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ARTICLE

Rising Market Power: Evidence from Industry Studies

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1. Introduction

As an economist who does research in industrial organization (IO)—a field defined in part by its focus on market power—the emergence of evidence pointing to significant increases in market power among firms in the United States has been one of the more striking recent developments in the economics literature. The seminal contribution analyzes accounting data for publicly traded firms in the United States and finds that price-cost markups rose significantly between 1980 and 2016 (De Loecker et al., 2020) ["DLEU"]. Its methodology differs from that of a prototypical empirical IO study, in that it enables inferences about markups at a broad, economy-wide level but provides less insight into specific firms, markets, and causal mechanisms. This creates research opportunity. In particular, IO-style empirical models of supply and demand—models that are grounded in market details— have the potential to provide more robust insights into the mechanisms that drive change, and thereby help provide a sound basis for policy, in antitrust and elsewhere.

The long-form version of this article reviews DLEU and the challenges associated with inferring markups from accounting data, and then analyzes a handful of IO-style industry studies that cover outcomes over time (Miller, 2025). Here, I focus on the industry studies and then connect the results to those of DLEU. The industry studies cover consumer packaged goods (Brand, 2021; Atalay et al., 2023; Döpper et al., 2024), portland cement (Miller et al., 2023), wholesaling (Ganapati, 2024), steel (Collard-Wexler and De Loecker, 2015), automobile manufacturing (Grieco et al., 2024), and airlines (Bet, 2021). These are industries that are amenable to empirical modeling because they feature reasonably stable institutions and high-quality data that spans decades. IO economists understand their institutional details reasonably well, so it is sensible to turn to them for an initial set of findings. For each industry, I

provide a short description of the research, and then discuss commonalities; somewhat greater detail is provided in Miller (2025).

To preview, the main theme that I draw from the industry studies is that change, measured across decades, has predominantly been due to technological advances. The technologies that have mattered vary across the industries, as have the implications for economic outcomes. Notable is that even among the industries for which technological change appears to support greater market power, the industry studies indicate that improvements in quality and reductions in marginal cost dominate, so that consumer welfare improves over time, or at least does not decline. The industry studies do not point to lax antitrust enforcement as having been the primary driver of greater market power.

2. Overview of the Industry Studies

Often in IO, research uses empirical modeling that combines data with economic theory; this pairing allows for richer insights than either data or theory on its own. Many articles focus on a single market so that the model can capture specific institutional details and their effects on behavior and economic outcomes. Furthermore, due to limits on data availability and computational power, many articles focus on shorter windows of time, rather than on economic outcomes as they change over decades. Therefore, the prototypical IO research project contributes relatively narrow insights for the market under study—insights that can be essential for policy but that do not extend generally.

The industry studies reviewed in this section differ in part, as they consider outcomes over long time horizons. Still, they focus on specific settings, which allows the modeling to incorporate relevant institutional detail. The industry studies are examples of "IO research at scale," in that the modeling is preserved, yet the overall scope is broader. In the remainder of this section, I summarize the high-level results for each industry in turn. The question to have in mind is whether there is more to be learned by considering the industry studies together: Can we obtain general insights from specific results?

For *consumer packaged goods*, the research covers 2005-2019, and indicates that real prices have been reasonably flat, while marginal costs have decreased. Therefore, markups have gone up. Anecdotal evidence indicates that firms' investments in logistics contribute to the cost reductions, and econometric evidence points to weaker consumer price sensitivity to explain why lower marginal costs have not pulled prices down. Open questions include why consumers became less responsive to price, and the extent to which higher markups accrue to profit or are used to pay for sunk investments or fixed costs.

For *cement*, the research covers 1974-2019, and indicates both greater local market concentration and (modestly) rising markups over time. The research points to the introduction of the precalciner kiln as an important driver of change. Precalciner kilns relax capacity constraints and improve fuel efficiency but require upfront capital expenditures. Because the kilns amplify scale economies, industry adoption coincided with a shakeout in which many plants closed. Markup increased due to marginal cost reductions and diminished competition. Real prices in 1974 and 2019 are similar because the effects of lower costs and diminished competition roughly counterbalance each other.

For *wholesaling*, the research finds rising markups and concentration over 1992-2012; it also finds decreasing real prices and an expanding variety of products that are available to retailers. The changes are attributed to globalization and advances in information technology. Together, these provide the incentive and ability for the larger wholesalers to make sunk investments in their efficiency and the breadth of their service, especially with regard to their reach in international markets.

For *steel*, the research covers 1963-2002. During this time, markups fell due to the emergence of minimills. The efficiency gains of minimill technology come from reduced fixed costs; minimills are much smaller than vertically integrated mills, which had been the dominant, incumbent technology. The economic effects of the minimill differ from those of the precalciner kiln in the cement industry (for example) because the minimill is a scale-decreasing technology. The research also indicates that steel prices decrease, though this is difficult to interpret on its own because input prices also decrease.

For *automobile manufacturing*, the research finds falling markups and higher real prices over 1980-2018. This can be understood as an effect of quality improvements (fuel efficiency, anti-lock brakes, etc.) that increase marginal cost, paired with growing import competition that limits the pass-through of those costs to prices. The research also indicates that, despite higher marginal cost, firms' technical efficiency improves. That is, any given level of quality can be produced at lower cost; it is the quality improvements that drive costs up over time. Furthermore, consumers gain despite the higher prices because they have access to higher quality products.

Finally, for *airlines*, the research covers 1990-2019, and finds higher markups over time, alongside lower real prices (not accounting for fees). This is a complicated period for the industry due to a number of factors: continuing adjustments to deregulation, fluctuations in fuel prices and macroeconomic conditions, a broadening of hub-and-spoke networks by legacy carriers, the emergence of low cost carriers and ultra low cost carriers, mergers, and bankruptcies. Further research that

examines how these factor interact and connect to markups and prices would be valuable.

3. Analysis of the Industry Studies

One explanation for rising market power is that innovation and technological change have allowed firms to reduce their marginal costs and, due to incomplete pass-through, increase their markups. To the extent this process also amplifies scale economies, long run incentives also may generate greater concentration. The literature on the first three industries discussed above provides empirical support for this mechanism. Yet, the remaining industry studies indicate that other mechanisms also are at play. In two, there appears to be less market power over time; steel offers a particularly salient counterpoint because technological change has been scale-decreasing. Thus, the literature reinforces that industries differ in important ways—regarding production technologies, consumer preferences, government policies, and so on—and that these differences matter for economic outcomes.

Nonetheless, there does appear to be a theme that runs through the industry studies: the changes in industry outcomes, measured across decades, have predominantly been due to technological change. How this manifests varies but, for the first five industries, the literature is consistent with technological change improving the productive efficiency of firms, yielding gains in product quality, or both. In all of the industries, real prices or real quality-adjusted prices have decreased or remained flat, so technological innovation does not appear to have harmed consumers. In some of the industries, consumers have benefited.

The industry studies as a group do not point to weak antitrust enforcement being the main driver of growing market power. Supporting this interpretation is evidence that the rising markups of DLEU do not correlate with rising prices (Conlon et al., 2023). Of course, the industrial organization literature is broader than the industry studies that are the focus here, and the extent to which it implicates antitrust enforcement is contested (e.g., see Shapiro and Yurukoglu, 2024; Baker and Scott Morton, 2024). However, if my interpretation of the industry studies is correct, and technological change tends to drive economic outcomes over long time horizons, then stringent antitrust enforcement may be more, not less, appropriate in the modern economy. The reason is that some forms of technological change—especially scale-increasing technologies—tend to support higher markups and, in the long run, reduce the number of firms. As a result, it can make collusion easier to sustain and amplify the adverse competitive effects of mergers.

4. Conclusion

My synthesis of the industry studies does not differ so much from the results obtained in DLEU. Of course, the headline result of DLEU is that the sales-weighted

average markup increased significantly from 1980 to 2016. DLEU find that this markup growth is largely due to a reallocation of sales from lower-markup firms to higher-markup firms (rather than rising markups within firms). Furthermore, markup growth correlates with more expenditures on SG&A, R&D, and advertising, and there is econometric support for a modest increase in scale economies. Thus, DLEU is consistent with a subset of firms increasingly incurring fixed costs that support higher markups, and with these firms capturing a greater share of sales. Because within-firm markup growth is limited, DLEU does not appear to point to weak antitrust enforcement as a main driver of the empirical trends.

Furthermore, both DLEU and the industry studies show heterogeneity across sectors of the economy. Research that tackles other industries—including industries as they operate outside the United States—would help flesh out an understanding of how and why market outcomes have changed. Additionally, the industry studies reviewed here highlight the value of research on the conditions that facilitate innovation and the diffusion of new technologies across firms, markets, and nations; similarly for research on how the gains of innovation are distributed through society. My hope is that our understanding of rising market power, and of the evolution of economic outcomes more generally, is at its beginning. Industrial organization has an important role to play, and I look forward to seeing how the literature develops.

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Disclaimer: I served as the Chief Economist of the Department of Justice Antitrust Division in 2024 and am now a Founding Partner at Econic Partners. I have consulted with antitrust authorities and private companies on antitrust matters, and some of those consulting relationships are confidential. In 2022, I testified on behalf of the United States regarding the Northeast Alliance of American Airlines and JetBlue Airlines. I also consulted with Alaska Airlines and Hawaiian Airlines prior to their merger. I have had no consulting relationship in the past three years related to the other industries discussed in this article.

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