THE UNITED STATES HAS A MARKET CONCENTRATION PROBLEM

REVIEWING CONCENTRATION ESTIMATES IN ANTITRUST MARKETS, 2000-PRESENT

ISSUE BRIEF BY **ADIL ABDELA AND MARSHALL STEINBAUM**[1] | SEPTEMBER 2018

Since the 1970s, America's antitrust policy regime has been weakening and market power has been on the rise. High market concentration—in which few firms compete in a given market—is one indicator of market power. From 1985 to 2017, the number of mergers completed annually rose from 2,308 to 15,361 (IMAA 2017).

Recently, policymakers, academics, and journalists have questioned whether the ongoing merger wave, and lax antitrust enforcement more generally, is indeed contributing to rising concentration, and in turn, whether concentration really portends a market power crisis in the economy. In this issue brief, we review the estimates of market concentration that have been conducted in a number of industries since 2000 as part of merger retrospectives and other empirical investigations. The result of that survey is clear: market concentration in the U.S. economy is high, according to the thresholds adopted by the antitrust agencies themselves in the Horizontal Merger Guidelines.

By way of background, recent studies of industry concentration conclude that it is both high and rising over time. For example, Grullon, Larkin, and Michaely conclude that concentration increased in 75% of industries from 1997 to 2012. In response to these and similar studies, the antitrust enforcement agencies recently declared that their findings are not relevant to the question of whether market concentration has increased because they study industrial sectors, not antitrust markets. Specifically, they wrote, "The U.S. Department of Justice and Federal Trade Commission find the claims of increasing concentration are unsupported by data for meaningful markets" (DOJ/FTC 2018).

In fact, we find that claims that market concentration is high are well-supported in the data for properly defined antitrust markets. Given the sparsity of studies that document market concentration in a given sector and in antitrust markets within that sector, there is indeed insufficient evidence to conclude that concentration in antitrust markets is rising. But the antitrust enforcement agencies themselves are in the best position to investigate that question, and so we hope they will do so—rather than publicly castigate outside attempts to shed light on the issue.

---

[1] The Roosevelt Institute released an earlier version of this issue brief in April 2018 under the title "Market Concentration and the Importance of Properly Defined Markets." Here, we update and augment the previous publication in order to respond to policy debates that have arisen since then.

RECENT CONCERNS ABOUT CONCENTRATION

The Organisation for Economic Co-operation and Development (OECD) held a meeting in June of 2018 on the topic of market concentration, motivated by evidence of a moderate increase in broad measures of concentration in the U.S. and Japan, though not as much in European countries. Part of the OECD's motivation for holding this meeting was that a range of other indicators suggest that on average market power is increasing. For example, markups and profits have significantly increased in the U.S. and internationally (Diez, Leigh, and Tambunlertchai 2018). Output and productivity growth have weakened. The OECD stated that "it remains unclear precisely what is driving the increase in market power" (OECD 2018).

As noted above, the Department of Justice (DOJ) and the Federal Trade Commission (FTC), responded to the OECD's concerns by stating that they find the claims of increased concentration unsupported by the data for meaningful markets (DOJ/FTC 2018). They pointed to multiple papers that based their findings of increased industry concentration on data from the U.S. Census Bureau. They claim that such measures of concentration are meaningless for competition analysis because industrial sectors are not relevant antitrust markets. They are not defined by consumer substitution patterns, and are in general much larger than antitrust markets. The example they give is that manufacturers of pencils and wooden blocks would be in the same industrial sector, but those two items cannot substitute for one another in consumption since they have very different uses.

In this issue brief, we first step back to characterize the policy debate by explaining why market definition matters in antitrust analysis and how it came to be that antitrust markets have been allowed to become as concentrated as they are. We then review the other evidence documenting the economy's market power problem, including how that evidence is inconsistent with the antitrust agencies' preferred theory for how we got here: that "superfirms" have gained market share thanks to their superior efficiency. Finally, we conclude by characterizing the research and policy agenda going forward, given that the agencies' account of the evidence is so flawed.

THE HORIZONTAL MERGER GUIDELINES AND ANTITRUST MARKETS

Section 7 of the Clayton Antitrust Act of 1914 states that a merger is unlawful if "in any line of commerce or in any activity affecting commerce in any section of the country, the effect of such acquisition may be substantially to lessen competition, or to tend to create a monopoly" (DOJ 2010). Since 1968, this statute has been enforced according to the Horizontal Merger Guidelines, which have been updated and reissued several times.

The Horizontal Merger Guidelines, promulgated jointly by the DOJ and the FTC, outline the techniques, practices, and enforcement policy with respect to mergers and acquisitions amongst competitors. In the 1968 guidelines, the main concerns were barriers to entry and concentration ratios. In 1982, the guidelines were updated to include the Herfindahl-Hirschman Index and to entertain the concept of offsetting merger "efficiencies." At the same time, they raised the level of market concentration that made it likely a merger would receive enforcement scrutiny. In 2010, the thresholds were raised even more. As a result, decades of lax merger review and antitrust enforcement gave way to rampant market power.

Before an analysis of market concentration can occur, the relevant market must first be defined. Antitrust officials determine the "relevant market" as the alternative firms or products available to consumers within the same market as the merging firms. For example, if a firm were to raise its prices after a proposed merger, regulators may examine how easy it would be for consumers to switch to another, more affordable product. When determining which products or firms compete in a given market, the geographical extent of the market is often a crucial dimension. Due to travel costs, for instance, customers are unlikely or unable to travel an exceedingly long distance to buy a product from a different company following a price spike.

The guidelines define an antitrust market in both product and geographic dimensions by using the "hypothetical monopolist test": would a hypothetical monopolist in the proposed antitrust market be able to raise prices without losing enough customers that it would be self-defeating to do so? If the answer is yes, then the market is defined too broadly and should be narrowed. If a hypothetical monopolist could not increase prices without losing so much business that it wouldn't be worthwhile, the market is defined too narrowly and should be widened—ideally to include the alternatives to which consumers would switch in this hypothetical. The threshold market definition at which such a price increase would be borderline profitable is considered the extent of the antitrust market, and this procedure for establishing that threshold is known as "critical loss analysis."

MEASURING MARKET CONCENTRATION

Once markets are defined, the Herfindahl–Hirschman Index (HHI) is the most common measure used for determining market concentration, including by the Horizontal Merger Guidelines. It is calculated by squaring the market share of each firm in a market and summing them up. Market share can be calculated using revenue, sales, or in some cases, number of products, employment, or hiring. For example, if we have four firms in a market with market shares of 35%, 30%, 20%, and 15%, the HHI would be 352 + 302 + 202 + 102 = 2750. The index ranges from 1 (perfect competition) to 10000 (a monopoly).

According to the Horizontal Merger Guidelines, a market with an HHI above 2500 is considered highly concentrated. Furthermore, the guidelines state "mergers resulting in highly concentrated markets that involve an increase in the HHI of more than 200 points will be presumed to be likely to enhance market power" (DOJ 2010). Before 2010, the guidelines were more strict. The guidelines considered a highly concentrated market to be one with an HHI above 1800, and a post-merger HHI increase of 100 to be considered potential for enhanced market power.

The Obama administration believed it should loosen the guidelines, since under the old guidelines, too many mergers that exceeded the thresholds went unchallenged. The idea would be that with more leeway for borderline-competitive mergers, enforcement resources could be directed at a greater share of mergers that are presumptively problematic, and hence fewer mergers in violation of the guidelines' thresholds would go unchallenged. However, the effect has been to simply ratchet up the egregiousness of the mergers being considered, since industry has unsurprisingly interpreted the change in policy as reflecting a greater tolerance for concentration. Therefore, despite the higher thresholds, the merger wave has not been held back, but rather accelerated.

THE FALLACY OF THE AGENCIES' RESPONSE

The figures reported at the start of this issue brief, from the paper by Grullon et al., refer to industry concentration levels. The authors calculated industry concentrations by summing the squared ratios of firms' sales to total industry sales and found industry concentrations to be high and increasing over time in most industries. Industry concentration is not the same as market concentration in a relevant antitrust market; however, it can be an indicator of increasing concentrations for antitrust markets within industries. A relevant antitrust market includes the options available to consumers, workers, or other counterparties to the merging firms. That is usually fewer than all the firms in a given industry, as the agencies pointed out in their statement to the OECD. Thus, the market concentration of a properly defined antitrust market within specific industries will normally be much higher than the concentration of each industry overall.

The logical assumption one should make about relevant markets is that the more narrow one defines it, the less firms there would be, and therefore, the concentration would be higher. In the agencies' response, they use a study that looks at concentrations across the SIC 4-digit level. They use the manufacturing industry as an example as it is split into four groups, one of them being drug manufacturing. They argue that because drugs aren't close substitutes for one another, the product market is too broad and therefore the concentration calculated has no merit.

The following example in the pharmaceutical industry shows that a narrow relevant market leads to calculating a higher market concentration. A study of the sector by Torreya Partners stated that "it is readily apparent that the generic pharmaceutical segment is not highly concentrated," but they defined the industry at the global level, looking at revenue of companies that sell generic drugs and calculated the HHI to be 210 (Lefkowitz 2016). One cannot get a prescription from one's doctor to buy a drug from a different country, so the market should be defined at the country level at least. More importantly, though, the product market should not be defined using all generic drugs in the same market. A consumer cannot substitute their diabetic medication with an antidepressant in the way they might be able to substitute one fast food item for another. Instead, the pharmaceutical industry would have its markets defined by specific drugs.

In the failed attempt by the DOJ to block the Pfizer-Warner merger in 2000, the DOJ lawyers pointed out that the HHI for specific drug markets would increase by a substantial amount. For example, over the counter pediculicides would see an HHI increase from 2,223 to 4,024. Pfizer's Aricept had 98% of the Alzheimer's treatment market, with Warner's Cognex being their only competition (FTC 2000). With better-defined markets, antitrust officials can block anti-competitive mergers—and, in the case of the pharmaceutical industry at least, protect Americans' access to affordable medication. In this example, we see the DOJ acknowledge that the pharmaceutical industry is highly concentrated when using the relevant market definition.

In their statement to the OECD, the agencies argue that reliable data is limited except for the banking and airlines sectors. They cite studies that show that there is not a rise in concentration in either industry. The study on airlines concentration from the U.S. Government Accountability Office (GAO) shows that concentration for airport routes did not rise by much from 2007 to 2012, but markets have been highly concentrated throughout the period (GAO 2014). The most recent banking study they cited also showed that concentration did not rise by much, from 2000 to 2010, in metropolitan, micropolitan, and rural areas. However, micropolitan and rural areas were highly concentrated throughout the time period (Adams 2012).

INADEQUATE ENFORCEMENT OF THE GUIDELINES

Market definition is one of the most crucial tasks in antitrust enforcement, and in sectors where the antitrust agencies have reviewed many mergers, they tend to have established rules of thumb about the appropriate market definition. For example, in mergers between hospitals, they might conclude that the relevant market for a given merger is a 20-mile radius around hospitals owned by the merging parties. What that means is that when

patients consider which hospital to go to, they generally choose from the options within that radius. The point of the exercise undertaken in this issue brief is that when you look at the studies that have made an attempt to define antitrust markets, the average concentration they report for whatever market definition they come up with tends to be high.

As shown in the table below, nearly all of the markets reviewed are highly concentrated across the different industries where market definition has been undertaken. The internet search engine market is composed of companies looking to advertise their products by purchasing ads and listings using search services. It was highly concentrated with an HHI of 5105 in 2010, with Google, Microsoft, and Yahoo sharing over 96% of the revenue. Just two years later, the HHI grew to 5506, following the Search Alliance made by Microsoft and Yahoo (Noam 2016). The study defined the relevant market using revenue from ads at the national level and calculated market share by using search volume. The Search Alliance was a deal that enabled Microsoft to bypass acquiring Yahoo by instead powering Yahoo's search engine in exchange for listings and ads on Bing, Microsoft's search engine. The DOJ shut down a potential Google-Yahoo pact a year prior in fear of the highly concentrated search engine market becoming even more so. However, they did not challenge the Search Alliance in court, even though the guidelines would suggest that they would do so, given that the market was already highly concentrated. To have an online presence, companies must now either choose between signing up for Google Adwords or Microsoft's Bing Ads.

There is also a huge, growing concern about user privacy. Following the adoption of the broadband privacy rule in 2016, Internet Service Providers (ISPs) had been prohibited from selling users' browser history without their consent. President Trump signed a bill rolling back restrictions and allowing ISPs to sell one's search history without user consent. Meanwhile, the search engines themselves (Google and Bing) have never had any restrictions in how they can sell our search data to third parties, other than the FTC's mild warning that they must comply with their own terms of use (which few consumers bother to actually read, and in any case, they are written to be as opaque as possible and universally favorable to providers).

In our current duopoly—in which two companies dominate the market for online advertisements—we have no other choice than to accept that whatever we search on Google or Bing can be sold to whomever without our knowledge. In a competitive search engine industry, we would be able to instead use a competitor's service to avoid this practice, possibly discouraging Google, Microsoft, or the ISPs from continuing to invade our privacy.

The Whirlpool acquisition of Maytag in 2006 led to the refrigerator industry's already high HHI growing from 2244 in 2007 to 2484 in 2008 (Taylor 2013). That study defined the relevant market as sales of each type of home appliance at the national level. The effects of a merger higher up the supply chain—in this case, at the manufacturing level—can still directly affect final consumers and must be considered. Appliance retailers (and other retailers in a similar situation) can face a price increase from their supplier as they will have fewer sourcing options. Before the acquisition, the top four companies within the industry had a 98% share of the market. At the time, the standard for enforcement was lower than it is today. Yet, even with a lower standard, antitrust regulators did not challenge the merger, and it turned out to have increased prices (Ashenfelter, Weinberg, and Hosken 2011).

PROPER MARKET DEFINITION CAN STRENGTHEN ANTITRUST POLICY

The health insurance industry has had many large mergers in the past two decades. When analyzing a potential merger between two large insurance agencies, it would be wrong to define the market at the national level. At the national level, there are many insurance companies and the HHI would be low, so any merger would probably not increase the calculated HHI significantly. But health insurance is regulated at the state level, so insurance regulators have to approve policies offered in their state. Therefore, the proper geographic market definition in health insurance is, at the very widest, the state level. It may even be at the local level, since many insurers specialize still further, marketing to local communities or employers. One study looked at health insurance premiums offered by 800 employers in 139 geographical areas. It calculated the average HHI to be 2984 in 2006 (Daffny 2012), revealing that the health insurance industry is highly concentrated.

The Aetna-Humana merger was successfully blocked by the DOJ in 2016. The market here was defined as Medicare Advantage plans at the county level. It was found that the post-merger HHI would have surpassed 5000 for 75% of the counties. In 70% of the counties, the HHI would have increased by over 1000. In 70 counties, where Aetna and Humana are the only two Medicare Advantage plan providers in the market, the merger would have created a monopoly (DOJ 2017). Aetna's lawyers argued that the Medicare and Medicare Advantage plans should be in the same market. However, Medicare Advantage plans are run by private companies and provide extensive coverage. In exchange for out-of-pocket limits and supplemental benefits, seniors can choose to pay monthly premiums and give up network flexibility by choosing Medicare Advantage over Original Medicare. This difference is the reason why the DOJ decided to define each plan in different markets.

WHY HIGH CONCENTRATION THROUGHOUT THE ECONOMY MATTERS

The debate over proper market definition and whether concentration in the U.S. economy is, in fact, high should be understood in light of its larger significance: Does the economy currently suffer from a market power problem, and is that problem related to or caused by high measured concentration?

Other research finds that concentrated markets deter healthy competition, leading to low investment by companies who don't need to keep up with competitors (Gutierrez and Philippon 2017). It is also one cause of labor market monopsony—where employers have the discretion to set wages and working conditions on their own terms, without fearing that their workers could check their power by finding another job (Azar, Marinescu, and Steinbaum 2017; Dube and Kaplan 2010; Webber 2016). High market concentration makes it difficult for small businesses to compete or for new businesses to enter the market, since suppliers and customers will be difficult to pry away from incumbents. Moreover, such barriers to entry themselves give rise to concentration that sustains itself in an uncompetitive equilibrium. There's good reason to believe that market concentration and other uncompetitive market structures cause rising inequality and declining labor mobility and entrepreneurship (Konczal and Steinbaum 2016). Industrial concentration also correlates with rising profits and declining returns to productive factors (Barkai 2017). Finally, while no direct link has been shown between concentration (and market power more generally) and the slowdown in aggregate productivity growth, it is nonetheless the case that at the same time that market power has risen to crisis levels in the overall economy, productivity growth has been in decline (Fernald 2015; Syverson 2016).

In their statement to the OECD, after pointing out that industrial sectors are not antitrust markets, the agencies go on to credit interpretations of rising concentration premised on technological transformation, which implies that the reallocation of production to larger firms with greater market share is increasingly efficient. This is the so-called "superfirm" hypothesis, advanced by Autor et al. (2017), among others.

That interpretation is inconsistent with the evidence about both declining productivity growth and rising markups in aggregate and at the individual firm level. If more efficient firms were systematically gaining market share, it is difficult to imagine how, at the same time, productivity growth in aggregate has been declining. Moreover, the means by which more efficient firms would presumably attract a larger share of commerce is by beating the actual or potential competition through their ability to charge lower prices. And yet, the markups they charge are increasing—meaning that their cost advantage, if one exists,

is more likely driven by the ability to monopsonize input markets rather than by coming up with more efficient ways to convert those inputs into output.

It is therefore premature to excuse the economy's concentration problem with reference to superfirms.

CONCLUSION

If the federal antitrust enforcement agencies do not make significant changes to the enforcement of antitrust policy, first by acknowledging that many markets are highly concentrated, fewer and fewer firms will continue to expand their dominance. Market concentration and market power lead to stagnant wages, fewer new businesses, and a weakened supply chain. As a result, many participants in the economy feel their fate is out of their own hands.

The start of any policy to rectify the economy's market power problem must be a recognition by antitrust enforcers that it exists. Here, we have gathered all the available literature to show that, at the very least, antitrust markets are highly concentrated per the Horizontal Merger Guidelines. It's time for the agencies to stop ignoring the problem or going out of their way to deny it exists. Instead, they and the rest of the antitrust policy community ought to be putting forward solutions for how to rectify the problems that lax antitrust enforcement has created, and the agencies themselves should be investigating the empirical questions brought forward in this ongoing debate.

Concentration Levels in Antitrust Markets by Industry				
Industry	**Study**	**Market Definition**	**Average HHI**	**Year(s) Studied**
Airline	Azar, Schmalz, Tecu (2018)	Airport-to-airport routes at market-carrier level	4639	2001-2014
Airline	Kwoka, Hearle, Alepin (2016)	Airport-to-airport routes	3930	2009-2010
Airline	Gayle (2008)	City-Pair Traffic	6900	2002
Appliance	Taylor (2013)	Revenue shares for refrigerator manufacturers at the national level	2484	2008
Appliance	Ashenfelter, Hosken, and Weinberg (2011)	Revenue shares for dishwasher manufacturers at the national level	2453	2005
Appliance	Ashenfelter, Hosken, and Weinberg (2011)	Revenue shares for clothes dryer manufacturers at the national level	2983	2005
Appliance	Ashenfelter, Hosken, and Weinberg (2011)	Revenue shares for refrigerators manufacturers at the national level	2595	2005
Appliance	Ashenfelter, Hosken, and Weinberg (2011)	Revenue shares for clothes washer manufacturers at the national level	2632	2005
Appliance	Ashenfelter, Hosken, and Weinberg (2011)	Revenue shares for cooktop manufacturers at the national level	1571	2005
Appliance	Ashenfelter, Hosken, and Weinberg (2011)	Revenue shares for oven manufacturers at the national level	1929	2005
Appliance	Ashenfelter, Hosken, and Weinberg (2011)	Revenue shares for range manufacturers at the national level	2703	2005
Banking	Adams (2012)	Average number of offices within metropolitan area markets	1622	2010
Banking	Adams (2012)	Average number of offices within micropolitan area markets	2311	2010
Banking	Adams (2012)	Average number of offices within rural markets	4148	2010
Beer	Gokhale, Tremblay (2012)	Revenue share of domestic beer brewing industry at the national level (not including craft)	4329	2009
Beer	Miller, Weinberg (2017)	Revenue share of brewing industry at the national level	2162	2011
Broadband	Noam (2016)	Local broadband ISP connections by number of subscribers	3171	2013
Fertilizer	Taylor, Moss (2013)	Production capacity of nitrogen-based fertilizer in North America	2107	2011
Fertilizer	Taylor, Moss (2013)	Production capacity of phosphorus-based fertilizer in North America	3163	2011
Fertilizer	Taylor, Moss (2013)	Production capacity of potash-based fertilizer in North America	4604	2011

Health Insurance	Gaynor (2011)	HMO + PPO Markets within MSA	3727	2008
Hospital	Daffny, Duggan, Ramanarayanan (2012)	Share of number of hospital beds per three digit zip code.	2984	2006
Hospital	Gaynor (2011)	Hospitals within Metropolitan Statistical Area (MSA)	3261	2006
Internet Search/Advertising	Noam (2016)	Revenue from banner ads, buttons, and sponsorships	5506	2012
Labor Market	Azar, Marinescu, Steinbaum (2017)	Job vacancies in commuting zones by SOC-6 occupation (Careerbuilder)	3157	2010-2013
Labor Market	Azar, Marinescu, Steinbaum, Taska (2018)	Job vacancies in commuting zones by SOC-6 occupation (Burning Glass)	4378	2016
Meat Packing	Department of Justice (2008)	Cattle Packing in the High Plain Region	2100	2008
Meat Packing	Department of Justice (2008)	Cattle Packing in the Southwest Region	3200	2008
Medical Devices	Lobmayr (2011)	Number of approvals for active firms in the medical specialty at the national level	5370	2007
Pharmaceutical	Leftkowitz, Opler, Vaderah (2016)	Revenue share of generic brand companies at the global level for all drugs.	210	2016
Pharmaceutical	Dave, Kesselheim, Fox, Qiu, Hartzema (2017)	Average HHI amongst generic drugs in national markets with HHI below 5000	3600	2008
Pharmaceutical	Federal Trade Commission (2000)	Suppliers of OTC pediculicides	2223	2000
Pharmaceutical	Federal Trade Commission (2000)	Suppliers of SSRI/SSNI drugs	1834	2000
Pharmaceutical	Federal Trade Commission (2000)	Supplier of Alzheimer's treatment drug	9801	2000
Pharmaceutical	Tenn and Yun (2011)	Revenue share of H2-Blockers not including private labels at the national level	2626	2005-2008
Pharmaceutical	Tenn and Yun (2011)	Revenue share of Hydrocortisones not including private labels at the national level	1466	2005-2008
Pharmaceutical	Tenn and Yun (2011)	Revenue share of Sleep Aids not including private labels at the national level	1179	2005-2008
Pharmaceutical	Tenn and Yun (2011)	Revenue share of Diaper Rash Treatments not including private labels at the national level	1936	2005-2008
Pharmaceutical	Tenn and Yun (2011)	Revenue share of Diarrhea Remedies not including private labels at the national level	4661	2005-2008

REFERENCES

Adams, Robert M. 2012. "Consolidation and Merger Activity in the United States Banking Industry from 2000 Through 2010." SSRN Electronic Journal. https://doi.org/10.2139/ssrn.2193886.

Ashenfelter, Orley C., Daniel S. Hosken and Matthew C. Weinberg. 2011. "The Price Effect of a Large Merger of Manufacturers: A Case Study of Maytag-Whirlpool." w17476. Cambridge, MA: National Bureau of Economic Research

Autor, David, David Dorn, Lawrence Katz, Christina Patterson, and John Van Reenen. 2017. "The Fall of the Labor Share and the Rise of Superstar Firms." w23396. Cambridge, MA: National Bureau of Economic Research. https://doi.org/10.3386/w23396.

Azar, Jose, Ioana Marinescu, and Marshall Steinbaum. 2017. "Labor Market Concentration." SSRN Electronic Journal. http://dx.doi.org/10.2139/ssrn.3088767.

Azar, José, Ioana Marinescu, Marshall Steinbaum, and Bledi Taska. 2018. "Concentration in US Labor Markets: Evidence From Online Vacancy Data," 29.

Azar, Jose, Martin C. Schmalz, and Isabel Tecu. 2017. "Anti-Competitive Effects of Common Ownership." SSRN Electronic Journal.

Barkai, Simcha. 2017. "Declining Labor and Capital Shares," London Business School. 57.

Dafny, Leemore, Mark Duggan, and Subramaniam Ramanarayanan. 2012. "Paying a Premium on Your Premium? Consolidation in the US Health Insurance Industry." American Economic Review 102 (2): 1161–85.

Dave, Chintan V., Aaron S. Kesselheim, Erin R. Fox, Peihua Qiu, and Abraham Hartzema. 2017. "High Generic Drug Prices and Market Competition: A Retrospective Cohort Study." Annals of Internal Medicine 167 (3): 145.

Diez, Federico, Daniel Leigh, and Suchanan Tambunlertchai. 2018. "Global Market Power and Its Macroeconomic Implications." IMF Working Papers 18 (137): 1. https://doi.org/10.5089/9781484361672.001.

Dube, Arindrajit, and Ethan Kaplan. 2010. "Does Outsourcing Reduce Wages in the Low-Wage Service Occupations? Evidence from Janitors and Guards." ILR Review 63 (2): 287–306. https://doi.org/10.1177/001979391006300206.

Fernald, John. 2015. "Productivity and Potential Output Before, During, and After the Great Recession," 51.

Gayle, Philip G. 2008. "An Empirical Analysis of the Competitive Effects of the Delta/Continental/Northwest Code Share Alliance." The Journal of Law and Economics 51 (4): 743–66. https://doi.org/10.1086/595865.

Gaynor, Martin. 2011. "Health Care Industry Consolidation," Statement before the Committee on Ways and Means Health Subcommittee U.S. House of Representatives. 31.

Gokhale, Jayendra, and Victor J. Tremblay. 2012. "Competition and Price Wars in the U.S. Brewing Industry." Journal of Wine Economics 7 (02): 226–40.

Grullon, Gustavo, Yelena Larkin, and Roni Michaely. 2017. "Are U.S. Industries Becoming More Concentrated?," 67. SSRN Electronic Journal. http://dx.doi.org/10.2139/ssrn.2612047.

Gutiérrez, Germán, and Thomas Philippon. 2017. "Declining Competition and Investment in the U.S." w23583. Cambridge, MA: National Bureau of Economic Research. https://doi.org/10.3386/w23583.

Hosken, Daniel S., Luke M. Olson, and Loren K .Smith. 2017. "Do Retail Mergers Affect Competition? Evidence from Grocery Retailing." Journal of Economics & Management Strategy, 27 (1): 45.

Institute for Mergers, Acquisitions, and Alliances (IMAA), 2017. "M&A US - Mergers & Acquisitions in the United

States."

Konczal, Mike, and Marshall Steinbaum. 2016. "Declining Entrepreneurship, Labor Mobility, and Business Dynamism: A Demand-Side Approach," . The Roosevelt Institute. 35.

Kwoka, John, Kevin Hearle, and Phillippe Alepin. 2016. "From the Fringe to the Forefront: Low Cost Carriers and Airline Price Determination." Review of Industrial Organization 48 (3): 247–68.

Lefkowitz, Allen, Tim Opler and Vimal Vaderah. 2016 "Generic Pharmaceutical Industry Yearbook." Torreya Partners.

Lobmayr, Bernard. 2011. "Innovation and Regulation in High-Risk Medical Device Markets." Centre for Regulation and Market Analysis.

Martin Gaynor, Kate Ho, and Robert J. Town. 2015. "The Industrial Organization of Health-Care Markets." Journal of Economic Literature 53 (2): 235–84.

Miller, Nathan H., and Matthew C. Weinberg. 2017. "Understanding the Price Effects of the MillerCoors Joint Venture." Econometrica 85 (6): 1763–91.

Moss, Diana L. and Robert C. Taylor. 2013. "The Fertilizer Oligopoly: The Case for Global Antitrust Enforcement" American Antitrust Institute, 13-05.

Noam, Eli M. 2016. Who Owns the World's Media? Media Concentration and Ownership around the World. Oxford ; New York: Oxford University Press.

OECD. 2018. "Market Concentration" Background paper by Secretariat.

Syverson, Chad. 2016. "Challenges to Mismeasurement Explanations for the US Productivity Slowdown." Journal of Economic Perspectives 31 (2): 165–86. https://doi.org/10.1257/jep.31.2.165.

Taylor, Margaret. 2013. "An Exploration of Innovation and Energy Efficiency in an Appliance Industry." Berkeley National Laboratory.

Tenn, Steven, and John M Yun. "The Success of Divestitures in Merger Enforcement: Evidence from the J&J-Pfizer Transaction," 29.

The United States Department of Justice. 2008. U.S. and Plaintiff States v. JBS S.A. and National Beef Packing Company, LLC. Complaint.

The United States Department of Justice. 2010. Horizontal Merger Guidelines.

The United States Department of Justice. 2017. Aetna-Humana, Memorandum Opinion.

The United States Department of Justice and Federal Trade Commission. 2018. "Argument to OECD Against Increasing Concentration" OECD Note by the United States

The United States Federal Trade Commission. 2000. Pfizer Inc. - Warner-Lambert Company. Complaint.

The United States Government Accountability Office, 2014. "Airline Competition: The Average Number of Competitors Serving the Majority of Passengers Has Changed Little in Recent Years, but Stakeholders Voice Concerns about Competition"

Webber, Douglas. 2016. "Firm-Level Monopsony and the Gender Pay Gap. Industrial Relations: A Journal of Economy and Society. 55. issue 2. p. 323-345. https://EconPapers.repec.org/RePEc:bla:indres:v:55:y:2016:i:2:p:323-345.

ABOUT THE AUTHORS

Adil Abdela is a Research Associate at the Roosevelt Institute, where he researches market power and financialization. He assists Fellows Marshall Steinbaum, Lenore Palladino, and Mike Konczal in their research of financial reform, antitrust and competition policy, and the labor market. Prior to working at the Roosevelt Institute, he interned at the Department of the Treasury for the Office of Financial Stability. He earned his BA in economics at the University of Maryland and is currently obtaining his MPS in applied economics there.

Marshall Steinbaum is the Research Director and a Fellow at the Roosevelt Institute, where he researches market power and inequality. He works on tax policy, antitrust and competition policy, and the labor market. He is a co-editor of *After Piketty: The Agenda for Economics and Inequality*, and his work has appeared in *Democracy*, *Boston Review*, *Jacobin*, the *Journal of Economic Literature*, the *Industrial and Labor Relations Review*, and *ProMarket*. Steinbaum earned a PhD in economics from the University of Chicago.

ABOUT THE ROOSEVELT INSTITUTE

Until the rules work for every American, they're not working. The Roosevelt Institute asks: What does a better society look like? Armed with a bold vision for the future, we push the economic and social debate forward. We believe that those at the top hold too much power and wealth, and that our economy will be stronger when that changes. Ultimately, we want our work to move the country toward a new economic and political system: one built by many for the good of all.

It will take all of us to rewrite the rules. From emerging leaders to Nobel laureate economists, we've built a network of thousands. At Roosevelt, we make influencers more thoughtful and thinkers more influential. We also celebrate—and are inspired by—those whose work embodies the values of both Franklin and Eleanor Roosevelt and carries their vision forward today.