

Common Ownership is a Big Investor Protection Challenge

Common Ownership: The Investor Protection Challenge of the 21st Century

Commissioner Robert J. Jackson Jr.

New York, NY

Dec. 6, 2018

Testimony Before the Federal Trade Commission Hearing on Competition and Consumer Protection

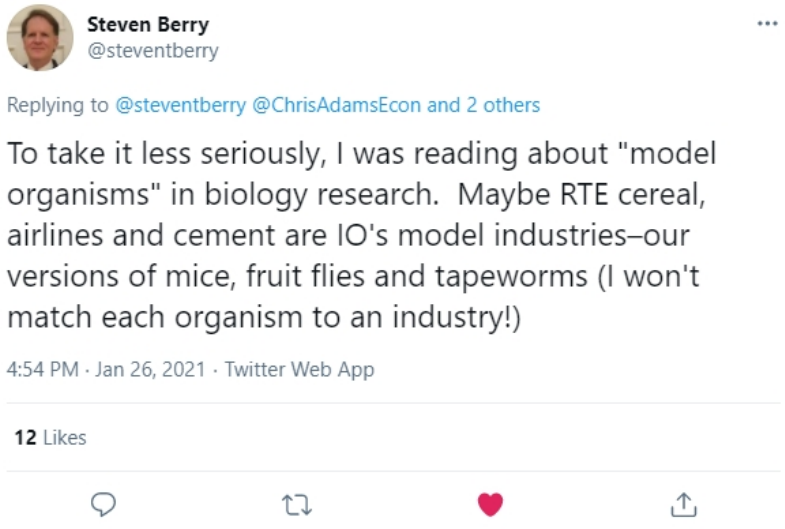
Testing the Common Ownership Hypothesis

- "When large investors own shares in more than one firm within the same industry, those firms may have reduced incentives to **compete**."
  - There are many ways in which common ownership may manifest itself: prices, quantities, entry, costs, quality, productivity, ...
  - ... but all of these *should* raise shareholder (portfolio) profits in some way.
- Range of different tests from "broad" to "specific" using variety of methods
  - Single-firm shareholder returns (Boller and Scott Morton 2020)
  - Merger voting (Matvos and Ostrovsky 2008)
  - Costs (Aslan 2019)
  - Managerial incentives (Antón et al. 2021)
  - Reduced-form/structural estimation of entry (Newham et al. 2018, Ruiz-Pérez 2019, Xie and Gerakos 2020)
  - Reduced-form intra-industry cross-market prices (Azar et al. 2018)
  - Structural estimation of price setting behavior (Kennedy et al. 2017, Park and Seo 2019)
- Common ownership likely has heterogeneous effects
  - across strategic choice variables
  - across industries

Partial Summary of the Empirical Evidence on Common Ownership

Theoretical Prediction	Level	Empirical Evidence
Incentives $(-)$	Firm	Antón et al. (2021)
Costs $(+)$	Firm	Aslan (2019)
Markups $(\pm)$	Firm & Market	Aslan (2019), Koch et al. (2020), Backus et al. (2021)
Profits $(+)$	Firm	Boller and Scott Morton (2020)
Prices $(+)$	Firm & Market	Azar et al. (2018), Park and Seo (2019), Aslan (2019), Torshizi and Clapp (2019)
Output $(-)$	Market	Azar et al. (2018)
Concentration $(-)$	Market	Azar et al. (2018), Azar et al. (2019)
Governance $(-)$	Firm	Bubb and Catan (2018), Heath et al. (2020)
Entry $(-)$	Firm & Market	Newham et al. (2019), Ruiz-Pérez (2019), Xie and Gerakos (2020)
Investment $(-)$	Industry	Gutiérrez and Philippon (2018)

Is Ready-to-Eat Cereal the right industry to study? Yes!



Steven Berry
@steventberry

Replying to @steventberry @ChrisAdamsEcon and 2 others

To take it less seriously, I was reading about "model organisms" in biology research. Maybe RTE cereal, airlines and cement are IO's model industries–our versions of mice, fruit flies and tapeworms (I won't match each organism to an industry!)

4:54 PM · Jan 26, 2021 · Twitter Web App

12 Likes

Issues with Ready-to-Eat Cereal and Common Ownership

- Ownership structure of cereal is unlike that of many other industries!
  - Kellogg Foundation Trust is by far the largest shareholder of Kellogg
    - Backus et al. (2021) assumes it wants to maximize profits like an activist investor ...
    - ... but wouldn't having a not-for-profit large shareholder governed by a few trustees exacerbate agency problems (and reduce efficiency/increase costs)?
  - Quaker Oats is a subsidiary of a huge corporation (PepsiCo)
    - Only 8% of its revenue comes from the cereal subsidiary
    - Several layers of agency conflicts compared with other industries
- How are prices set in the RTE cereal industry?
  - RTE cereal companies sell in a national wholesale market, but who sets retail prices?
  - How important are slotting fees and shelf space allocations relative to prices?
  - How important is supermarket competition relative to RTE cereal competition?

Other Smaller Issues with Ready-to-Eat Cereal and Common Ownership

- How important is common ownership of supermarkets?
  - Large variation between Walmart (family-controlled), Wholefoods (subsidiary), and Target (Vanguard, Fidelity, BlackRock, ...)
  - Do Walmart, Aldi, and Lidl price cheaply because that's in the founder DNA or because of their ownership structure? (cf. Virgin America and Allegiant)
- Is each private label product produced by a different manufacturer?
  - Should we assume that these private label manufacturers have completely separate shareholders?
- Perhaps a bit more discussion about what is particularly interesting in RTE cereal given the (structural) evidence from airlines

The Mechanism of Common Ownership — Backus et al. (2021)

Investors

Directly set p_f to maximize

$$\varphi_f = \pi_f(p_f, p_{\neg f}) + \sum_g \kappa_{fg} \pi_g(p_f, p_{\neg f})$$

Product Prices

Plausibility of Direct Price Setting by Investors

- This is a very strict testing standard
  - Literally assumes that firms exactly use κ_{fg} weights and only set prices
  - Really complex problem compared to the much simpler problem of maximizing π_f
  - Maybe investors are solving a much simpler maximization problem that includes *some* but not all κ_{fg}
- Organizational Economics 101
  - Owners do not make firm decisions, managers do
  - By my own count, at least 17 law review and corporate finance papers discussing the results of Azar et al. (2018) raise this point
- Backus et al. (2021) actually address this point by using $\tau < 1$
  - Attenuates the otherwise large potential effects of common ownership
  - Managerial entrenchment (Azar 2020), incentive contracts (Antón et al. 2016, 2021) or investor inattention could all generate $\tau < 1$
  - (Also very responsive, because this is exactly what Nathan Miller asked them to do!)

Agency Issues — Backus et al. (2021) with $\tau < 1$

Investors

Set w_f to maximize φ_f

Top Management

Set p_f to maximize w_f

Product Prices

Where are the large common ownership effects?

- Backus et al. (2021) note that "potential magnitude of common ownership effects would be large"
  - But their analysis forces these large effects to exclusively and directly show up in the pricing decision and nowhere else ... because **investors** are assumed to **only** choose prices
- If the firm (i) only sets prices and (ii) investors directly control these prices then ...
  - ... the potential effect of common ownership on markups would indeed be huge!
- But Ruiz-Pérez (2020) finds that "entry seems to be better explained by common ownership than by own-firm profit maximization" and "pricing [given entry] appears to be unaffected by common ownership."

Entry and Pricing — Ruiz-Pérez (2020)

Investors

Choose entry to maximize φ_f

Pricing Specialists

Set p_f to maximize π_f

Product Prices

Managers, Investment, and Pricing — Antón et al. (2021)

Investors

Set w_f to maximize φ_f

Top Management

Invest in cost reduction to maximize w_f

Pricing Specialists

Set p_f to maximize π_f

Product Prices

The Common Ownership Mechanism Matters

- Example 1: If investors do not directly control prices, but control product offerings then common ownership ...
  - ... will only affect which products the firm offers, but ...
  - ... will **not** affect pricing at all **given** these product choices.
- Example 2: If investors directly control neither prices nor investment, but control managerial incentives then common ownership ...
  - ... will have attenuated effects ...
  - ... will affect managerial incentives and in turn investment, costs, and prices, but ...
  - ... will **not** affect markups at all **given** these costs (except for cost passthrough).

If common ownership does not affect pricing, then where does it matter?

- Common ownership may not (directly) influence the prices that firms set
  - Enter new markets (Ruiz-Pérez 2019, Newham et al. 2019, Xie and Gerakos 2020)
  - Choose which products to offer
  - Set capacity
  - Invest (Gutiérrez and Philippon 2018) to reduce costs (Aslan 2019)
  - Improve product quality
  - Innovate (Antón et al. 2020)
  - Hire workers (Azar and Vives 2021)
- Some of these are harder (easier?) to estimate with modern IO tools ...
  - ... but arguably more plausible channels for common owners to influence than product-, location-, or route-specific prices.

Next Steps

- What firm decisions does common ownership actually influence?
  - Can the estimation accommodate hybrid models where some firm decisions are used to maximize π_f and others to maximize the κ_{fg} matrix?
  - Entry, investment, innovation, ...
- Can we disentangle the relative effects of common ownership on costs and markups?
  - Allow firms to invest in cost improvements and pricing: use first-order condition of (managerial) cost improvement to estimate impact of common ownership on costs
  - Could we re-examine plant-level inefficiency of conglomerates (Schoar 2002) with common ownership measures?
  - Does common ownership determine productivity? (Syverson 2011)
- But obviously not in this paper!
  - 70 footnotes + 5 pages of references is quite enough for my taste

Conclusion

- What this paper says
  - Develops new tools for estimating firm conduct by extending a rich intellectual history from Bresnahan (1982) to Berry and Haile (2014)
  - Convincing evidence that price-setting behavior in RTE cereal is more consistent with maximization of π_f than with the maximization of matrix of common ownership weights κ_{fg}
- What this paper does **not** say
  - There are no anticompetitive product market effects of common ownership in RTE cereal
  - Let alone that we do not have to worry about common ownership in general
- A fantastic paper
  - Allows evaluation and interpretation of existing empirical evidence on common ownership
  - Opens new avenues for work on common ownership and alternative objective functions
  - Suggests that future work in IO should incorporate differing owners' incentives
  - Gives economists (rather than law professors) something to say on antitrust policy (and financial regulation) to address the challenge of common ownership

Thank You!

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