Anti-Competitive Effects of Common Ownership Summary

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In the United States, institutional investors hold between seventy and eighty percent of US publicly traded firms. Moreover, it is common for a single institutional investor to hold shares of different firms competing within the same industry. For instance, BlackRock is the largest shareholder of both Apple and Microsoft, two of the biggest competitors in the technology industry. Economic theory suggests that such cases of common ownership should have anti-competitive effects, which can lead to market outcomes that more closely resemble those of monopolistic markets. Thus, common ownership can adversely affect consumers and reduce efficiency in the market by increasing deadweight loss. Despite the theoretical implications of common ownership, most of the literature has focused primarily on the anti-competitive effects of full mergers and acquisitions, rather than studying the effects of partial acquisition of firms by large asset management companies. Motivated by the prevalence of common ownership of this sort in today's economy and the potential implications, Schmalz, Azar, and Tecu seek to fill this gap in the literature by conducting an empirical study of the effects of common ownership on the US airline industry. The purpose of this essay is to give a brief rundown of the methodology and results of their study which has been documented in the recent paper, *Anti-Competitive Effects of Common Ownership*.

The authors of the paper analyzed data in the Department of Transportation's Airline Origin and Destination Survey (DB1B) database and the Thomas-Reuters Spectrum data set. The DB1B database includes information on the origin, destination, and price of a

ticket as well as the number of passengers that traveled on the ticket. On the other hand, the Thomson-Reuters Spectrum data set includes information on investments in US publicly traded stocks by institutional investors managing assets of more than 100 million dollars. By using these data sets and considering each origin-destination airport pair in the US as an individual market, the paper computes the MHHI for each route in each quarter between 2001Q1 and 2013Q1. For those who are unfamiliar, the MHHI or Modified Herfindahl-Hirschman Index is a measure of market power that incorporates the implied levels of "market concentration" due to common ownership. This is in contrast with the HHI (Herfindahl-Hirschman Index) traditionally used in assessments of market power concentration which does not account for common ownership. The MHHI and HHI are related according to the expression

$$MHHI = MHHI\,delta + HHI$$

Here, MHHI is equal to the MHHI delta, which is the component of market power concentration specifically due to common ownership added to the HHI, which is component of market power concentration assuming no anti-competitive effects due to common ownership. The authors computed values of the MHHI deltas as high as 5000 HHI points[1]. Since the United States Department of Justice deems that mergers that lead to changes exceeding 200 HHI points are likely to enhance market power, the high values of MHHI deltas would theoretically imply a significant anti-competitive effect of common ownership on behavior of firms in the air travel industry.

Motivated by the large MHHI deltas, the paper conducts regression analyses to see, empirically, whether firms set prices that are consistent with the presence of anticompetitive incentives implied by the large MMHI deltas. The regression equation of relevance is

$$log(p_{ijt}) = \beta \cdot MHHI\,delta_{it} + \gamma \cdot HHI_{it} + \theta \cdot X_{ijt} + \alpha_t + \nu_{ij} + \epsilon_{ijt}$$

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[1]the MHHI delta and HHI are both in units called HHI points

where p_{ijt} is the average price for carrier j in route i at time t, MHHI delta$_{it}$ is the MHHI delta in route i at time t, X_{ijt} is a vector of controls, α_t are time fixed effects and v_{ij} are market-times-carrier fixed effects.

From running variations in the specification of the above regression, the coauthors found a statistically significant coefficient of approximately .2 on the MMHI delta so that an increase from 0 to 2,200 corresponded to an increase in average ticket price of around 4.9 percent. This is a significantly higher ticket price which is consistent with anti-competitive behavior. While the regression yielded results consistent with economic intuition, there were still endogeneity and reverse causality concerns. Namely, it is possible that the increase in ticket prices is actually what drives an increase in the MHHI delta$_{it}$ since firms are able to predict increased demand in an industry and thus increase their ownership of firms within the industry.

To address such concerns, the paper exploits BlackRock's acquisition of Barclay's Global Investors. Since airline stocks were a small part of both of the company's portfolios, it is unlikely that the merger was due to any foreseeable changes in the airline industry. The authors then computed the hypothetical change in MHHI deltas implied by the merger a quarter before the merger announcement. They found that the implied change in MHHI deltas had strong predictive power for the actual MHHI and thus used the MHHI deltas as a treatment variable in an instrumental variable regression. The IV regression yielded results that suggest that BlackRock's acquisition of BGI corresponded to 10 percent higher airplane ticket prices relative to a world in which there were no anti-competitive effects due to common ownership.

In conclusion, *Anti-Competitive Effects of Common Ownership* offers compelling evidence of the ability of common ownership from partial mergers to affect market outcomes. The results of the paper yields several interesting insights. One such insight, is that the HHI traditionally used may offer a skewed understanding of market power concentration by failing to account for the anti-competitive effects of common ownership . Perhaps measures that account for common ownership like the MHHI should be used instead. Secondly, the paper

points to a policy trilemma. Specifically, three key goals of policy, : 1. shareholder diversification, 2. firms' maximization of shareholder interests, and 3. promotion of competitive product markets may inherently conflict with one another. That is, achieving diversification and firms' maximization of shareholder interests may actually lead to anti-competitive effects on market outcomes.