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# COMMON OWNERSHIP, EARNINGS AND R&D

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Large sample evidence that the common ownership of large, listed companies by index funds is not associated with earnings increases or R&D cuts

May 9, 2022

*Common ownership is a term used to describe a large shareholder holding stock in multiple companies in the same industry. For example, Vanguard owns 10% of the shares in Delta, American and United. Researchers have raised the question of whether common ownership leads to anti-competitive business practices. Testing this theory is challenging because there is no smoking gun – no footage of executives in parking garages carving up markets or fixing prices. But if executives are accountable to shareholders, there is scope for shareholder-executive interactions to result in companies reducing investment or engaging in less price competition than would occur without common ownership.*

*Lewellen and Lowry (2021)<sup>1</sup> test whether mergers of asset managers resulted in portfolio companies with common ownership by 5 per cent shareholders resulted in an increase in return on assets and a decrease in R&D spending. Compared to companies without common ownership, profits do increase and R&D is cut in the three years subsequent to common ownership being established. But this is due to the different industry characteristics of common ownership firms (the treatment group) compared to firms without common ownership (the control group). Firms with common ownership are higher growth firms as measured by R&D/Assets, book-to-market equity and PPE & inventory/Assets. Once the researchers form a control group matched on industry, there is no evidence that common ownership leads to increased profits and reduced spending on innovation.*

*This paper provides evidence against the argument that broad regulation is needed to constrain common ownership. However, the large-sample results don't necessarily imply that common ownership will never lead to anti-competitive behavior. There could well be instances of anti-competitive behavior amongst firms in industries with few firms or a high degree of common ownership.*

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<sup>1</sup> <https://www.sciencedirect.com/science/article/pii/S0304405X21000982>

## Common ownership and anti-competitive incentives

The three largest shareholders in Delta Air Lines are Vanguard (10%), BlackRock (5%) and State Street (3%). The shareholders' corresponding ownership of American Airlines (10%, 5% and 3%) and United Airlines (10%, 4% and 3%) are almost identical, driven by the flow of money to market capitalization-weighted index funds. The Vanguard Total Stock Market exchange-traded fund (ETF) holds \$1.3 trillion of U.S.-listed companies and charges investors an annual fee of 0.03 per cent. The benefits to investors are obvious: diversification at low cost.

Researchers have raised the question of whether common ownership leads to anti-competitive business practices. The argument is that common ownership incentivizes companies to act in the interests of common shareholders (Vanguard, BlackRock, State Street) which means scaling back the intensity of competition. At the end of 2015, 81 per cent of S&P 500 firms had a 5 per cent shareholder that was also a 5 per cent shareholder of another firm in the same industry.<sup>2</sup> So, common ownership is a feature of most listed companies, and the question is whether the benefits of common ownership (diversification, low fees) outweigh the potential costs (anti-competitive behavior).

Testing this theory is incredibly challenging because there is no smoking gun. There is no footage of executives meeting in parking garages to carve up markets or fix prices on the basis of a directive from their largest shareholders. There is no tape recording of executives discussing whether a decision could negatively affect common shareholders because of the decision's impact on a competitor's share price. But if executives are accountable to shareholders (a good thing) then there is scope for interactions with shareholders to lead to executives making decisions to reduce investment, or engage in less price competition, than would occur without common ownership.

## Earnings and R&D of firms in the same industry unaffected by common ownership

Researchers from Dartmouth and Drexel addressed this issue in a paper published in the *Journal of Financial Economics*, and which one the journal's award for best paper in Corporate Finance and Organizations. Lewellen and Lowry (2021) reject the idea that common ownership is leading to large-scale reductions in investment or increases in profitability. This does not rule out the potential for common ownership to lead to anti-competitive behavior in particular industries, just that listed companies en masse are not making quasi-collusive decisions that are influenced by common ownership.

To measure the potential impact of common ownership, researchers search for big events that are most likely to lead to anti-competitive behavior. In this case, the researchers compiled a sample of 64 mergers from 1984-2015 of asset managers (for example, the merger of BlackRock and Barclays Global Fund Advisors (BGI) in 2009). The mergers generated a sample of 934 firms in which there was a 5 per cent shareholder in at least two firms in the same SIC industry. The researchers then measured whether these firms with common shareholders (the treatment firms) had increased return on assets (ROA measured as operating income/lagged assets), and reduced research & development expenditure (R&D/assets) in the three years post-merger, compared to what we would expect in the absence of common ownership.

This is where the analysis becomes particularly challenging because estimating what would have occurred *in the absence of common ownership* means identifying a set of imperfect control firms. The researchers

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<sup>2</sup> Lewellen and Lowry (2021, p. 322).

start by replicating research from prior studies that shows treatment firms experience an increase in ROA and a decrease in R&D compared to 3306 companies with a 5 per cent shareholder that did not have common shareholders. For treatment firms, there is a 1.2 per cent relative increase in ROA and a 0.4 per cent relative decrease in R&D.<sup>3</sup> Those figures are large in comparison to the mean ROA figures of 8 per cent for treatment firms and 11 per cent for control firms, and the mean R&D figures of 7 per cent for treatment firms and 2 per cent for control firms.<sup>4</sup>

The problem with this suite of control firms is that they are in different industries to the treatment firms, and in particular there is a high growth/low growth difference. High growth firms are over-represented in the common ownership sample (average R&D/assets of 7 per cent vs 2 per cent; average book-to-market equity of 0.66 vs 0.81; average property, plant & equipment plus inventory/assets of 0.30 vs 0.39). So, if the sample is clustered in a period when high growth firms experienced increasing profitability and made decisions to lower their R&D spend, relative to low growth firms, there might be no actual impact of common ownership.

The researchers make the **no impact** argument after performing a comparison with a different set of control firms. The researchers compiled a suite of 941 control firms matched on industry and size and which had a 5 per cent shareholder which was different to the two merging firms. This control sample is not perfect either, as it has lower institutional ownership than treatment firms. The researchers find no difference in changes to ROA and R&D post-merger between the control and treatment firms. In addition, the researchers find that if the years 2008 and 2009 are excluded, the result based on the treatment and control firms in different industries no longer holds.

In summary, the researchers contend that the large-sample evidence of increased ROA and decreased R&D associated with a boost to common ownership could be driven simply by differences in the industry characteristics of treatment and control firms. Further, even if industry differences are ignored, the researchers contend that the result of increased ROA and decreased R&D associated with common ownership is driven by a small number of mergers that occurred during the global financial crisis of 2008-09.

## Evidence against broad regulation limiting common ownership

The challenge for regulators remains, however. Researchers rely upon large-sample archival data, because that is what is needed for powerful tests of statistical significance. The evidence from this paper is that common ownership is not associated with across-the-board increased earnings and reduced incentive to innovate. But that does not rule out the potential for common ownership to influence individual decisions. Governments, regulators and investors want listed companies to exercise discipline in capital allocation, and to exercise sound judgment about the impact that investment and operational decisions have on communities. In short, there is a desire to have companies be more accountable to shareholders, not less, given that shareholders themselves are marketing their environmental, social and governance credentials to their underlying investors. The evidence from this paper suggests that broad regulation constraining common ownership is unwarranted. But the evidence does not rule out the possibility that common ownership has detrimental impacts on selected industries comprised of a small number of firms, or which have high common ownership.

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<sup>3</sup> Lewellen and Lowry (2021, Table 5, p. 332)

<sup>4</sup> Lewellen and Lowry (2021, Table 2, p. 327).

## References

Lewellen, K, and M. Lowry, 2021. Does common ownership really increase firm coordination? *Journal of Financial Economics*, 141, 322–344.