Opening Statement of Professor Carl Shapiro

Senate Judiciary Committee
Subcommittee on Antitrust, Consumer Protection and Consumer Rights

“The Consumer Welfare Standard in Antitrust: Outdated, or a Harbor in a Sea of Doubt?”

13 December 2017

Chairman Lee, Ranking Member Klobuchar, and Members of the Subcommittee, thank you for giving me the opportunity to testify in front of you today.

My Background

I am an economist who has been studying competition policy, and more generally the relationship between government and business, for nearly 40 years. I am a Professor of Business and Economics at the Haas School of Business at the University of California at Berkeley. I served as the Deputy Assistant Attorney General for Economics in the Antitrust Division of the Department of Justice during 2009-2011 and previously during 1995-1996. I led the working group at the Antitrust Division that, together with the Federal Trade Commission, revised the DOJ/FTC Horizontal Merger Guidelines in 2010. I also served as a Senate-confirmed Member of the President’s Council of Economic Advisers under President Obama during 2011 and 2012.

I am an advocate of vigorous, principled antitrust enforcement, especially regarding horizontal mergers. In addition to my academic research, I have served on numerous occasions as a consultant and expert witness for the Antitrust Division and for the Federal Trade Commission. Since leaving government service in 2012, I have provided testimony in Federal court as an economic expert in support of the DOJ’s successful challenge of the merger between Bazaarvoice and PowerReviews in 2013, and in support of the FTC’s successful challenge of the merger between Staples and Office Depot in 2015. I also have consulted and testified for a number of private clients in antitrust cases, and I testified on behalf of the U.K. Competition and Markets Authority in London, England in March 2017.

My recent paper, “Antitrust in a Time of Populism,” is directly relevant to the questions that the Subcommittee is exploring at this hearing.[1] That paper assesses and interprets the evidence on concentration in U.S. markets, corporate profits, and price/cost margins. Based on that evidence I call for more vigorous horizontal merger enforcement in the United States.

My recent paper with Herbert Hovenkamp, “Horizontal Mergers, Market Structure, and Burdens of Proof,” also is relevant to this hearing.[2] Based on economic evidence, that paper strongly supports the “structural presumption” in merger law, which states that mergers between rivals that significantly increase market concentration and lead to highly concentrated markets are likely to harm competition.

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[1] This paper is available on my web site at http://faculty.haas.berkeley.edu/shapiro/antitrustpopulism.pdf and is appended to this opening statement.

[2] This paper is available on my web site at http://faculty.haas.berkeley.edu/shapiro/structuralpresumption.pdf and is appended to this opening statement.

The Goal of Antitrust: Promoting Competition

Much of my career has been devoted to the goal of making sure that Americans enjoy the benefits of competitive markets. Consumers benefit from competition due to lower prices and improved products and services. *In my view, the proper goal of antitrust is straightforward: to promote competition.* We need rules of the road in three general areas to protect the competitive process from sabotage: (1) **Cartels**: rules against cartels and other forms of collusion; (2) **Mergers**: rules stopping firms from merging rather than competing, and (3) **Exclusionary Conduct by Dominant Firms**: rules stopping dominant firms from engaging in exclusionary conduct to weaken or eliminate their rivals.

The central paradox of antitrust is that to have a "free market" economy, we need these rules – we need our antitrust laws. Put starkly: to have free, competitive markets we need government oversight. We have known this for at least 125 years, since the passage of the Sherman Act, and we have taught this to many other countries. This is an American idea, not a Democratic idea or a Republican idea.

The Consumer Welfare Standard

The goal of antitrust is to promote competition. But how do we make that goal operational when it comes to antitrust enforcement? In practice, the antitrust enforcement agencies and antitrust courts apply the "consumer welfare" standard. As I use the term, applying the "consumer welfare" standard means that *a business practice is judged to be anti-competitive if it disrupts the competitive process and harms trading parties on the other side of the market*. To illustrate how this works, let us consider the three general areas identified above: cartels, mergers, and exclusionary conduct by dominant firms.

Cartels: Consider a cartel among retail gasoline stations that elevates the retail price of gasoline. This cartel replaces competition with collusion, so it obviously disrupts the competitive process. This cartel also clearly harms consumers by elevating the price of gasoline at the pump. In general, cartels disrupt the competitive process and harm the customers that buy from members of the cartel. In my example, those customers are final consumers, so the "trading parties on the other side of the market" are consumers. Hence, the term "consumer welfare standard" is very fitting.

Next, consider a cartel that raises the price of jet fuel. This cartel replaces competition with collusion, so it obviously disrupts the competitive process. This cartel directly harms the airlines that purchase jet fuel, not airline passengers, who are the final consumers. For the jet fuel cartel, the "trading parties on the other side of the market" are airlines. This cartel is anti-competitive under the "consumer welfare" standard because it disrupts the competitive process and harms these trading parties, namely the airlines. Under the "consumer welfare" standard, properly interpreted, we need not trace through the effect of the cartel on airline passengers to conclude that the jet fuel cartel is anti-competitive.

Mergers: Mergers between rivals also replace competition with coordination, as the two merging firms come under common ownership. As with cartels, the typical danger is that the loss of competition will lead to higher prices, reduced product quality, or other harms to the customers purchasing from the merging firms, who are the "trading parties on the other side of the market." A horizontal merger is judged to be anti-competitive if it significantly reduces competition and harms the trading parties on the other side of the market. In an airline merger, those trading parties are consumers, namely airline passengers. Hence, the term "consumer welfare standard" is very fitting.

Next, consider a proposed merger between two railroads that carry corn from farms in Iowa to customers in Chicago. This merger may substantially reduce competition in the transportation of corn from Iowa to Chicago. This merger may well harm farmers in Iowa by enhancing the merged railroad's *buyer power*, even if the merger does not harm the customers who purchase corn in Chicago, perhaps because they can purchase corn coming from many other locations, not just from Iowa. This merger is judged anti-competitive if it significantly reduces competition and harms the trading parties on the other

side of the market. In the railroad merger, those trading parties are the farmers seeking to ship their corn from Iowa to Chicago. We still use the term "consumer welfare standard," but when antitrust analysis involves possible buyer power, the term "supplier welfare standard" would be more precise.

Exclusionary Conduct by Dominant Firms: The analysis becomes a bit trickier when we look at the behavior of large, dominant firms. Suppose that a large, dominant firm charges lower prices than its rivals, or offers a superior product, and thus drives smaller firms, which cannot match its offerings, from the market. Even if this firm gains a dominant market position, that must be seen as the *result* of competition, not as a failure of the competitive process. To find otherwise would tie antitrust in knots by encouraging firms to compete and then turning on them when they succeed. In this situation, the goal of "promoting competition" again lines up nicely with a "consumer welfare" objective. The firm in question has been competing, and the trading parties on the other side of the market are the beneficiaries of that competition. In contrast, if a dominant firm threatens to cut off any trading parties who deal with its smaller rivals, such exclusive dealing can exclude rivals and harm those trading parties, and thus can be judged anti-competitive under the "consumer welfare" standard. By evaluating conduct based on its impact on trading parties on the other side of the market, we can accurately distinguish between legitimate forms of competition (such low prices) and anti-competitive conduct (such as exclusive dealing). That is the essence of the "consumer welfare" standard as applied to dominant firms.

Over the past 100 years, many people have been tempted to cry foul when a single firm gains a dominant position, and have called upon antitrust to remedy the situation. This is the second major paradox of competition policy: sometimes, the competitive process leads to a single firm having a dominant market position. So long as that firm has played fair, competing on the merits, this outcome should not be seen as a failure of antitrust. However, since dominant firms have powerful incentives to protect their position and keep threats at bay, it is critical for antitrust to be vigilant to make sure that dominant firms do not engage in exclusionary conduct. This is certainly true in the tech sector today, as I discuss in my article, "Antitrust in a Time of Populism." While every case is different, as a good simple guide, a dominant firm crosses the line if it excludes rivals through conduct that does not benefit the parties with which it trades. Again, the "consumer welfare" standard serves as a valuable guide.

I have seen no evidence whatsoever that the "consumer welfare" standard is somehow outdated, so long as one accepts that the goal of antitrust is to promote competition. One of the wonderful things about our antitrust laws is that they express very broad concepts and principles – promoting competition and protecting consumers – and have proven extremely flexible over more than 100 years to address new situations, as our entire economy has evolved, with economic activity shifting over a long period of time from agriculture toward manufacturing and then toward services.

Furthermore, those who say that the "consumer welfare" standard is narrowly focused on price to the exclusion of other factors are simply incorrect: properly applied, the "consumer welfare" standard includes a range of factors that benefit consumers, not just low prices but improved product variety and product quality and of course more rapid innovation. Likewise, those who say that the "consumer welfare" standard is overly focused on short-term outcomes are mistaken.

As I embrace the "consumer welfare" standard, I would like to be very clear: *adopting the "consumer welfare" standard absolutely does not mean that one is assuming that market power is rare or transitory*. Those who claim or insinuate that anyone adopting the "consumer welfare" standard is necessarily in favor of a laissez-faire antitrust policy are simply incorrect. I put my own career forward as Exhibit A on that point. In my view, durable market power is quite common in the U.S. economy, which is why I favor vigorous antitrust enforcement. And I am hardly alone. During the 40 years that I have been studying and practicing antitrust, there has been a broad consensus among antitrust scholars and practitioners in favor of the "consumer welfare" standard. No evidence whatsoever has been put

forward calling this consensus into question. Indeed, I know of no serious antitrust experts who favor abandoning the “consumer welfare” standard, and no workable alternative has been proposed.

Horizontal Mergers and the Structural Presumption

A wide range of evidence supports vigorous horizontal merger enforcement in the United States. My two papers cited above detail this evidence, which includes evidence from merger retrospectives, evidence of growing corporate profits, evidence that economies of scale have become more important in many industries, evidence of substantial differences in productivity across firms in the same industry, and highly detailed evidence from a great many merger investigations.

More specifically, I favor moderately more aggressive horizontal merger enforcement than we have seen in recent years. While legislation could well help in this regard, I believe the necessary level of merger enforcement can be achieved through suitable enforcement decisions taken by the DOJ and the FTC, so long as the DOJ and FTC are skillful and effective at conducting investigations and presenting their cases in court, and so long as they are provided with the resources necessary to do so.

Nor would a more assertive approach to horizontal merger enforcement require any major shift in the case law. The courts need only (1) define relevant markets or submarkets using the widely accepted “hypothetical monopolist test,” as detailed in the DOJ/FTC Horizontal Merger Guidelines, and then (2) apply the structural presumption, which has been deeply established in the case law for over 50 years, which shifts the burden of proof onto the merging parties if their proposed merger substantially increases concentration in a properly-defined relevant market or submarket.

The structural presumption is a critical element of effective merger enforcement, so retaining and strengthening the structural presumption is essential. Eliminating or weakening the structural presumption would substantially undermine merger enforcement, the precise opposite of what the evidence indicates that we now need.

The Limits of Antitrust

Many of those who criticize the “consumer welfare” standard seem motivated by concerns about the political power of large corporations, or about the extreme levels of inequality in income and wealth found in the United States today. I very much share these concerns. We very much need campaign finance reform, and greater transparency regarding money in politics, to control the excessive political power of large corporations. We very much need a more progressive tax system, and better health care and educational opportunities for all Americans, especially children, to reduce levels of inequality.

But asking antitrust to solve these problems is very likely to be counterproductive. Antitrust enforcement agencies and courts are ill suited to handle these broader problems. Worse yet, *the core mission of antitrust, to promote competition, could easily be undermined if we ask antitrust to solve problems unrelated to competition*. For example, asking the DOJ to block mergers that enhance political power, as distinct from economic power, would necessarily politicize antitrust enforcement, which strikes me as extremely dangerous and unwise.

Finally, it is important to recognize that antitrust is just one arrow in the quiver of available policies to promote competition and protect consumers. The Federal Communications Commission has the authority to promulgate rules that protect media diversity, the Federal Energy Regulatory Commission has the authority to establish rules to promote competition in wholesale electricity markets, and the Department of Transportation has the authority to promote international airline competition, to give just a few examples. Antitrust rules necessarily apply across the entire economy. They cannot and should not substitute for tailored rules needed in specific sectors.

Antitrust in a Time of Populism[*]

Carl Shapiro[†]

24 October 2017

Abstract

This article discusses how to move antitrust enforcement forward in a constructive manner during a time of widespread and growing concern over the political and economic power of large corporations in the United States. Three themes are emphasized. First, a body of economic evidence supports more vigorous merger enforcement in the United States. This can and should be done in a manner consistent with sound economic principles. Tighter merger control can be achieved by utilizing the existing legal presumption against highly concentrating mergers and by reinvigorating the potential competition doctrine to block mergers between firms that may well become important direct rivals in the foreseeable future. Second, close antitrust scrutiny is appropriate for today's largest and most powerful firms, including those in the tech sector. However, the coherence and integrity of antitrust require that successful firms not be attacked simply because they obtain dominant positions. Proper antitrust enforcement regarding unilateral conduct by dominant firms should continue to focus on identifying specific conduct that harms customers or disrupts the competitive process, especially conduct that excludes pesky, disruptive rivals. Third, while antitrust enforcement has a vital role to play in keeping markets competitive, antitrust law and antitrust institutions are ill suited to directly address concerns associated with the political power of large corporations or other public policy goals such as income inequality or job creation. Campaign finance reform, tax policy, labor, education, and other policies are far better suited to address those critical public policy goals.

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[*] Forthcoming, *International Journal of Industrial Organization*. I thank Aaron Edlin, Joe Farrell, Steven Salop, Fiona Scott Morton, Yossi Spiegel, Steve Tadelis, and three anonymous referees for very helpful comments on an earlier draft. This article is an updated and expanded version of my keynote address at the CRESSE conference in Heraklion-Crete, Greece in July 2017. Please send any comments and corrections on this draft to cshapiro@berkeley.edu. This paper is available at http://faculty.haas.berkeley.edu/shapiro/antitrustpopulism.pdf.

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1. Introduction

Antitrust is sexy again. Where does this take us?

American politicians are calling on antitrust to solve an array of problems associated with the excessive power of large corporations in the United States. As a recent leading example, in July 2017 Congressional Democrats unveiled "A Better Deal: Cracking Down on Corporate Monopolies and the Abuse of Economic and Political Power."[1] Their plan calls for much tougher merger enforcement and greater government oversight "to stop abusive conduct and the exploitation of market power where it already exists."

Not since 1912, when Teddy Roosevelt ran for President emphasizing the need to control corporate power, have antitrust issues had such political salience.[2] While Roosevelt did not win, Congress passed the Federal Trade Commission Act and the Clayton Act in 1914, significantly strengthening the Sherman Act. Indeed, the Sherman Act itself was passed in 1890 in response to broad concerns about the political and economic power of large corporations in America, as illustrated in this 1889 political cartoon, "The Bosses of the Senate."

"The Bosses of the Senate," Puck, 23 January 1889

[1] See https://democrats.senate.gov/wp-content/uploads/2017/07/A-Better-Deal-on-Competition-and-Costs-1.pdf.

[2] Roosevelt's views are expressed in his famous 1910 "New Nationalism" speech, delivered in Osawatomie, Kansas; see http://teachingamericanhistory.org/library/document/new-nationalism-speech/. This passage is especially relevant today: "Combinations in industry are the result of an imperative economic law which cannot be repealed by political legislation. The effort at prohibiting all combination has substantially failed. The way out lies, not in attempting to prevent such combinations, but in completely controlling them in the interest of the public welfare."

Today's concerns about corporate power, and today's renewed interest in antitrust, represent an opportunity to strengthen competition policy in the United States. This opportunity extends to all three branches of government: the Department of Justice and the Federal Trade Commission can take a tougher line enforcing the antitrust laws, the courts can interpret the very broad antitrust statutes in ways that support more vigorous antitrust enforcement, and Congress could strengthen the antitrust laws. The central purpose of this article is to assess the relevant economic evidence regarding competition in the U.S. economy and then, based on that evidence and on antitrust learning and experience, identify ways to improve and strengthen antitrust.

In Section 2, I document that we truly are at a moment when there is widespread and growing concern among politicians and journalists that the American economy has become significantly less competitive over the past several decades. In Section 3, I then look more deeply at the economic evidence relating to trends in competition in the U.S. economy. I focus on evidence about economic concentration and corporate profits and what it implies about competition. In Section 4, I then discuss competition policy responses to the rising economic concentration and unprecedented corporate profits that we are observing. Section 5 concludes.

Before turning to those topics, I would like to emphasize that the role of antitrust in promoting competition could well be *undermined* if antitrust is called upon or expected to address problems not directly relating to competition. Most notably, antitrust is poorly suited to address problems associated with the excessive political power of large corporations. Let me be clear: the corrupting power of money in politics in the United States is perhaps the gravest threat facing democracy in America.[3] But this profound threat to democracy and to equality of opportunity is far better addressed through campaign finance reform and anti-corruption rules than by antitrust. Indeed, introducing issues of political power into antitrust enforcement decisions made by the Department of Justice could dangerously politicize antitrust enforcement.

Antitrust also is poorly suited to address issues of income inequality. Many other public policies are far superior for this purpose. Tax policy, government programs such as Medicaid, disability insurance, and Social Security, and a whole range of policies relating to education and training spring immediately to mind. So, while stronger antitrust enforcement will modestly help address income inequality, explicitly bringing income distribution into antitrust analysis would be unwise. Baker and Salop (2015) identify a number of ways in which antitrust could help address inequality while staying true to its mission of promoting competition.

2. The New Conventional Wisdom: Competition in America Has Declined

Until quite recently, few were claiming that there has been a substantial and widespread decline in competition in the United States since 1980. And even fewer were suggesting that such a decline in competition was a major cause of the increased inequality in the United States in recent decades, or the decline in productivity growth observed over the past 20 years.

Yet, somehow, over the past two years, the notion that there has been a substantial and widespread decline in competition throughout the American economy has taken root in the

[3] Much of the problem seems to arise from an overly narrow definition of "corruption" adopted in recent years by the Supreme Court. See Zephyr Teachout (2014). The inability of Congress to police itself is also a major reason why large companies have so much political power. Of course, economists and political scientists have long recognized the dangers associated with regulatory capture, and legislators are hardly immune to this disease.

popular press. In some circles, this is now the conventional wisdom, the starting point for policy analysis rather than a bold hypothesis that needs to be tested.

Since 2015, there has been a regular drumbeat in the press reporting on a supposed decline of competition in the United States. In October 2015, the *Wall Street Journal*, hardly an anti-business publication, wrote: "A growing number of industries in the U.S. are dominated by a shrinking number of companies."[4] Later that month, the *New York Times* stated: "Markets work best when there is healthy competition among businesses. In too many industries, that competition just doesn't exist anymore."[5] Eduardo Porter of the *New York Times* later connected increasing inequality with a decline of competition, under the title: "With Competition in Tatters, the Rip of Inequality Widens."[6]

The *Economist*, a highly respected publication regarding economic policy, has been especially sharp and persistent in asserting that there has been a substantial decline in competition in recent years. In March 2016, the Economist published a lengthy report stating: "Profits are too high. America needs a giant dose of competition."[7] In September 2016, the *Economist* special report, "The Rise of the Superstars," highlighted the dangers to competition posed by today's largest and most successful tech companies.[8] The magazine's summary of this report was entitled: "The Superstar Company: A Giant Problem," along with the subtitle: "The rise of the corporate colossus threatens both competition and the legitimacy of business."[9] That summary concluded: "The world needs a healthy dose of competition to keep today's giants on their toes and to give those in their shadow a chance to grow." The *Economist* has also expressed grave concerns over passive investment funds, such as index funds, that take large ownership stakes in multiple firms in the same industry. The *Economist* fears that these investments dull competition, calling them a form of "stealth socialism," asserting that "passive investment funds create headaches for antitrust authorities, and even describing such investments as "a contradiction at the heart of financial capitalism."[10]

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[4] Theo Francis and Ryan Knutson, "Wave of Megadeal Tests Antitrust Limits in U.S.," *Wall Street Journal*, 18 October 2015, available at https://www.wsj.com/articles/wave-of-megadeals-tests-antitrust-limits-in-u-s-1445213306.

[5] "How Mergers Damage the Economy," The Editorial Board, *New York Times*, 1 November 2015, available at https://www.nytimes.com/2015/11/01/opinion/sunday/how-mergers-damage-the-economy.html?_r=0.

[6] *New York Times*, 12 July 2016, available at https://www.nytimes.com/2016/07/13/business/economy/antitrust-competition-inequality.html.

[7] Economist, 26 March 2016, "Too Much of a Good Thing," available at https://www.economist.com/news/briefing/21695385-profits-are-too-high-america-needs-giant-dose-competition-too-much-good-thing.

[8] Economist, 17 September 2016, available at https://www.economist.com/news/special-report/21707048-small-group-giant-companiessome-old-some-neware-once-again-dominating-global.

[9] *Economist*, 17 September 2016, available at https://www.economist.com/news/leaders/21707210-rise-corporate-colossus-threatens-both-competition-and-legitimacy-business.

[10] "Stealth Socialism," *Economist*, 17 September 2016, available at https://www.economist.com/news/finance-and-economics/21707191-passive-investment-funds-create-headaches-antitrust-authorities-stealth.

The drumbeat continues. *Business Week* recently reported: "Market concentration in the U.S. has reached a three-decade high, while the government has opened fewer antitrust cases."[11]

The view that competition has declined in the American economy during recent decades is not confined to the popular press. President Obama's Council of Economic Advisers added some high-octane fuel to the fire in May 2016 with its release of an issues brief entitled "Benefits of Competition and Indicators of Market Power." In typical Obama-CEA style, this report was carefully worded with numerous caveats, and it properly cited empirical evidence and the academic economics literature. But overall the CEA report was generally interpreted as embracing the view that the American economy has experienced a decline in competition over the past several decades. After all, the lead paragraph states: "Several indicators suggest that competition may be decreasing in many economic sectors, including the decades-long decline in new business formation and increases in industry-specific measures of concentration." I discuss the findings of this report below.

A number of progressive think tanks and advocates have issued reports over the past two years documenting the decline in competition in the American economy, linking that decline to increasing inequality, and offering policy proposals to reinvigorate competition policy. The American Antitrust Institute, a respected organization long committed to more effective antitrust enforcement, published a report in June 2016 entitled "A National Competition Policy: Unpacking the Problem of Declining Competition and Setting Priorities Moving Forward." This report lists three main symptoms of declining competition: rising concentration, higher profits to a few big firms combined with slowing rates of start-up activity, and widening inequality gaps. The report rather boldly claims (p.7): "There is a growing consensus that inadequate antitrust policy has contributed to the concentration problem and associated inequality effects."

That same month, the Center for America Progress issued a report entitled "Reviving Antitrust: Why Our Economy Needs a Progressive Competition Policy." The introduction and summary to this report states: "there is systematic evidence – ranging from the disconnect of corporate profits and corporate investment to evidence of persistent supra-normal profitability – that points to an increase in rent extraction in the U.S. economy." These ills are then linked to inadequate antitrust enforcement over the past few decades.

Also in June 2016, the Roosevelt Institute issued a report, "Untamed: How to Check Corporate, Financial and Monopoly Power." The first chapter in this report, "Restoring Competition in the U.S. Economy," opens this way: "Increasing market concentration across the American economy has been a driver of declining economic opportunity and widening inequality in recent decades. In industries ranging from hospitals and airlines to agriculture and cable, markets are now more concentrated and less competitive than at any point since the Gilded Age."[12] In March 2017, the Roosevelt Institute released a paper, "Toward a Broader View of Competition Policy," by none other than Nobel Laureate Joseph Stiglitz. In the abstract, Stiglitz highlights "the increase in market power across many important sectors of the U.S. economy and persistent higher rates of return to capital than seem consistent with competition." He adds: "These monopoly rents, may, in turn, play an important role in the country's growing inequality."

[11] "Here's How They Play Monopoly in America, and Who Wins," Business Week, 5 April 2017, available at https://www.bloomberg.com/news/articles/2017-04-05/here-s-how-they-play-monopoly-in-america-and-who-wins.

[12] See p. 18, with a footnote citing the 26 March 2016 *Economist* article, "Too Much of a Good Thing," noted above. The authors of this chapter are K. Sabeel Rahman and Lina Khan.

The Washington Center for Equitable Growth joined the chorus, releasing a paper in March 2017 by antitrust expert Jonathan Baker, "Market Power in the U.S. Economy Today." Baker opens his paper with this paragraph: "The U.S. economy has a 'market power' problem, notwithstanding our strong and extensive antitrust institutions. The surprising conjunction of the exercise of market power with well-established antitrust norms, precedents, and enforcement institutions is the central paradox of U.S. competition policy today." In February 2017, Barry Lynn, then the director of the Open Markets program at New America, went so far as to state: "The idea that America has a monopoly problem is now beyond dispute."[13]

Progressive politicians have also been expressing concerns about declining competition and growing corporate power. Early in the presidential campaign, in October 2015, Hillary Clinton stated: "Economists, including President Obama's Council of Economic Advisers, have put their finger on what's going on: large firms are concentrating their control over markets."[14] Later in the campaign, her campaign web site promised: "A new commitment to promote competition, address excessive concentration and the abuse of economic power, and strengthen antitrust laws and enforcement."[15] The 2016 Democratic Party Platform contained a section entitled "Promoting Competition by Stopping Corporate Concentration," which stated: "Large corporations have concentrated their control over markets to a greater degree than Americans have seen in decades – further evidence that the deck is stacked for those at the top."[16]

Senator Elizabeth Warren has been especially vocal about the decline of competition in America and the need for stronger policies to reign in corporate power. She gave a detailed speech on this topic in June 2016 at New America's Open Markets Program, in which she stated: "Today in America competition is dying. Consolidation and concentration are on the rise in sector after sector. Concentration threatens our markets, threatens our economy, and threatens our democracy."[17] The need to control corporate power is an ongoing theme for Senator Warren. In May 2017 she stated: "It's time for us to do what Teddy Roosevelt did – and pick up the antitrust stick again. Sure, that stick has collected some dust, but the laws are still on the books."

In July 2017, the Democratic party gave considerable prominence to antitrust issues in the "Better Deal" it put forward to attract voters.[18] Their "Better Deal" plan has three prongs: (1) "new standards to limit large mergers that unfairly consolidate corporate power," (2) "tough

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[13] Barry Lynn, "America's Monopolies are Holding Back the Economy," The Atlantic, 22 February 2017, available at https://www.theatlantic.com/business/archive/2017/02/antimonopoly-big-business/514358/.

[14] Hillary Clinton, "Being Pro-Business Doesn't Mean Hanging Consumers Out to Dry," Quartz, 20 October 2015, available at https://qz.com/529303/hillary-clinton-being-pro-business-doesnt-mean-hanging-consumers-out-to-dry/.

[15] https://www.hillaryclinton.com/briefing/factsheets/2016/10/03/hillary-clintons-vision-for-an-economy-where-our-businesses-our-workers-and-our-consumers-grow-and-prosper-together/

[16] See https://www.democrats.org/party-platform, p. 12.

[17] Senator Elizabeth Warren, "Reigniting Competition in the American Economy," 29 June 2016, available at https://www.warren.senate.gov/files/documents/2016-6-29_Warren_Antitrust_Speech.pdf.

[18] "Congressional Democrats Promise a 'Better Deal' for American Workers, *New York Times*, 24 July 2017, available at https://www.nytimes.com/2017/07/24/us/politics/congressional-democrats-promise-a-better-deal-for-american-workers.html.

post-merger review," and (3) "a new consumer competitive advocate."[19] In September 2017, Senator Klobuchar introduced the "Consolidation Prevention and Competition Promotion Act of 2017," which would greatly strengthen the ability of the antitrust agencies to block horizontal mergers and to evaluate the effects of mergers that are consummated.[20]

Perhaps these sentiments are unsurprising, coming from progressive think tanks and politicians during a time of populism. But they are not just coming from that quarter. Concerns about corporate concentration and corporate power are bipartisan, in rhetoric if not in action. During the presidential campaign, candidate Donald Trump stated: "It's not just the political system that rigged, it's the whole economy."[21] He vowed to stop AT&T from acquiring Time Warner, calling their merger "an example of the power structure I'm fighting."[22] After the election, Vice-President Elect Pence stated: "The free market has been sorting it out and America's been losing," at which point President-Elect Trump chimed in: "Every time, every time."[23]

All of this chatter has even reached the ivory tower. The shifting terms of the debate were impossible to miss at the University of Chicago conference in March 2017, "Is There a Concentration Problem in America."[24] Notably, this conference took place at the home of the Chicago School, which is associated with Milton Friedman and George Stigler. The Chicago School ushered in a far more circumscribed approach to antitrust enforcement around 1980.[25] Yet one speaker after another at this conference argued that antitrust enforcement needs to be strengthened. The title of the article in the *Economist* reporting on this conference says it all: "The University of Chicago worries about a lack of competition. Its economists used to champion big firms, but the mood has shifted."[26]

3. Taking a Closer Look at the Evidence

In this section, I step back and ask what the empirical evidence actually shows about trends in competition in the United States over the past 30 to 40 years. I consider this an essential predicate to discussion of the various proposals to strengthen U.S. competition policy.

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[19] See https://graphics.axios.com/pdf/better-deal-competition-and-cost.pdf?utm_source=newsletter&utm_medium=email&utm_campaign=newsletter_axiosam&stream=top-stories.

[20] See https://www.klobuchar.senate.gov/public/index.cfm/news-releases?ID=FB9C644A-2F7B-4FB1-9003-0E0C667E1027.

[21] http://www.politico.com/story/2016/06/transcript-trump-speech-on-the-stakes-of-the-election-224654.

[22] See https://www.washingtonpost.com/news/the-switch/wp/2016/11/11/trump-may-have-a-harder-time-blocking-the-massive-att-time-warner-merger-than-he-thought/?utm_term=.44921a16844e.

[23] https://www.nytimes.com/2016/12/01/business/economy/trump-carrier-pence-jobs.html.

[24] https://research.chicagobooth.edu/stigler/events/single-events/march-27-2017. This conference was sponsored by the Stigler Center for the Study of the Economy and the State and was organized by Luigi Zingales and Guy Rolnik.

[25] Many date the shift to the publication of Robert Bork's book, *The Antitrust Paradox* in 1978. The election of President Reagan and the new antitrust enforcement policies put in place by Assistant Attorney General William Baxter were critical for implementing the ideas in Bork's book.

[26] 12 April 2017, available at https://www.economist.com/news/business/21720657-its-economists-used-champion-big-firms-mood-has-shifted-university-chicago.

A. Trends in Market Concentration

The starting point for most assertions that there has been a significant and widespread decline in competition in the United States in recent decades is the claim that U.S. markets have systematically become far more *concentrated*. Purely as a factual matter, is this actually true?

Before I turn to the data, I would like to state clearly and categorically that I am looking here for *systematic and widespread* evidence of significant increases in concentration in well-defined markets in the United States. Nothing in this section should be taken as questioning or contradicting separate claims regarding changes in concentration in specific markets or sectors, including some markets for airline service, financial services, health care, telecommunications, and information technology. In a number of these sectors, we have far more detailed evidence of increases in concentration and/or declines in competition. In my view, no high-level look at the American economy can substitute for detailed studies of specific markets when it comes to assessing market power. Nonetheless, understanding broad trends is certainly valuable, and, as illustrated above, many are claiming that there has been a systematic and widespread decline in competition in America. Here, I am evaluating those claims, not assessing concentration or competition in specific markets or sectors.

Industrial organization economists have understood for at least 50 years that it is extremely difficult to measure market concentration across the entire economy in a systematic manner that is both consistent and meaningful. Going back to the 1950s, economists seeking to understand the relationship between concentration and profits struggled long and hard with these difficulties, in the end with only limited success.[27] One unavoidable and persistent problem is conceptual: defining relevant markets in which to measure market shares is known to be difficult in individual antitrust cases, and is well-nigh impossible to do consistently on an economy-wide basis. The second problem is very practical and can change over time: what data on sales, prices and costs are actually available on a systematic basis, and how good are those data?

So far as I can tell, recent assertions regarding economy-wide trends market concentration in the American economy have largely ducked both of these problems. This does not mean that the reported results are meaningless, but certainly one should understand the underlying data and their limitations when interpreting those results. That is my limited goal here.

1. Measuring Changes in Concentration Over Time

Let me start with the April 2016 report by the Council of Economic Advisers cited above. Below, I reproduce Table 1 from that report. The CEA states flatly: "Table 1 shows that the majority of industries have seen increases in the revenue share enjoyed by the 50 largest firms between 1997 and 2012." Fair enough – but what are we to make of this fact?

[27] See Schmalensee (1989) and Salinger (1990).

Table 1: Change in Market Concentration by Sector, 1997-2012

Industry	Revenue Earned by 50 Largest Firms, 2012 (Billions $)	Revenue Share Earned by 50 Largest Firms, 2012	Percentage Point Change in Revenue Share Earned by 50 Largest Firms, 1997-2012
Transportation and Warehousing	307.9	42.1	11.4
Retail Trade	1,555.8	36.9	11.2
Finance and Insurance	1,762.7	48.5	9.9
Wholesale Trade	2,183.1	27.6	7.3
Real Estate Rental and Leasing	121.6	24.9	5.4
Utilities	367.7	69.1	4.6
Educational Services	12.1	22.7	3.1
Professional, Scientific and Technical Services	278.2	18.8	2.6
Administrative/ Support	159.2	23.7	1.6
Accommodation and Food Services	149.8	21.2	0.1
Other Services, Non-Public Admin	46.7	10.9	-1.9
Arts, Entertainment and Recreation	39.5	19.6	-2.2
Health Care and Assistance	350.2	17.2	-1.6

Note: Concentration ratio data is displayed for all North American Industry Classification System (NAICS) sectors for which data is available from 1997 to 2012.
Source: Economic Census (1997 and 2012), Census Bureau.

I do not consider Table 1 to be informative regarding overall trends in concentration in well-defined relevant markets that are used by antitrust economists to assess market power, much less trends in competition in the U.S. economy. My objections to Table 1 are fundamental: (a) the fifty-firm concentration ratio (CR_{50}) reported in Table 1 *is not informative regarding the state of competition*. Industrial organization economists generally believe that markets are normally quite competitive with far fewer than fifty firms, so we measure concentration using the Herfindahl Index (HHI) or perhaps the four-firm concentration ratio (CR_4); (b) the two-digit industry groupings in Table 1 are *far too broad* to assess market power, so the trends observed may well reflect nothing more than the expansion of successful, efficient firms into related lines of business, to the benefit of consumers, even as they are likely to mask worrisome increases in concentration in far narrower, properly-defined relevant markets; (c) the revenue shares reported in Table 1 are calculated on a *national* basis, yet many of the relevant markets are regional or local, so the trends observed may well reflect nothing more than the expansion by successful, efficient firms into new geographic regions, to the benefit of consumers, even as they are likely to mask worrisome increases in concentration in specific local or regional markets.

The CEA was no doubt well aware of these problems with Table 1 when it issued its report. The CEA was careful to qualify the figures shown in Table 1, stating: "The statistics presented in Table 1 are national statistics across broad aggregates of industries, and an increase in revenue concentration at the national level is neither a necessary nor sufficient condition to indicate an increase in market power. Instead, antitrust authorities direct their attention to concentration at

the relevant market level for each product or service. Those data are not readily available across the economy."[28] Unfortunately, many of those citing the CEA Report as not nearly so careful.

In the end, Table 1 reflects the growing role of large firms in the American economy, but it tells us little or nothing about trends in concentration in properly-defined relevant markets, and thus it tells us little or nothing about trends in market power. Sheer size and market power are just not the same thing. Sheer size would appear to matter much more for *political* power than for economic power. As noted above, my focus here is on economic power.

Another widely cited source for the proposition that U.S. markets have become systematically more concentrated in recent decades is the *Economist*. In March 2016 the *Economist* published a very useful chart, "A Widespread Effect," showing the four-firm concentration ratio in some 893 "individual industries," in the United States in 1997 and 2012.[29] I reproduce this chart below.

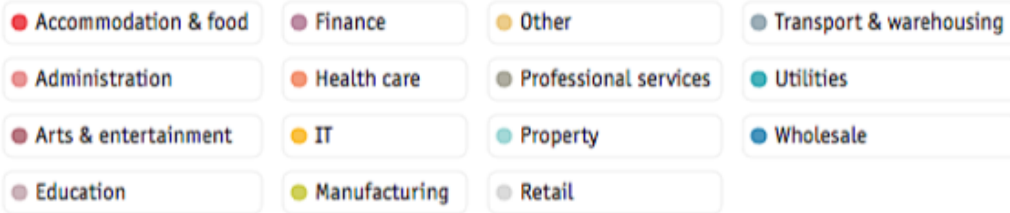
[28] Recognizing the limitations of Table 1, the CEA cites a number of studies showing rising concentration in specific industries, including bank loans and deposits (nationally, 1980 to 2010), several agricultural industries (1972 to 2002), hospital markets (early 1990s to 2006), wireless providers (2004 to 2014), and railroad markets. As noted above, I steer clear here of studies of specific industries and focus on systematic evidence across the U.S. economy.

[29] See "Corporation Concentration: The Creep of Consolidation Across America's Corporate Landscape," available at https://www.economist.com/blogs/graphicdetail/2016/03/daily-chart-13, 24 March 2016. This web site is a very handy interactive tool which readers are encouraged to visit and explore.

A widespread effect

Top four firms' share of total industry revenue, %

893 industries, grouped by sector, United States



Sources: US Census Bureau; *The Economist*

*Latest available, 2007 or 2012

This chart is based on data from the Economic Census. So far as I can tell, each of the 893 "industries" in the chart corresponds to a four-digit industry under the NAICS classification system used by the Census Bureau. Industries in which the four-firm concentration ratio increased from 1997 to 2007 (or 2012) appear above the 45-degree line. The size of the circle is proportional to revenues in the industry, and the color denotes the sector of the economy in which that industry belongs.

These 893 “industries” are far closer to relevant antitrust product markets than are the two-digit sectors used by the CEA. But still not all that close. Here are a few example of the larger “industries” appearing in the *Economist* chart, with their corresponding revenues and the change in CR4 from 1997 to 2012:

- full-service restaurants ($224 billion, CR4 up from 8% to 9%);
- direct health and medical insurance carriers ($647 billion, CR4 up from 20% to 34%)
- general medical and surgical hospitals ($657 billion, CR4 down from 11% to 8%)
- scheduled passenger air service ($157 billion, CR4 up from 25% to 65%)
- supermarket and other grocery stores ($537 billion, CR4 up from 21% to 31%)
- wired telecommunications carriers ($286 billion, CR4 up from 47% to 51%)

These examples illustrate a major problem with any claim based on these data that concentration has systematically risen in well-defined relevant markets, much less than there has been a decline in competition in these markets: the *geographic* markets for many of these services, including those for full-service restaurants, supermarkets, wired telecommunications services, and hospitals, are *local*, while the measurement exercise is being done at the *national* level.

As an illustration of the basic measurement issue, consider what happens to concentration measured at the national level if we begin with a situation in which each of many local markets has five stores, all locally owned with no cross-ownership across geographies. Then suppose that four national chains arise, and each local market shifts to having a store from each of these four national chains plus one locally-owned store. This shift causes no change at all in concentration at the local level, i.e., in the properly defined relevant markets. Each local HHI is 2000 before and after the rise of the national chains (five stores, each with 20%). Nationally, however, the HHI starts near zero and grows to 1600 (four chains each with 20% nationally). This shift could well go along with lower prices and better service for customers.[30]

So, while these data do reflect the fact that large, national firms have captured an increasing share of overall revenue during the past 20 years in many of these 893 “industries,” they do not, in and of themselves, indicate that the relevant *local* markets have become more concentrated. This point is quite important in many of the markets in most of the major sectors reported by the *Economist*: Accommodations and Food, Finance, Health Care, IT, Professional Services, Property, Retail, Transport & Warehousing, Utilities, and Wholesale. The general shift from local firms to national firms is not a cause for concern from the perspective of competition policy if this shift is the result of these national firms providing greater value to consumers. Of course, this shift is a cause for concern if one believes for other reasons that it is important to protect small businesses and entrepreneurs from competition by larger firms.

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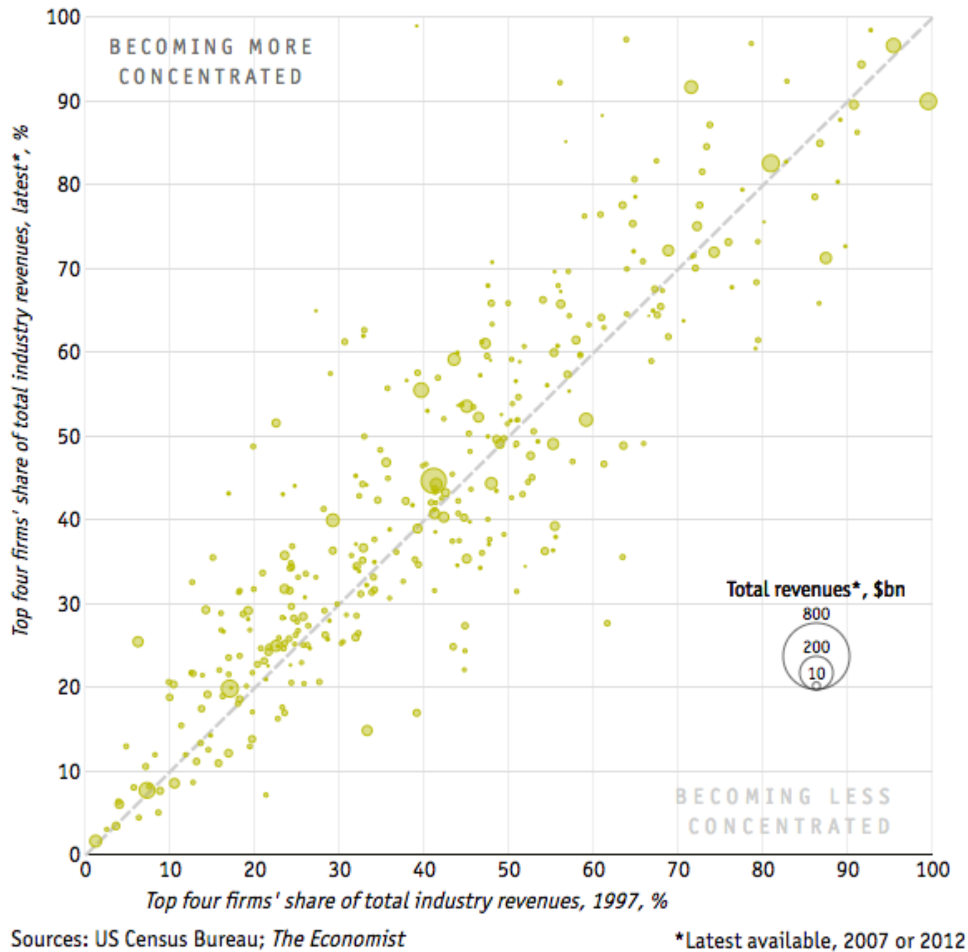
[30] Indeed, small local firms often state that they find it very difficult to compete against large national chains, in large part because the chains have lower costs and thus can charge lower prices. If the competitive process is working properly, and if consumers prefer to shop from locally-owned stores, those preferences would give local stores one competitive advantage over national chains that would to some degree offset their lower costs. Related, antitrust should generally not stand in the way of groups of local stores from different areas working together to obtain the benefits of volume purchasing as a means to compete more effectively with the national chains.

A distinct problem arises in the manufacturing sector. The following chart illustrates the data from the *Economist* confined to manufacturing:



The *Economist* reports a small increase from 1997 to 2012 in the weighted-average CR4 across these manufacturing "industries" from about 41% to about 43%, in these Economic Census data. Moreover, it is important to understand, when interpreting this increase in concentration, that the Economic Census data only report production at *domestic* establishments. These data do not include imports of manufactured products, which have grown dramatically over the past 20 years.

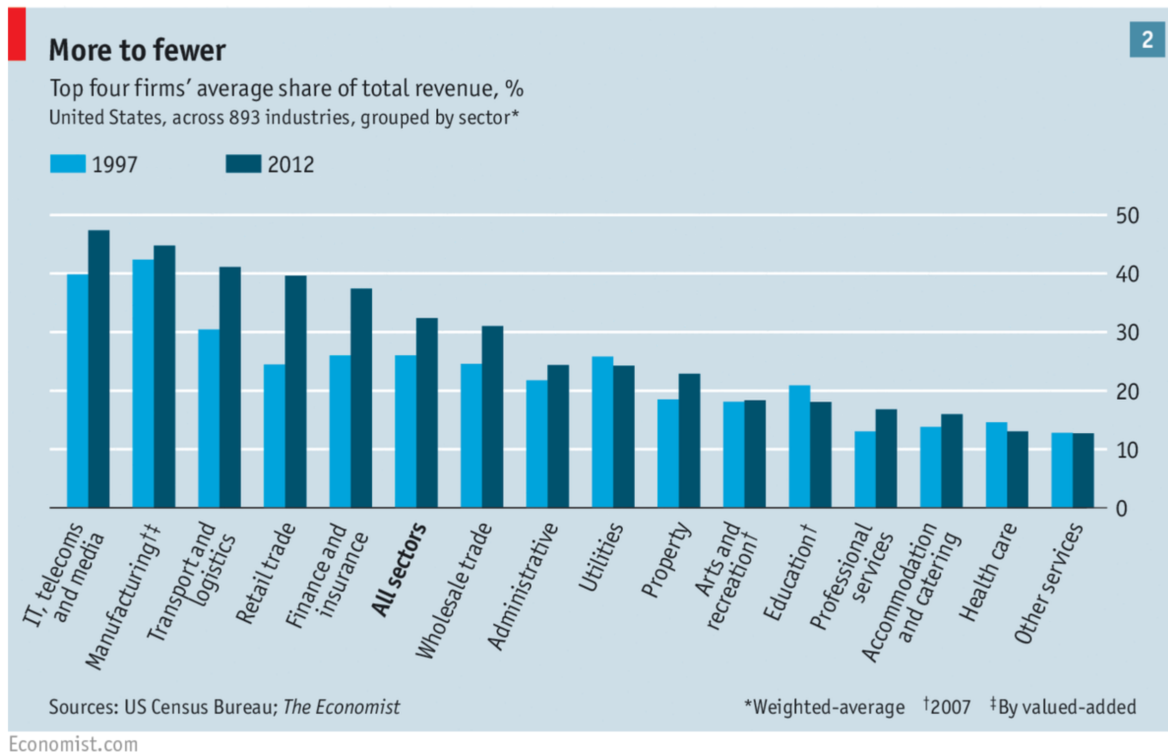
Peltzman (2014) looks more deeply at trends in concentration in the manufacturing sector over a longer period of time, 1963 to 2007. He finds no overall increase in concentration from 1963 to 1982, but an increase in concentration following the relaxation of merger enforcement in 1982. He reports that the median HHI in 1982 in the manufacturing industries reported by the Economic Census was 565, and the median increase in HHI from 1982 to 2002 was 97. He finds higher HHI levels and increases for consumer goods than for producer goods.[31] Peltzman does not assert that these increases in concentration reflect a decline in manufacturing competition.

[31] See Table 6 and Table 7 respectively.

So far as I can determine, all of the various press reports and policy papers raising the alarm about increasing concentration in the U.S. economy ultimately rely on data from the Economic Census. These data convince me that larger firms have systematically gained business relative to smaller ones, and they no doubt reflect worrisome increases in concentration in *some* narrower markets. But, simply as a matter of measurement, the Economic Census data that are being used to measure trends in concentration do not allow one to measure concentration in relevant antitrust markets, i.e., for the products and locations over which competition actually occurs. As a result, it is far from clear that the reported changes in concentration over time are informative regarding changes in competition over time.

2. The Magnitude of the Reported Increases in Concentration

Let us now set aside these measurement issues and focus on the *magnitude* of the reported increases in concentration. In summarizing the data discussed above covering the 893 four-digit industries, the *Economist* reported, for each broad sector in the economy, the weighted-average increase in the four-firm concentration ratio from 1997 to 2012 as measured across the various "industries" in that sector.[32] The following chart shows their results.[33]



[32] The weights are based on revenue, except for manufacturing, where the weights are based on value-added.

[33] See https://www.economist.com/news/briefing/21695385-profits-are-too-high-america-needs-giant-dose-competition-too-much-good-thing.

The *Economist* summarized their findings, stating: "The weighted average share of the top four firms in each sector has risen from 26% to 32%." See the "All Sectors" bar in the chart.[34]

What does the structure of a market with a CR_4 of 32% look like? As an illustration, think about a market with a CR_4 of 32% in which the top four firms have shares of 10%, 8%, 8% and 6%. There must be at least 11 more firms, since the largest any of these other firms can be is 6%, and they comprise 68% of the market. The HHI is this market is between 300 and 700. Industrial organization economists would generally describe this market as being unconcentrated.

Autor, et. al. (2017) report similar findings to those in the *Economist*. They too rely on data from the Economic Census, looking at the changes in CR_4 and CR_{20} from 1982 to 2012 at the four-digit industry level, based on sales and based on employment. They then take averages across six broad sectors: manufacturing, retail trade, wholesale trade, services, finance, and utilities and transportation. Below I reproduce their charts illustrating their basic findings regarding concentration in these six sectors:

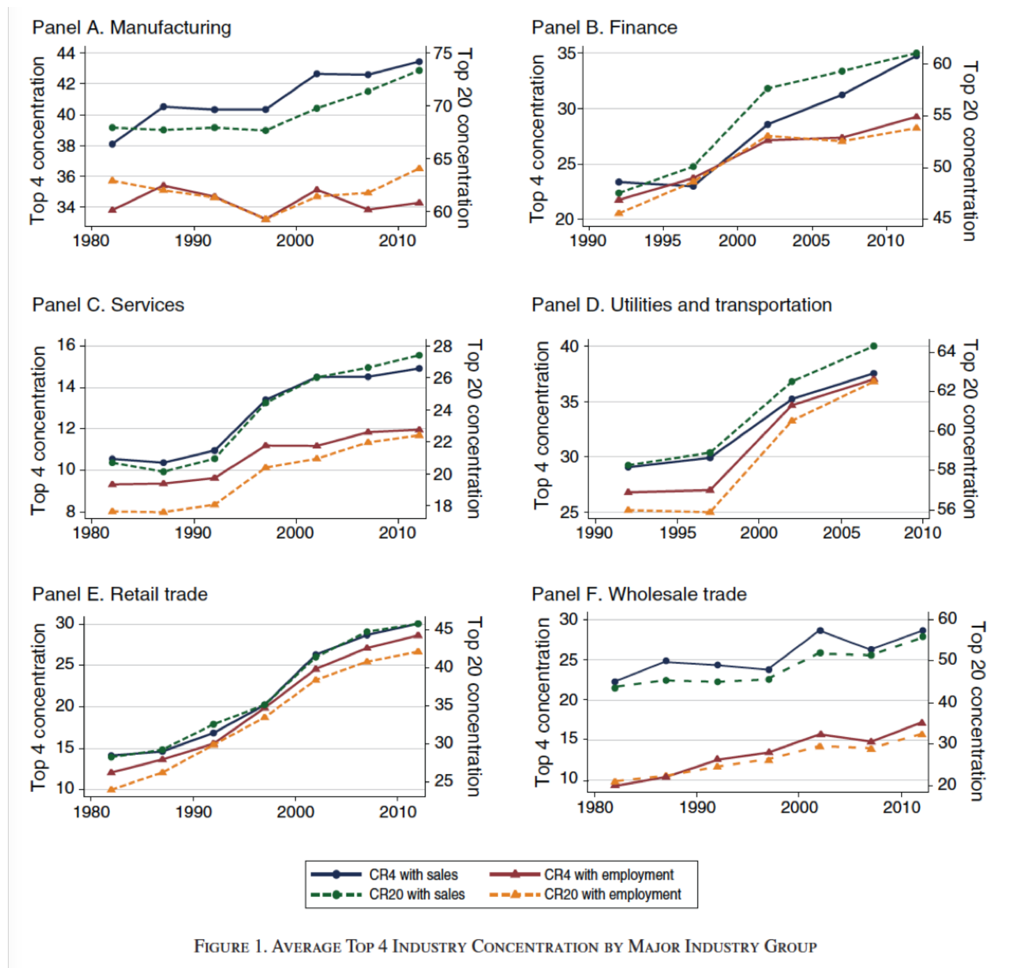


FIGURE 1. AVERAGE TOP 4 INDUSTRY CONCENTRATION BY MAJOR INDUSTRY GROUP

[34] We know from the previous chart that these averages mask considerable variation, and that some of the 893 four-digit industries have experienced very large increases in concentration leading to a high CR4. I focus here on the averages since we are looking for systematic and widespread changes in concentration.

Autor, et. al. (2017a) summarize their findings (p. 183) this way:

> There is a remarkably consistent upward trend in concentration in each sector. In manufacturing, the sales concentration ratio among the top four increases from 38 percent to 43 percent; in finance, it rises from 24 percent to 35 percent; in services from 11 percent to 15 percent; in utilities from 29 percent to 37 percent; in retail trade from 15 percent to 30 percent; and in wholesale trade from 22 percent to 28 percent.

Autor, et. al. (2017b) use these same data to report average changes in the HHI by sector from 1982 to 2012. They find an average increase in the HHI in manufacturing from 800 to 875, in finance from 300 to 700, in services from 950 to 1375, in utilities and transportation from 525 to 725, in retail trade from 125 to 625, and in wholesale trade from 325 to 350.

For better or worse, I very much doubt that many antitrust economists would be concerned to learn that a market had experienced these types of increases in the CR_4 or the HHI. Currently, the Horizontal Merger Guidelines consider a market to be unconcentrated if the HHI is below 1500; prior to 2010, the threshold was 1000. Are antitrust economists, who have looked most closely on a case-by-case basis at the relationship between concentration and competition, completely off base here? Possibly, but I doubt it.

To summarize, the Economic Census data show a modest average increases in concentration in four-digit NAICS industries. While these four-digit industries often do not line up well with properly defined antitrust markets, these data may reflect increases in concentration in many properly defined antitrust markets over the past 30 or 40 years. Indeed, it would be surprising if that were *not* the case, given the very substantial relaxation of merger enforcement in 1982 for firms with small or modest market shares and in markets with an HHI of less than 1000. The real question is whether those modest increases in concentration have been accompanied by a decline in competition, leading to higher prices or other consumer harms. One cannot answer that question just by looking at measures of concentration, no matter how good the data.

3. The Relationship Between Trends in Concentration and Competition

Moving past these issues of measurement and magnitude, we come to some deeper questions. How should one interpret changes in concentration over time, and what forces would cause such changes to occur? To sharpen these key questions, consider these two alternative hypotheses:

- **Increase in Concentration Indicates a Decline in Competition**: If we see a market experience an increase in concentration over time, that indicates that this market has become less competitive.
- **Increase in Concentration Reflects the Forces of Competition**: If we see a market experience an increase in concentration over time, that reflects the forces of competition at work, with the firms providing better value to customers gaining market share.

So far as I can determine, the bulk of what has been written in the popular press simply *assumes* that an increase in concentration indicates a decline in competition – even if the resulting level of the four-firm concentration index is only 30% or 40%, meaning that quite a few firms continue to compete. Such an assumption strikes me as unjustified, especially given the forces of globalization and technological change that have transformed many industries in recent decades.

How can we distinguish between the two hypotheses presented above?

First, we need to recognize that markets in the U.S. economy differ vastly: in some markets an increase in concentration over time does indeed indicate a decline in competition, while in other

markets the increase in concentration reflects the forces of competition at work. As a result of this heterogeneity, we need to look at individual markets, or at different sectors in the economy, to properly understand and interpret the changes in concentration we observe over time.

Second, and closely related, it is very important to understand the *process* by which concentration has increased over time in any given market. If the increase in concentration resulted from horizontal mergers, that opens up the possibility that inadequate merger enforcement was at fault. Merger retrospectives would be very informative in such markets, to see if the mergers that significantly raised concentrated also harmed customers. Alternatively, if a market has experienced an increase in concentration due to internal growth by one or a few suppliers, that suggests that these suppliers enjoyed some competitive advantages and gained market share by offering better value to customers, unless these firms engaged in some type of anti-competitive, exclusionary conduct. Identifying those competitive advantages, and the means by which the winners gained market share, would be very informative in this situation.

Several recent empirical studies take on the ambitious task of trying to answer these and related questions for the whole U.S. economy, or at least shed light on them, using concentration measures at the four-digit level based on data from the Economic Census.[35] Autor, et. al. (2017a and 2017b) ask whether increases in concentration reflect the forces of competition, "so that super-star firms with higher productivity increasingly capture a larger slice of the market," or "arise from anticompetitive forces whereby dominant firms are able to prevent actual and potential rivals from entering and expanding."[36] Based on their finding that the industries that became more concentrated tended also to be the ones in which productivity increased the most, they conclude: "The findings suggest that a positive productivity-concentration relationship will most likely be a feature of any plausible explanation of rising industry concentration."[37] Their findings support the view that observed increases in concentration generally reflect the forces of competition at work in manner that has enhanced productivity. Antitrust economists would normally expect this type of competition to benefits customers as well.

Along similar lines, Bessen (2017) finds that an industry's use of information technology systems (IT) is strongly associated with the level of concentration in that industry and the rise in concentration from 2002 to 2007. Within an industry, use of IT is associated with larger plant size, higher labor productivity, and higher operating profits margins. Focusing on the deployment of proprietary, mission-critical IT systems, he reaches this conclusion: "Successful IT systems appear to play a major role in the increases in industry concentration and in profit margins, moreso than declining concentration."

B. Corporate Profits

I now turn my attention to trends in corporate profits. The idea is simple enough: when markets are competitive, supra-normal profits will tend to be transitory. While any single firm may have

[35] Gutiérrez and Philippon (2016) and Grullon, Larkin and Michaely (2017) use Compustat data to measure concentration at the three-digit level. For the reasons given above, I am highly skeptical that concentration measures at the three-digit (or two-digit) level are informative regarding competitive conditions in well-defined markets.

[36] Autor, et. al. (2017a), p. 184. Similarly, Barkai (2017) finds a correlation across industries between increases in concentration over time and declines in the labor share of valued-added over time.

[37] Ibid.

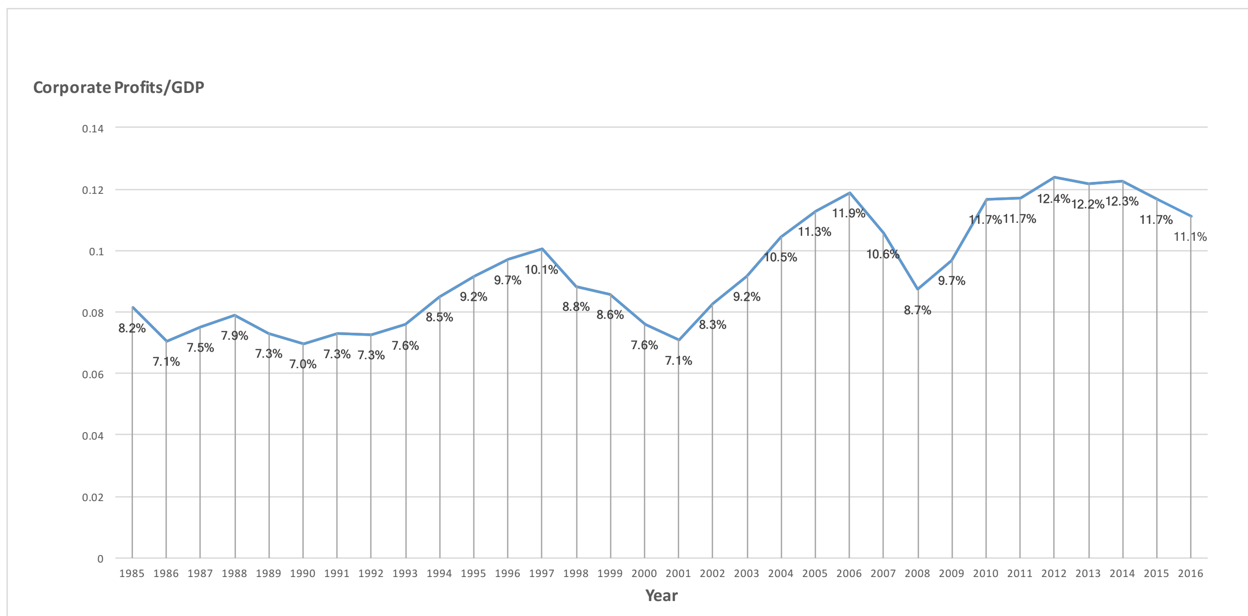
high and persistent profits simply because it is especially efficient, observing high and persistent profits on a widespread basis tends to suggest that many firms are earning rents associated with market power and that their positions are protected by barriers to entry.

The *Economist* has been especially vocal on this issue, writing: "Profits are an essential part of capitalism. … But high profits across a whole economy can be a sign of sickness. They can signal the existence of firms more adept at siphoning wealth off than creating it afresh, such as those that exploit monopolies. If companies capture more profits than they can spend, it can lead to a shortfall of demand. This has been a pressing problem in America."[38]

Before turning to the data, it is worth noting that accounting profits often fail to line up with true economic profits. So, some caution is appropriate when looking at economy-wide data on profits. However, the disconnect between accounting profits and economic profits may matter less when looking at *changes* in profits over time than when looking at the *level* of profits, and when looking at a large number of firms.

Here is what the national income accounts show about corporate profits over the past 30 years:

Corporate Profits/GDP: 1985 to 2016



Source: Bureau of Economic Analysis, Table 1.7.5, "Relationship of Gross Domestic Product, Gross National Product, Net National Product, National Income and Personal Income," Last Revised September 28, 2017, available at https://bea.gov/iTable/iTable.cfm?reqid=19&step=2#reqid=19&step=3&isuri=1&1910=x&0=-9&1921=survey&1903=43&1904=1977&1905=2017&1906=a&1911=0.

The Bureau of Economic Analysis is seeking to measure "profits from current production," so this measure of corporate profits excludes dividend income and capital gains and losses.[39] The

[38] *Economist*, 26 March 2016, "Too Much of a Good Thing," available at https://www.economist.com/news/briefing/21695385-profits-are-too-high-america-needs-giant-dose-competition-too-much-good-thing.

[39] See "Chapter 13: Corporate Profits," December 2015, at https://www.bea.gov/national/pdf/chapter13.pdf. This measure of corporate profits includes all U.S. corporations and is made before deducting corporate income taxes.

BEA makes adjustments for changes in the value of inventories and depreciation of capital assets. Still, properly measuring corporate profits is a tricky business, not least because of unavoidable gaps between reported accounting profits and true economic profits. I cannot delve into these important issues here; I confine my attention to high-level trends.

In short: there has been a very substantial increase in corporate profits as a share of GDP over the past thirty years: roughly a 50% increase from 7% to 8% of GDP up to 11% to 12% of GDP.

Interpreting this substantial increase in corporate profits is not straightforward, so my observations here are necessarily tentative. For example, one can ask how much of the growth in corporate profits merely reflects a higher cost of capital, e.g., due to higher interest rates or increased risk taking. I am highly skeptical of this explanation, especially given the historically low interest rates in the United States in recent years, which should cause the return on equity to be lower, not higher. Barkai (2016) firmly rejects this explanation.[40] One also can also ask whether the increase in corporate profits is due to increased exports by U.S. corporations, which have little to do with increased market power in U.S. markets.[41] Plus, of course, it is always possible that some of the reported increase in corporate profits merely reflects accounting issues rather than an increase in true economic profits.

Still, these data strongly suggest that U.S. corporations really are systematically earning far higher profits than they were 25 or 30 years ago. Combined with other evidence that large corporations are accounting for an increasing share of revenue and employment, it certainly appears that many large U.S. corporations are earning substantial incumbency rents, and have been doing so for at least 10 years, apart from during the depths of the Great Recession.

There is also some limited evidence that high levels of profits are persistent at the firm level.[42] High and persistent profits for any one firm are easy to explain, in theory, based on that firm being more efficient than its rivals. But if high and persistent profits are widespread, any economist will naturally ask why competitive forces are not eroding those supra-normal profits.

This evidence leads quite naturally to the hypothesis that economies of scale are more important, in more markets, than they were 20 or 30 years ago. This could well be the result of technological progress in general, and the increasing role of information technology on particular. On this view, today's large incumbent firms are the survivors who have managed to successfully obtain and exploit newly available economies of scale. And these large incumbent firms can persistently earn supra-normal profits if they are protected by entry barriers, i.e., if smaller firms and new entrants find it difficult and risky to make the investments and build the

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[40] Barkai breaks out corporate profits into a required rate of return on capital and extra "profits" or rents. He finds "a large increase in the profit share in the U.S. non-financial corporate sector over the past 30 years."

[41] The share of profits earned by U.S. corporations from exports grew from 14% in 1998 to 18% in 2016. BEA Table 6.17D, "Corporate Profits Before Tax by Industry," 3 August 2017. So the growth of profits from exports explains a small portion of the overall growth of corporate profits as a share of GDP over the past 20 years.

[42] The *Economist* article on high profits cited McKinsey for the proposition that there was greater persistence of high profits from 2003 to 2013 than from 1993 to 2003. This question certainly warrants further study. For example, the *Economist* is referring to the persistence of profits at the level of the firm, but from a competition perspective we are more interested in persistence for a firm's participation in a specific market. For more on McKinsey's "economic profit" measure, see Chris Bradley, Angus Dawson, and Sven Smit, "The Strategic Yardstick You Can't Afford to Ignore," *McKinsey Quarterly*, October 2013, available at http://www.mckinsey.com/business-functions/strategy-and-corporate-finance/our-insights/the-strategic-yardstick-you-cant-afford-to-ignore.

capabilities necessary to challenge them. As discussed in more detail below, in markets where this state of affairs prevails, namely oligopolies protected by barriers to entry, antitrust has a critical role to play to control mergers and acquisitions involving large incumbent firms, and to prevent these firms from engaging in exclusionary conduct.

In the hope of shedding some light what has caused corporate profits to grow so much, I have broken out the BEA data on corporate profits by sector to learn how the growth of corporate profits over the past 20 years has been distributed across sectors. Here are what these data show:

Corporate Profits by Sector: Share of All Domestic Profits

Sector	1998	2016
Utilities	5.3%	1.1%
Construction	4.2%	5.1%
Manufacturing	29.7%	22.1%
Wholesale Trade	8.1%	7.0%
Retail Trade	9.9%	10.2%
Information	5.3%	7.8%
Finance & Insurance	13.6%	18.3%
Health Care & Social Assistance	2.1%	5.2%
Accommodation & Food Services	1.5%	2.6%

Source: Bureau of Economic Analysis, Table 6.17D, "Corporate Profits Before Tax by Industry," August 3, 2016. 1998 is the earliest year for which these data are available, and 2016 is the latest year. These data are subject to all of the caveats noted above regarding accounting measures of profits.

Looking at this Table, I would highlight the following observations:

- Profits in the Manufacturing Sector fell sharply as a share of the total. This drop is consistent with the declining share of GDP attributable to manufacturing and with increased import competition. But we know from the literature on labor productivity that manufacturers also lowered their costs through automation. Manufacturing profits were roughly constant as a share of GDP (from 29.1% of 8.8% of GDP, which is 2.6% of GDP in 1998, to 22.1% of 11.1% of GDP, which is 2.5% of GDP in 2016).
- Profits in the Finance & Insurance sector grew sharply, from 13.6% of the total to 18.3% of the total. Since corporate profits as a share of GDP rose by about 50% from 1998 to 2016, this increase in the share of corporate profits to the finance and insurance sector corresponds nearly to a doubling of these profits as a share of GDP (from 13.6% of 8.8% of GDP, which is 1.2% of GDP in 1998, to 18.3% of 11.1% of GDP, which is 2.0% of GDP in 2016). During the past five years (2012-2016), corporate profits in Finance & Insurance totaled $1.6 trillion. This is rather striking in the wake of the bailouts during the Financial Crisis, and quite worrisome given the consolidation that has taken place in this sector.

- Profits in the Health Care & Social Assistance sector have more than doubled as a share of the total. This most likely reflects both growth and consolidation in this sector.
- Profits in the Information Sector, which includes both media and high-tech, have grown as a share of the total, but not as dramatically as one might have thought looking at the enormous stock market values now attached to the largest firms in the tech sector. These sky-high market caps tell us that investors expect high future profits from these firms, suggesting that the share of profits attributable to this sector will continue to grow.

The CEA report looks at how the return to invested capital is distributed across firms, stating: "Returns on invested capital for publicly-traded U.S. non-financial firms have also become increasingly concentrated within a smaller segment of the market. Figure 1 indicates that the 90th percentile firm sees returns on investments in capital that are more than five times the median. This ratio was close to two just a quarter of a century ago."[43] This observation is consistent with the findings of Autor et. al. (2017b) that a relatively few "superstar" firms have captured a greater share of sales and profits in recent decades.

When interpreting the evidence on trends in corporate profits, it is useful to view that evidence in the context of two other ongoing trends relating to American businesses. First, there has been a long and steady decline in the rate at which new businesses are formed in the United States. Figure 2 from the CEA Report shows that firm entry rates declined steadily from 1977 through 2013. Decker, et. al. (2016) discuss this trend in greater depth. Second, the United States has experienced a much-discussed productivity slowdown over the past 15 years, during which time the gap between the most productive and the least productive firms has widened.[44] This growing gap may well reflect competition at work, as some firms become more efficient than their rivals. However, given the high levels of profits, it is natural to ask whether the growing gap between leaders and laggards also reflects less vigorous competition in oligopolistic markets, as the more efficient firms take their profits in the form of high price/cost margins rather than cutting prices to gain share, which would be more likely to force their less efficient rivals to exit the market. This question is of great importance, given the findings of Decker, et. al. (2017) that much of the recent slowdown of productivity growth can be attributed to a weakening of the process by which resources shift toward the more efficient firms within an industry.

These concerns are further enhanced by evidence that high corporate profits are expected to persist into the future. This is most clear in the tech sector, where the platform leaders have breathtaking market caps. But the continued strength of the stock market generally must reflect investors' confidence that high corporate profit flows are durable, together with low interest rates. The *Economist* calls this "the hidden message in American companies' balance-sheet."[45]

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[43] Council of Economic Advisers (2016), p. 5. These data were compiled by the McKinsey Corporate Analysis tool in a manner that is opaque to me. See Furman and Orszag (2015).

[44] See, for example, Baily and Montalbano (2016), which reports increasing productivity dispersion across firms and declining rates of new business formation. Andrews, et. al. (2015) show that productivity dispersion is increasing in many OECD countries. For thoughtful commentary on this evidence, see "The Great Divergence," *Economist*, 12 November 2016, available at https://www.economist.com/news/business/21709976-group-elite-firms-has-established-sustained-lead-not-good-thing-great.

[45] "The United States of Debt," Economist, 15 July 2017, at https://www.economist.com/news/business/21725010-hidden-message-american-companies-balance-sheets-united-states-debt.

In sum, the evidence on corporate profits clearly shows that corporate profits have risen as a share of GDP. This evidence also points to a rise in incumbency rents. While any good capitalist is naturally tempted to applaud the success of the large U.S. firms that have seen their profits grow so significantly, perhaps we should hold our applause until we understand better why competitive forces have not (yet?) been more effective at eroding these profits. Profits necessary to induce risky investments are one thing; incumbency rents are quite another.

4. Antitrust and Competition Policy Responses

What does all of this imply for antitrust policy and competition policy going forward?

Antitrust policy can address concerns about rising concentration and high corporate profits (a) by increasing cartel enforcement efforts; (b) by imposing tighter controls on mergers; and (c) by taking a tougher approach to exclusionary conduct by dominant firms. Looking at competition policy more broadly, additional tools can come into play: (d) adopting policies that reduce entry barriers; (e) actively breaking up large firms in concentrated markets; and (f) regulating firms deemed to have substantial market power. I now address these six policy areas in turn.

A. Stricter Cartel Enforcement

Detecting and punishing collusion is the most fundamental component of antitrust policy. Cartels are criminal violations in the United States. I believe there is a consensus that antitrust enforcement in this area has become tougher over the past 25 years, both in the United States and especially worldwide. This can be attributed in part to the leniency program adopted and expanded by the DOJ some 25 years ago, and in part to the strengthening of anti-collusion laws and enforcement efforts in many countries and jurisdictions around the world, together with improved international cooperation in cartel investigations. Nonetheless, it is well understood that not all cartel activity is deterred. Indeed, the DOJ seems to uncover a steady stream of major cartels, many of them international in scope. So there is always more to do here.

More concentrated markets are generally regarded as more susceptible to the harms caused by durable, effective cartels and legal, interdependent conduct. Indeed, historically, the central rationale for merger enforcement was to limit market concentration to reduce the incidence of cartels and other forms of coordination among oligopolists. Logically, then, to the extent that U.S. markets have become more concentrated over time, cartel enforcement becomes all the more vital. Devoting additional resources to cartel enforcement is a natural response.

B. Stricter Merger Enforcement

Several types of economic evidence all support moving toward stricter merger enforcement in the United States: evidence that U.S. markets have become more concentrated, evidence that price/cost margins have risen, evidence that entry barriers have become higher, and evidence that corporate profits have risen substantially and are expected to persist.

Merger enforcement is especially important since a wide range of interdependent conduct by oligopolists, i.e., conduct whereby the oligopolists refrain from vigorous competition, is not considered to be illegal if it does not involve an agreement among those oligopolists.

Tightening up on horizontal merger enforcement policy would directly address the rising levels of concentration over the past 20 to 30 years that have received so much attention of late.

Indeed, it seems likely that the adoption of a more lenient merger enforcement policy in 1982 made possible the rising levels of concentration seen in the Economic Census data over the past 20 to 30 years. Merger policy became noticeably more lenient with the adoption of the 1982 Merger Guidelines, which is roughly when concentration levels started to rise, at least in the manufacturing sector.[46] The 1968 Merger Guidelines stated that the DOJ "will ordinarily challenge" a merger between two firms with 5% market share each, or between a firm with a 20% market share and a firm with a 2% market share.[47] An even stricter approach was applied in markets with CR4 in excess of 75% and in markets with a trend toward concentration. Under the 1982 Merger Guidelines, only much larger levels and changes in concentration would trigger a presumption by the DOJ that a merger would harm competition.[48]

Antitrust economists have debated for many years where to draw the line for horizontal merger enforcement. This is very much an empirical question. Merger retrospectives are especially valuable in this respect, since they directly address the relevant question: which mergers harm customers by lessening competition? There are a number of convincing merger retrospectives, especially those based on a difference-in-differences analysis, such as Ashenfelter and Hosken (2010). Blonigen and Pierce (2016) also is highly informative. They look at the impact of mergers across a wide range of industries using plant-level data, also taking a difference-in-differences approach. They find that mergers are associated with increases in average markups. They find little evidence that mergers increase efficiency through rationalization of production across plants or through savings in administrative costs. Overall, the evidence from U.S. merger retrospectives supports a shift to a moderately stricter merger enforcement policy.[49]

Salop and Shapiro (2017) and Hovenkamp and Shapiro (2017) advocate a moderately stricter merger control policy. Treating horizontal mergers more strictly is directly supported by the evidence from merger retrospectives. A shift to stricter merger enforcement is also supported, albeit less directly, by evidence of high and persistent corporate profits, which suggests the presence of meaningful barriers to entry and expansion in many markets. Higher barriers to entry and expansion make it less likely that entry by new firms, or expansion by small ones, will erode any market power that is enhanced by a merger.[50] In markets where economies of scale are significant, it may well make sense to allow smaller firms to merge to achieve lower costs and thus take on their larger rivals more effectively. But letting the largest firms in such markets merge is more likely to lessen competition, since these firms are each other's strongest rivals. Stricter merger enforcement policy is further supported by the *lack* of evidence that mergers involving industry leaders commonly generate genuine synergies that could not otherwise be achieved,[51] and by the growing presence of horizontal shareholding.[52]

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[46] See Peltzman (2014), op. cit. who makes precisely this argument.

[47] 1968 Merger Guidelines, at https://www.justice.gov/sites/default/files/atr/legacy/2007/07/11/11247.pdf, p. 6.

[48] 1982 Merger Guidelines, at https://www.justice.gov/sites/default/files/atr/legacy/2007/07/11/11248.pdf, p. 14. The 1982 Merger Guidelines also allowed more defenses in cases where the concentration line was crossed.

[49] See especially Kwoka (2015), with a critique by Vita and Osinski (2016) and response by Kwoka (2017a).

[50] Likewise, if one accepts the finding by De Loecker and Eeckhout (2017) that price/cost margins in the U.S. economy rose sharply from 1980 to 2014, that would tend to indirectly support stricter merger enforcement policy.

[51] For a recent study, see "Mergers and Acquisitions Often Disappoint," *Economist*, October 7, 2017.

Stricter merger control policy could involve (a) challenging more mergers, (b) insisting on stronger remedies, and/or (c) including provisions in consent decrees to correct remedial errors.[53] The DOJ and the FTC certainly have sufficient prosecutorial discretion to implement these types of changes. How such a shift would be greeted by the courts is hard to predict, but both the DOJ and the FTC have been quite successful in recent years with their merger challenges, and 50-year old Supreme Court precedent could be cited to support such a shift.[54]

If the DOJ and FTC were to become more aggressive in challenging mergers, I would expect that would temporarily lead to more merger litigation. If DOJ and FTC were to win these new cases, the case law would evolve in favor of stronger merger enforcement, and the set of proposed mergers would adjust accordingly, so long as the DOJ and FTC stay the course. Alternatively, if the DOJ and FTC were to lose these new cases, they would be forced to pull back. In thinking about this dynamic, it is important to bear in mind that only a small fraction of proposed mergers are challenged by the DOJ and the FTC, and a tiny fraction result in a decision by the court. In the 2016 fiscal year, for example, 1832 merger transactions were reported to the DOJ and the FTC, of which 47, some 2.6%, were challenged, and only a few resulted in a court decision.[55]

One promising way to tighten up on merger enforcement would be to apply tougher standards to mergers that may lessen competition *in the future*, even if they do not lessen competition right away. In the language of antitrust, these cases involve a loss of *potential competition*. One common fact pattern that can involve a loss of future competition occurs when a large incumbent firm acquires a highly capable firm operating in an adjacent space. This happens frequently in the technology sector. Prominent examples include Google's acquisition of YouTube in 2006 and DoubleClick in 2007, Facebook's acquisition of Instagram in 2012 and of the virtual reality firm Oculus CR in 2014, and Microsoft's acquisition of LinkedIn in 2016. Smaller acquisitions happen on a regular basis, and indeed are an important exit strategy for tech startups.

Acquisitions like these can lessen future competition, even if they have no such immediate impact. To illustrate, suppose that the target firm has no explicit or immediate plans to challenge the incumbent firm on its home turf, but is one of several firms that is best placed to do so in the next several years by developing innovative new products or by improving or modifying its existing products. Not even the target firm knows for sure how its product offerings will evolve. Does it seem so far-fetched that the dominant incumbent firm, whose market capitalization will fall sharply if successful entry occurs, would pay a premium to acquire the target firm in order to avoid the risk of facing this pesky rival in a few years' time? Not to me. Nor does it seem far-fetched that a dominant incumbent firm can reliably identify the firms that are genuine future threats before the antitrust agencies or the courts can do so with confidence.

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[52] Horizontal shareholding refers to situations in which an institutional investor owns shares of two or more firms that are rivals in a concentrated product market. Scott Morton and Hovenkamp (2017) discuss the antitrust policy implications of horizontal shareholding. One implication is that horizontal mergers are likely to have anti-competitive effects at lower levels of market concentration than would otherwise be the case.

[53] For more on how this last proposal could work, see Salop (2016).

[54] See, especially, *United States v. Philadelphia National Bank*, 374 US. 321 (1963). See Hovenkamp and Shapiro (2017) on the legal and economic support for the "structural presumption" established in that case, and Kwoka (2017b) for further analysis supporting the use of the structural presumption.

[55] See Federal Trade Commission and Department of Justice (2017).

The problem for merger enforcement is distinguishing this fact pattern from a situation in which the dominant incumbent can and will greatly expand the reach and usage of the target firm's products, e.g., by combining the two products into one, or by using its distribution might to rapidly expand sales of the target firm's products. Making the problem even harder, these fact patterns can occur together for a single proposed merger.

Another classic example of a merger that may lessen competition in the future involves a leading incumbent firm merging with a large supplier, a large customer, or a large firm selling a complementary product, especially if the target firm is contemplating entering the incumbent's market. This was the case when the DOJ challenged the merger between Ticketmaster, which was dominant in providing ticketing services to certain venues, and LiveNation, which was a large customer of Ticketmaster that was developing its own ticketing services.[56] While such vertical mergers can generate efficiencies, this also can eliminate potential competition.

The DOJ and the FTC have been quite cautious about challenging mergers involving firms that do not currently compete (either much or at all) but which may well become important direct rivals in the foreseeable future. This reticence stems in part from the difficultly of showing that such a merger would significantly increase concentration in a well-defined market, which is normally a key element of the government's case. By showing such an increase in concentration, the government can establish a *prima facie* case that the merger is likely to substantially lessen competition. Furthermore, merger challenges based on the loss of potential competition necessarily rely on the prediction that the two merging firms will become significant competitors in the future. This is inherently a difficult thing to predict, and even harder for the government to prove as the merging firms themselves are trying to convince a court otherwise. And these obstacles are even harder in the high-tech sector, where products and services have overlapping functionality and can change significantly over relatively short periods of time.

Notwithstanding these genuine difficulties, there would be a big payoff in terms of competition and innovation if the DOJ and FTC could selectively prevent mergers that serve to solidify the positions of leading incumbent firms, including dominant technology firms, by eliminating future challengers.[57] As a general principle, the greater and more durable is the market power of an incumbent firm, the larger is the payoff from preventing that firm from acquiring the smaller firms that, if left to grow on their own, would become its strongest challengers. Sound competition policy would tolerate some false positives – blocking mergers involving targets, only to find that they do not grow to challenge the incumbent – in order to avoid some false negatives – allowing mergers that eliminate targets that would indeed have grown to challenge the dominant incumbent.

[56] See https://www.justice.gov/atr/case/us-et-al-v-ticketmaster-entertainment-inc-et-al.

[57] In Shapiro (2011), I explain that mergers between future rivals slow down innovation unless they significantly internalize spillovers associated with R&D or enable merger-specific synergies in conducting R&D. I specifically show that the evidence put forward in the literature that there is an inverse U-shaped function relating competition to innovation is generally either misleading or not relevant for the purpose of merger enforcement.

C. Controlling Exclusionary Conduct by Dominant Firms

Many of those calling for stronger antitrust enforcement are especially concerned about what they see as the enormous power of the largest tech firms, notably Amazon, Apple, Facebook, Google, and Microsoft.[58] The *Economist*, calling these firms "high-tech wizards," states:

> "the superstars are admirable in many ways. They churn out products that improve consumers' lives, from smarter smartphones to sharper televisions. They provide Americans and Europeans with an estimated $280 billion-worth of "free" services—such as search or directions—a year. But they have two big faults. They are squashing competition, and they are using the darker arts of management to stay ahead. Neither is easy to solve. But failing to do so risks a backlash which will be bad for everyone."[59]

Some are even calling to break up Amazon, Facebook and Google.[60]

The *Economist* points squarely to antitrust as the solution to the "giant problem" posed by the largest tech firms, stating: "Above all, policymakers need to revamp antitrust policy for a world based on information and networks rather than on selling lumps of stuff."[61] When it comes to specifics on just how antitrust policy needs to be revamped, the *Economist* is far more cautious than those calling for breakups, and far more grounded in U.S. antitrust law:

> Antitrust authorities need to start setting the agenda by examining the ways that digital companies are using network effects to crowd out potential competitors, or inventing new ways of extracting rents by repackaging other people's content. But the regulators must also beware of trying to load too much onto the rules: the point of antitrust policy is to promote competition and hence economic efficiency, not to solve problems such as inequality.[62]

As an antitrust economist, my first question relating to exclusionary conduct is whether the dominant firm has engaged in conduct that departs from legitimate competition and maintains or enhances its dominance by excluding or weakening actual or potential rivals.[63] In my experience, this type of inquiry is highly fact-intensive and may necessitate balancing pro-competitive justifications for the conduct being investigated with possible exclusionary effects. In the end, the key question is whether the conduct disrupts the competitive process and either

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[58] Farhad Manjoo at the *New York Times* has taken to calling these firms the "Frightful Five." See, for example, "Tech's 'Frightful 5' Will Dominant Digital Life for Foreseeable Future," *New York Times*, 20 January 2016, available at https://www.nytimes.com/2016/01/21/technology/techs-frightful-5-will-dominate-digital-life-for-foreseeable-future.html, "Tech's Frightful Five: They've Got Us," *New York Times*, 10 May 2017, available at https://www.nytimes.com/2017/05/10/technology/techs-frightful-five-theyve-got-us.html, and "How the Frightful Fie Put Start-Ups in a Lose-Lose Situation," New York Times, 18 October 2017, available at https://www.nytimes.com/2017/10/18/technology/frightful-five-start-ups.html?rref=collection%2Fsectioncollection%2Fbusiness&action=click&contentCollection=business®ion=rank&module=package&version=highlights&contentPlacement=1&pgtype=sectionfront.

[59] "A Giant Problem: The Rise of the Corporate Colossus Threatens Both Competition and the Legitimacy of Business," *Economist*, 17 September 2016, op. cit.

[60] "Should America's Tech Giants Be Broken Up?" Business Week, 20 July 2017, available at https://www.bloomberg.com/news/articles/2017-07-20/should-america-s-tech-giants-be-broken-up. See also Taplin (2017) and Jonathan Taplin, "Is It Time to Break Up Google" New York Times, 22 April 2017, available at https://www.nytimes.com/2017/04/22/opinion/sunday/is-it-time-to-break-up-google.html?_r=0.

[61] "The Rise of the Superstars," *Economist*, 17 September 2016, p. 16.

[62] "The Rise of the Superstars," *Economist*, 17 September 2016, p. 16.

[63] For issues related to *acquisitions* by dominant incumbent firms, in the tech sector or not, see the previous section.

harms customers or is likely to harm them in the future. Critically, the focus of the inquiry is on specific business conduct, not sheer size and just the presence of substantial market power.

The structured inquiry just sketched has long been the approach to monopolization cases taken by the U.S. courts. I believe this approach is sound and has widespread support among industrial organization economists. So I say: let these inquires proceed when suspicious conduct can be identified. But in doing so, let us avoid a "big is bad" mentality and let us truly have the interests of consumers in mind. We learned long ago that proper antitrust enforcement is about protecting consumers, and protecting the competitive process, not about protecting competitors. We must not forget that guiding principle. Indeed, that principle is especially important in markets subject to large economies of scale, whether those scale economies are based on traditional production economies or based on network effects, which are often important in the tech sector.

In this time of populism, many observers appear frustrated that the DOJ and the FTC have brought very few Sherman Act Section 2 monopolization cases over the past 25 years. I have three reactions to this complaint. First, I can say from personal experience that when I was the chief economist at the DOJ during 2009-2011, the Antitrust Division was genuinely interested in developing meritorious Section 2 cases, and we were prepared to devote the resources necessary to investigate complaints and other leads, but we found precious few cases that warranted an enforcement action based on the facts and the case law.

Second, those calling for more monopolization cases must describe the specific conduct that concerns them and explain how that conduct disrupts the competitive process and harms customers. Simply saying that Amazon has grown like a weed, charges very low prices, and has driven many smaller retailers out of business is not sufficient. Where is the consumer harm? I presume that some large firms are engaging in questionable conduct, but I remain agnostic about the extent of such conduct among the giant firms in the tech sector or elsewhere. For better or worse, over the past thirty years the Supreme Court has made it harder for the government (and private plaintiffs) to win Section 2 cases. The DOJ and the FTC could bring cases in an attempt to broaden the reach of the Sherman Act, but precedent in this area moves very slowly and I see no evidence that the current Supreme Court has an interest in greatly expanding the range of conduct that would be found to violate Section 2 of the Sherman Act.[64]

Third, it seems clear that some conduct that is permitted under the U.S. antitrust laws will be challenged by the European Commission under E.U. law, but I am not convinced that the European approach to evaluating unilateral conduct by dominant firms is superior to the American approach. In any event, the growing divergence between the U.S. and the E.U. in this area does provide a type of "natural experiment." Researchers can look at conduct challenged by the European Commission, but not challenged by the DOJ or the FTC, as one way of trying to determine whether eliminating that conduct has led to consumer benefits. Simply observing that the EC is "more aggressive" than the DOJ or the FTC does not answer that question.

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[64] Amending the Sherman Act after 125 years is even more daunting, especially given the dysfunction in the U.S. Congress. Plus, it is not clear to me just what new general legislative language would constitute an improvement.

D. Reducing Entry Barriers and Promoting Competition

The evidence of high corporate profits, slower productivity growth, and declining rates of new business formation tells me that we should redouble our efforts to generally reduce entry barriers to promote competition, encourage entrepreneurship, and broaden economic opportunities.

There is bipartisan support for many initiatives along these lines, such as reducing occupational licensing requirements where they serve to protect incumbents rather than consumers,[65] and eliminating government restrictions that protect incumbents, such as the rules in many states that prohibit automobile manufacturers from selling their cars directly to consumers.[66]

E. Breaking Up Large Tech Firms

As noted above, some are calling to break up today's tech giants. If these calls are motivated primarily by concerns about *political* power, then focusing attention on the tech sector seems peculiar to me. What about the energy, health care, media, and finance sectors? If these calls are motivated based on concerns about *economic* power, then I would first like to see some showing that breaking these firms up would leave consumers better off in the foreseeable future.

Any call to break up large tech firms based on economic considerations needs to address the concern that dismembering some of our most successful companies will significantly reduce economic efficiency. We know that firms vary greatly in their efficiencies within an industry, and we know that the more efficient firms tend to grow relative to others, at least until they run into diseconomies of scale. On this basis alone, breaking up the largest and most successful firms makes me rather nervous. On top of that, we know that there are substantial economies of scale of various types in the technology sector, including network effects and the economies of scale resulting from the fixed costs associated with developing new products, especially software and content. So these market may drift back toward winner-takes-most anyhow. I vote for strengthening enforcement of the Sherman Act rather than breaking up the largest tech firms.

F. Regulating Dominant Firms

Regulation is an alternative way of controlling monopoly power. Historically, price regulation has been reserved for natural monopolies such as the local distribution of electricity or local telephony. Price regulation is notoriously messy, but it can limit the ability of a firm with durable monopoly power to exploit that power. Antitrust is not well suited to preventing the exploitation of monopoly power, especially since "merely" charging a monopoly price is not an antitrust violation in the United States.

While some are calling to regulate today's dominant technology companies, price regulation tends to work rather poorly in industries experiencing technological change. Furthermore, it is well understood that industry-specific regulators are often subject to regulatory capture. For both of these reasons, I suspect there will be relatively little interest in setting up specialized agencies to prevent today's dominant technology companies from exploiting their market power by regulating the prices they can charge. However, regulations relating to privacy, data ownership and portability, or open interfaces and interconnection may attract widespread support. The

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[65] See, for example, Council of Economic Advisers (2015).

[66] See, for example, Crane (2016).

substantive rules governing such regulations, and the institutions created to implement such regulations, will matter a great deal to their efficacy.

5. Economic Populism as an Opportunity and a Threat

Antitrust was born and then fortified during a period of populism in the United States in the late 19th and early 20th centuries. Likewise, today's populist sentiments – by which I mean the widespread and bipartisan concern that the deck is stacked in favor of large powerful firms – represent an opportunity, indeed a plea, to strengthen antitrust enforcement.

The empirical evidence supports moving in the direction of stronger merger enforcement. The empirical evidence also supports increased vigilance in preventing dominant firms with durable market power from engaging in business practices that exclude their actual and potential rivals. In this article, I have offered a number of constructive proposals along these lines. Rather than repeat those proposals, I close with a word of caution.

Today's populist sentiments pose a threat as well as an opportunity for antitrust. The danger to effective antitrust enforcement is that today's populist sentiments are fueling a "big is bad" mentality, leading to policies that will slow economic growth and harm consumers. The rest of this article is devoted to identifying this threat and discussing how such an error can be avoided.

I take as my starting point the core principle guiding antitrust enforcement in the United States that has served us well for so many years: *antitrust is about protecting the competitive process so consumers receive the full benefits of vigorous competition*. None of the empirical evidence relating to growing concentration and growing corporate profits, which I have discussed at length in this article, provides a basis for abandoning this core principle.

Applying this core principle, we understand quite well how to use antitrust to protect competition and consumers, and least conceptually. This enterprise centers on the economic notion of market power, and relies heavily on industrial organization economics. Of course, there is always room for improvement in practice, and right now that means stricter merger enforcement and vigilance regarding acts of monopolization, as already discussed.

The fundamental danger that 21st century populism poses to antitrust in that populism will cause us to abandon this core principle and thereby undermine economic growth and deprive consumers of many of the benefits of vigorous but fair competition. Economic growth will be undermined if firms are discouraged from competing vigorously for fear that they will be found to have violated the antitrust laws, or for fear they will be broken up if they are too successful.

Populism poses this danger in part because today's populism is in many ways animated more by concerns about the *political* power of large corporations than by concerns about their *economic* power. In this sense, there is a mismatch between 21st century populism and modern antitrust. More specifically if antitrust policy is altered to serve goals other than the economic goals of promoting competition and protecting consumers, the core principle articulated above would have to be modified or abandoned. Examples of alternative goals for antitrust are the goal of having more small local businesses, the goal of raising wages or employment, and the goal of reducing the political power of large businesses.

I am deeply concerned about the current state of the American political system, and specifically about the political power of large corporations and the cramped definition of corruption that has

been adopted by the Supreme Court.[67] Readers may be interested to learn that the *original* Chicago School, back in the 1920s and 1930s, which was associated with Frank Knight and Henry Simons, was also deeply concerned about the political power of large organizations. Here is what Henry Simons had to say in 1934:

> "The representation of laissez faire as a merely do-nothing policy is unfortunate and misleading. It is an obvious responsibility of the state under this policy to maintain the kind of legal and institutional framework within which competition can function effectively as an agency of control. Thus, the state is charged, under this 'division of labor,' with heavy responsibilities and large 'control' functions: the maintenance of competitive conditions in industry…"[68]

Simons went on (p. 4) to state that "the great enemy of democracy is monopoly, in all its forms." As a practical matter, I do not see that antitrust can do a great deal to solve the deep problems we face relating to the political power of large corporations and the corruption of our political system. And I fear that assigning those massive tasks to antitrust will be counterproductive.

My hope is that the intense energy of populism will empower stronger antitrust enforcement policy in the United States with the goal of protecting the competitive process and channeling more of the benefits of economic growth to consumers. To protect and preserve this mission, it is important to recognize that antitrust cannot be expected to solve the larger political and social problems facing the United States today. In particular, while antitrust enforcement does tend to reduce income inequality, antitrust cannot and should not be the primary means of addressing income inequality; tax policies and employment policies need to play that role. Nor can antitrust be the primary policy for dealing with the corruption of our political system and the excessive political power of large corporations; that huge problem is better addressed by campaign finance reform, a better-informed citizenry, stronger protections for voting rights, and far tougher laws to combat corruption. Trying to use antitrust to solve problems outside the sphere of competition will not work and could well backfire.

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[67] For an excellent discussion on this vitally important topics, see Teachout (2014).

[68] Simons (1934), p. 3.

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Horizontal Mergers, Market Structure, and Burdens of Proof [*]

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Draft: 9 November 2017

ABSTRACT

Since the Supreme Court's landmark 1963 decision in *Philadelphia National Bank*, antitrust challengers have mounted *prima facie* cases against horizontal mergers that rested on the level and increase in market concentration caused by the merger, with proponents of the merger then permitted to rebut by providing evidence that the merger will not have the feared anticompetitive effects. Although the way that concentration is measured and the triggering levels have changed over the last half century, this basic approach has remained intact. This longstanding *structural presumption,* which is well supported by economic theory and evidence, has been critical to effective merger enforcement. We suggest some ways to strengthen it further. We also respond to those who would weaken or eliminate the structural presumption. Our analysis applies to the present legal world, where protection of consumer welfare is the point of merger enforcement.

We also consider a promising recent legislative proposal that aims to strengthen and expand the structural presumption. We offer some guidance concerning how this proposal could be improved so as to strengthen merger enforcement, primarily by making it easier for the government to establish its prima facie case, while staying true to the fundamental goal of antitrust, which is to promote competition.

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Introduction

Since the Supreme Court's landmark merger decision in *Philadelphia National Bank*,[1] challengers have mounted prima facie cases against horizontal mergers that rested on the level and increase in market concentration caused by the merger. The merging parties can then rebut this *structural presumption* by showing that the market shares do not accurately predict competitive effects. Most generally, they do this by showing that the proposed market is poorly defined or that market shares exaggerate the merger's anticompetitive potential, that entry into

[*] Forthcoming, *Yale Law Journal*. We thank participants at the "Unleashing the Promise of Antitrust" conference at American University, and the editors at the *Yale Law Journal*, for valuable input on an earlier draft. The most recent version of this paper may be found at http://faculty.haas.berkeley.edu/shapiro/structuralpresumption.pdf.

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[1] United States v. Philadelphia Natl. Bank, 374 U.S. 321 (1963).

the market will discipline any price increase, or that the merger produces offsetting efficiencies sufficient to keep prices at premerger levels or otherwise offset the anticompetitive effects.

The *Philadelphia National Bank* burden-shifting approach has been critical for effective horizontal merger enforcement by the Department of Justice and the Federal Trade Commission. While the technical analysis of markets or the size of the relevant numbers has shifted somewhat over time, the basic structural presumption, burden-shifting framework remains alive and well.[2] We strongly support the application of the structural presumption in merger cases and suggest below how to broaden the set of situations in which the presumption operates.

Our approach is highly pragmatic: given that horizontal merger enforcement is typically a predictive exercise, which is conducted after mergers are proposed but before they are consummated, what facts can the government realistically establish in court? We argue that considerable uncertainty is the norm, as to both the likely competitive effects of the merger and the specific manner in which those effects will manifest themselves in the market. We thus embrace the structural presumption for very practical reasons, notwithstanding difficulties associated with defining the relevant market, as well as certain valid criticisms that have been made regarding market definition. Ultimately, we argue that market shares are often highly informative, despite the fact that one can only measure market shares after defining the relevant market, which can be messy. Plus, importantly, the structural presumption is rebuttable.

Two important economic ideas underlie the structural presumption. The first idea is that the loss of a significant competitor in a concentrated market is likely to lead to the creation of enhancement of market power. The second idea is that entry barriers in concentrated markets often are significant. Both of these economic ideas have been challenged over the past half-century, most notably by the Chicago School. We argue that both of these fundamental economic ideas remain valid as bases for the burden-shifting approach associated with the structural presumption. In our view, both ideas find strong support in how companies themselves formulate and execute competitive strategy, and indeed in how they evaluate proposed mergers and select merger partners. In contrast, the Chicago School view that small firms are just as effective competitors as large firms, or that entry will typically and promptly occur in response to prices modestly above competitive levels, finds much less empirical support. Importantly, if those conditions do apply in particular markets, the structural presumption can be rebutted with industry-specific evidence.

Our response to those who criticize the structural presumption because of its reliance on market definition is three-fold. First, we suggest that the courts, whenever practical, assess whether the market shares that underlie the government's structural presumption are sensitive to the precise boundaries of the relevant market. If not, then many of the criticisms based on market definition melt away and the structural presumption deserves greater weight. If so, then the court should ask which set of market shares more accurately reflects the likely competitive effects of the proposed merger for the overlap products. Direct evidence of the likely competitive effects, such as the extent of direct competition between the merging parties, will be important for this

[2] For a robust defense of the use of presumptions in merger analysis, see Steven Salop, *The Evolution and Vitality of Merger Presumptions: A Decision-Theoretic Approach*, 80 ANTITRUST L. J. 269, 276 (2015).

purpose. However, the fact that the market shares vary with the boundaries of the market does not make those shares uninformative or require the abandonment of market definition altogether.

Second, the government is entitled to the structural presumption if the merger causes the requisite increase in concentration in *any* properly defined relevant market. Even if the defense can identify an alternative relevant market (be it broader or narrower) in which the level or increase in concentration is insufficient to trigger the structural presumption, that showing does not negate or rebut the presumption. This observation is especially important because the accepted method of defining relevant markets in horizontal merger cases, namely the hypothetical monopoly test ("HMT") generally leads to relatively narrow markets.[3] Under the HMT, a group of products is tested as a "candidate market" to determine whether it qualifies as a relevant antitrust market. Any candidate market for which the court concludes that a perfectly functioning cartel would lead to a significant price increase qualifies as a relevant market. The objection that the merger leads to only a modest increase in concentration in some broader market is not responsive, so long as the market identified by the challenger satisfies the HMT. As we note below, this is particular pertinent in unilateral effects analysis.[4]

Third, we argue that in some cases the government should be able to prevail *without* invoking the structural presumption, at least not in the way it is commonly stated, based on a more direct showing of the likely competitive effects of the proposed merger. As a result, market definition need not be a gating factor for the government, and the court's decision need not rest on market definition, especially in cases where it is unclear which relevant market would be most informative regarding the merger's likely competitive effects. Allowing this route for the government would harmonize horizontal merger law with other areas of antitrust law, where the courts have shown an increasing willingness to look at *direct evidence* of the likely effect of challenged conduct, relying less on indirect evidence based on a firm's market share.[5] We also consider briefly whether the now existing statutory language permits an approach that avoids market definition altogether.[6]

Developing these ideas further, we discuss how the courts should evaluate evidence of market structure alongside more direct evidence of likely competitive effects. In cases where the government alleges effects arising solely due to the loss of direct competition between the two merger firms, so-called "unilateral effects," alternative metrics such as diversion ratios or upward pricing pressure can complement and supplement the more traditional measures of market shares and HHIs without necessarily displacing them.[7] In cases where the government alleges

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[3] See, for example, Joseph Farrell and Carl Shapiro, *Improving Critical Loss*, ANTITRUST SOURCE (Feb. 2008).

[4] *See* discussion *infra*, text at notes __.

[5] E.g., FTC v. Actavis, Inc., 570 U.S. ___, 133 S. Ct. 2223 (2013) (permitting market power to be inferred from a large exclusion payment)

[6] See discussion infra, text at notes __.

[7] The HHI, or Herfindahl-Hirschman Index, is a widely used index of market concentration, measured as the sum of the squares of the market shares of all firms in the market. On the use of diversion ratios and upward pricing pressure in merger analysis based on unilateral effects, *see* Carl Shapiro, *The 2010 Horizontal Merger Guidelines: from Hedgehog to Fox in Forty Years*, 77 ANTITRUST L.J. 49 (2010).

coordinated effects, the role of market definition and concentration measures such as the HHI is much more fundamental.

We begin in Part I by explaining that a considerable body of economic evidence supports the proposition that a merger combining two firms with substantial market shares in a concentrated market is likely to reduce competition and harm customers. This evidence has become stronger over the past 10 to 20 years, as economies of scale have become more significant in many industries. This shift, primarily driven by technological change, further strengthens the economic basis for the structural presumption, because firms with small market shares, and new entrants, are less likely to be as effective competitors as firms that have proven their capabilities by achieving a substantial market share. Part II argues that the structural presumption is deeply established in the case law, and has been a central element of the Horizontal Merger Guidelines for a full 50 years. Part II also explains how the DOJ and the FTC can use the structural presumption more aggressively under existing case law. We also respond to those who would weaken or eliminate the structural presumption. Part III discusses how the structural presumption can most effectively be applied in cases where the primary concern is with the loss of direct competition between the merging firms, i.e., with unilateral effects.[8]

Part IV relates the structural presumption to the fundamental goal of antitrust law and policy. The structural presumption and the associated burden shifting framework, as they have developed over the past 50 years, rely importantly on the assumption that the goal of merger policy is to protect consumers against high prices or reduced output, product variety, product quality, or innovation, i.e., to promote "consumer welfare." Our analysis in Parts I, II, and III assumes that the goal of merger enforcement policy is to promote consumer welfare. If the goal is something else, such as deterring industrial concentration to control corporate political power, or protecting small firms from larger competitors, then the structural presumption must be viewed differently or may not apply at all.

In Part V we briefly consider a legislative proposal that aims to strengthen and expand the structural presumption. We offer some guidance concerning how this proposal could be improved so as to strengthen merger enforcement, in part by making it easier for the government to establish its prima facie case.

I. The Economic Case for the Structural Presumptions

The structural presumption has its roots in empirical evidence indicating that more concentrated markets tend to have higher prices and higher price/cost margins, all else equal. During the 1970s and 1980s, that evidence came to be seen as less convincing, leading to a weakening of the structural presumption. But the economic case for the structural presumption remains strong. Indeed, the most recent economic evidence supports a strengthening of the presumption.

Building on the work of Joe S. Bain during the 1950s and 1960s, industrial organization economists devoted considerable attention to the empirical relationship between various

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[8] As distinct from unilateral effects, "coordinated effects" involve harm to competition arising from coordination between the merged firm and its remaining rivals. See 2010 Horizontal Merger Guidelines Sections 6 and 7.

measures of market structure and market performance.[9] Schmalensee (1989) reviews the resulting large literature of inter-industry studies.[10] The central finding of this literature was that more concentrated industries tended to perform poorly in serving consumers, as they displayed higher prices, higher price/cost margins, and higher profits than less concentrated industries.

These research results greatly influenced antitrust thinking during the 1960s. For example, in his important 1960 paper on mergers, Derek Bok wrote: "Lawyers have also learned that, within a market, changes in the number and relative size of firms are among the most important determinants of competition and monopoly."[11] In *Philadelphia National Bank*, the Supreme Court stated: "That 'competition is likely to be greatest when there are many sellers, none of which has any significant market share,' is common ground among most economists, and was undoubtedly a premise of congressional reasoning about the antimerger statute."[12]

The *Brown Shoe* case in 1962, *Von's Grocery* case in 1966, and the 1968 Merger Guidelines, can now be seen as the high-water marks relating to merger enforcement based on measures of market concentration. In *Brown Shoe*, the Supreme Court, relying heavily on its view that Congress intended to halt consolidation in its incipiency, stated: "If a merger achieving 5% control were now approved, we might be required to approve future merger efforts by Brown's competitors seeking similar market shares. The oligopoly Congress sought to avoid would then be furthered and it would be difficult to dissolve the combinations previously approved."[13] In *Von's Grocery*, the Court enjoined a merger between two firms with a combined share of 7.5% in the market for retail groceries in the Los Angeles area. Noting these shares and the many acquisitions that had taken place in that market, the Court stated: "These facts alone are enough to cause us to conclude contrary to the District Court that the Von's-Shopping Bag merger did violate §7."[14]

Reflecting these decisions by the Court, the 1968 Merger Guidelines placed great emphasis on the overall "market structure" as the "focus" of the Department's query.[15] Those Guidelines identified two overall market concentration levels, and merging firm market shares, that would "ordinarily" trigger a challenge. In "highly concentrated" markets, those with a four-firm concentration ratio exceeding 75%, the Department would challenge a merger if each firm had a premerger market share exceeding 4%. For a firm with a share of 10%, the Government would

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[9] See especially JOE. S. BAIN, BARRIERS TO NEW COMPETITION (1956). Prior to Bain's work, most empirical research in industrial organization involved case studies of specific industries.

[10] Richard Schmalensee, "Inter-Industry Studies of Structure and Performance," in HANDBOOK OF INDUSTRIAL ORGANIZATION, Ch. 16 (Richard Schmalensee and Robert Willig, eds., 1989). *See also* Leonard Weiss, "The Concentration-Profits Relationship and Antitrust," in INDUSTRIAL CONCENTRATION: THE NEW LEARNING (H. J. Goldschmid, H.M. Mann, and J.F. Mason, eds., 1974).

[11] Derek Bok, *Section 7 of the Clayton Act and the Merging of Law and Economics*, 74 HARV. L. REV. 226, 238.

[12] *Philadelphia National Bank,* 374 U.S. at 363.

[13] *Brown Shoe, Co., Inc. v. United States*, 370 U.S. 294, 343 (1962); *United States v. Von's Grocery*, 385 U.S. 270 (1966).

[14] 384 U.S. 270, at 273.

15 Department of Justice, 1968 Merger Guidelines, available at https://www.justice.gov/archives/atr/1968-merger-guidelines. The 1968 Guidelines were issued only by the Department of Justice.

challenge the acquisition of a firm with a share of at least 2%. In less concentrated markets, the Department would challenge a merger if each firm had a premerger market share exceeding 5%; if the acquiring firm's share was 10%, the Government would challenge the acquisition of a firm with a share of at least 4%.[16] Further, the 1968 Merger Guidelines followed *Brown Shoe* in applying harsher scrutiny if the market had exhibited a "trend" toward increased concentration.[17]

In 1982, the Merger Guidelines were updated to apply a dramatically less strict structural presumption than found in the 1968 Merger Guidelines. They considered markets unconcentrated if the HHI is below 1000, moderately concentrated in the HHI is between 1000 and 1800, and highly concentrated if the HHI is above 1800.[18] They stated that the government was likely to challenge mergers that raise the HHI by at least 100 points and lead to a post-merger HHI of more than 1800." The 10% plus 4% merger that would have triggered a challenge under the 1968 Merger Guidelines would cause the HHI to rise by only 80 points, and thus would not create a presumption under the 1968 Merger Guidelines, regardless of the shares of the other firms. The set of mergers that trigger the structural presumption was reduced further to reflect actual Agency practice when the Horizontal Merger Guidelines were updated most recently in 2010. They define markets to be highly concentrated if the HHI is greater than 2500, and then apply the following structural presumption: "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."[19] For example, in a market with five 20% firms, a merger between two of those firms would raise the HHI from 2000 to 2800, triggering the presumption. However, in a market with four 20% firms and two 10% firms, a merger between a 20% firm and a 10% firm would not trigger the presumption: the HHI would increase from 1800 to 2200, so the post-merger market would only be moderately concentrated. Following the Guidelines, such a merger would "warrant scrutiny" but would not be presumed to be likely to enhance market power.[20]

This weakening of the structural presumption over time in the Horizontal Merger Guidelines properly reflects advances in economic learning during the intervening 50 years. As Steven Salop puts it: "This evolution to a weaker presumption based on market shares and concentration is consistent with and was likely caused by the parallel evolution of economic analysis."[21] In

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[16] Ibid. §5.

[17] Ibid., §7. The idea of increased scrutiny in antitrust cases where the industry in question had exhibited a trend toward concentration first appeared in an exclusive dealing decision. *Standard Oil Co. of California v. United States*, 337 U.S. 293, 317 n.1 (1949). It migrated to merger law in *Brown Shoe Co. v. United States*, 370 U.S. 294, 332 (1962), which identified the concern in the legislative history of the 1950 amendments to §7. See also *United States v. Philadelphia National Bank*, 374 U.S. 321, 325, 331, 363 (1963); *United States v. Von's Grocery Co*., 384 U.S. 270, 277-278 (1966).

[18] Department of Justice and Federal Trade Commission, *1982 Horizontal Merger Guidelines*, available at https://www.justice.gov/archives/atr/1982-merger-guidelines.

[19] Department of Justice and Federal Trade Commission, *Horizontal Merger Guidelines*, Section 5.3, p. 18, available at https://www.justice.gov/sites/default/files/atr/legacy/2010/08/19/hmg-2010.pdf.

[20] *Id*. at 19.

[21] Steven Salop, *The Evolution and Vitality of Merger Presumptions: A Decision-Theoretic Approach*, 80 ANTITRUST L. J. 269, 276 (2015).

particular, serious issues were raised regarding the quality of the data and the econometric methods used by the inter-industry studies that had shown a relationship between concentration and profits. Schmalensee summarizes: "The relation, if any, between seller concentration and profitability is weak statistically, and the estimated concentration effect is usually small. The estimated relation is unstable over time and space and vanishes in many multivariate studies."[22] However, important findings relating market structure to performance remain valid. In particular, the empirical evidence does show a positive relationship between seller concentration and prices or price/cost margins. On this point, Schmalensee reports: "In cross-section comparisons involving markets in the same industry, seller concentration is positively related to the level of price."[23] Such intra-industry comparisons are especially relevant for merger control policy, and indeed are often used in merger analysis.[24] Michael Salinger reached the same conclusion as Schmalensee in his own review of the evidence on the relationship between market concentration and price/cost margins, stating: "The inappropriate inferences used to justify an active antitrust policy have given way to equally incorrect inferences that have been used to justify a relaxed merger policy."[25]

Economic thinking also has greatly evolved over the past 50 years as regards the *interpretation* of the empirical evidence relating market concentration to various measures of market performance. Two key ideas stand out.

First, since at least the 1970s, antitrust economists have recognized that, in markets where there are substantial economies of scale, the process of competition often leads quite naturally to high levels of concentration. In such markets, the most efficient firms typically incur large fixed costs, including R&D costs. In the long run, these firms will only make the necessary investments if they anticipate that future price/cost margins will be sufficiently large to allow them to earn an acceptable risk-adjusted rate of return on those investments. So, observing high levels of concentration and high price/cost margins does not, in and of itself, indicate any failure of the competitive process. Indeed, such a pattern is to be expected in industries where the firms regularly make large R&D investments or incur other large fixed costs.

Second, quite apart from economies of scale, the process of competition can and often does cause a few firms to have large market shares if they are simply more efficient than their rivals.[26] So, observing a few firms growing, and even driving smaller or less efficient firms out of business, also does not, in and of itself, indicate any failure of the competitive process.

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[22] Schmalensee, *Inter-Industry Studies*, *supra* note __, Stylized Fact 4.5, p. 976.

[23] *Id*., Stylized Fact 5.1, p. 988.

[24] As a leading example from 20 years ago, see FTC v. Staples, 970 F. Supp. 1066 (D.D.C. 1997) and Jonathan Baker, *Econometric Analysis in FTC v. Staples*, 18 J. PUBLIC POLICY & MARKETING 11 (1999).

[25] Michael Salinger, "The Concentration-Margins Relationship Reconsidered,*" Brookings Papers on Economic Activity: Microeconomics*, 1990, p. 287.

[26] One of the robust empirical findings in empirical industrial organization is that competing firms differ greatly in their efficiency. *See*, for example, Nicholas Bloom and John Van Reenen*, Why Do Management Practices Differ Across Firms and Countries, 24* J ECON. PERSP. 203 (2010) and the references therein.

For both of these reasons, which are very important in today's economy, high levels of concentration and high price/cost margins can result quite naturally from the process of competition playing out in ways that benefit consumers.

This critical observation has very important policy implications. Efforts to proactively *deconcentrate* industries can easily be counterproductive – by disrupting economic efficiency and harming consumers – if they force the breakup of the most successful and efficient firms, if they prevent firms from achieving the available economies of scale, or if they discourage firms from competing and growing for fear that they will later be broken up. These dangers were quite relevant back in the 1960s, when proposals were floated to actively deconcentrate American industry. Most noticeable was the 1968 "Neal Report," which proposed passage of a "Concentrated Industries Act."[27] This Act would have directed the Attorney General "to affirmatively search out all 'oligopoly industries' in the United States … and bring legal proceedings against all 'oligopoly firms' with the aim of reducing the share of each oligopoly firm to no more than 12%."[28]

More generally, modern industrial organization economics strongly supports the view that antitrust policy must always be careful not to discourage firms, even large firms, from competing on the merits to attract more customers and thus grow. This idea is captured well by what has become the mantra of modern antitrust policy: "the goal of antitrust is to protect competition, not competitors."[29] The United States has not only led the way in recognizing this important principle; we have spent decades exporting this core principle to competition authorities around the world.

What does all this mean for merger enforcement in the United States?

First and foremost, economic theory and a wide range of economic evidence support the conclusion that horizontal mergers that significantly increase market concentration are likely to lessen competition and harm consumers by raising price, reducing output, or limiting product quality or innovation. We have in mind here not only the intra-industry studies on market concentration and price/cost margins noted above, but also decades of experience with merger enforcement at the DOJ and the FTC and in the courts, as well as evidence regarding how business executives evaluate competition and make strategic decisions, and other evidence such as how reducing trade barriers and thus allowing foreign rivals to compete in a domestic market

[27] "Report of the White House Task Force on Antitrust Policy," July 1968. Phil Neal was the Chairman of the Task Force.

[28] Ibid., p. 2. *See* Herbert Hovenkamp, *The Neal Report and the Crisis in Antitrust*, 5 COMPETITION POLICY INT'L 217 (April 30, 2009), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1348707

[29] Brown Shoe Co. v. United States, 370 U.S. 294, 320 (1962), and repeated often. E.g., Leegin Creative Leather Prods., Inc. v. PSKS, Inc., 551 U.S. 877, 906 (2007); Atlantic Richfield Co. v. USA Petroleum Co., 495 U.S. 328, 337 (1990)

leads to lower prices.[30] Importantly, as shown especially by John Kwoka, the evidence from merger retrospectives strongly supports the structure presumption.[31]

Second, the modern view that the competitive process often leads to highly concentrated markets makes it *all the more important* not to let the victors emerging from that process to join forces by merging. If two firms are efficient because they have achieved a large scale of operations, or because they have learned how to run their operations efficiently, consumers benefit greatly when they compete vigorously against each other. So, logically, the empirical regularities cited above – that large firms are often the most efficient and that the efficiency achieved at the leading firms is difficult for other firms to imitate or for new entrants to achieve – very much warn against allowing two incumbents with large market shares, the best simple indicator of success, to merge. Growth by smaller firms, and entry, cannot in general be relied upon to replace the competition lost through such a merger. This conclusion applies not only to price competition but also to other forms of competition that may be more important in the long run, namely competition to develop and introduce new and improved products and services. Indeed, one of the most important roles for merger enforcement is to prevent established incumbents from acquiring mavericks, disruptive entrants, or other firms that threaten their position. For that reason, it is important to be forward-looking when estimating the markets shares of such firms.

Those who call for weakening or abandoning the structural presumption are effectively arguing that recent market success is not a good predictor of future market success. But this is just not what the evidence shows. In the presence of economies of scale, which are likely to be present in a concentrated market, a small incumbent firm (or an entrant) is unlikely to be as effective a competitor as the larger firm that is being acquired. If firms differ greatly in their efficiencies, and if it is hard for the less efficient firms to imitate their more efficient rivals, as is common, we will see a strong correlation between efficiency and market share. Again, if a firm with a large market share is acquired, it is unlikely that smaller, less efficient firms (or entrants) will be able to replace the lost competition in a timely manner. Likewise, if the merging firms own valuable specific assets that are difficult to replicate, such as brand names or established relationships with customers, or important intellectual property, entry is unlikely to protect consumers from the loss of competition resulting from the merger.

In short, the structural presumption fits well not only with the economic evidence but also with business reality: as a general rule, firms with large market shares are more effective competitors

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[30] For a discussion of some of this evidence, *see* Carl Shapiro, "Competition and Innovation: Did Arrow Hit the Bull's Eye?" in THE RATE & DIRECTION OF INVENTIVE ACTIVITY REVISITED (Josh Lerner and Scott Stern, eds., 2012).

[31] See, most recently, John Kwoka, "The Structural Presumption and the Safe Harbor in Merger Review: False Positive, or Unwarranted Concerns," forthcoming, *Antitrust Law Journal*. For a comprehensive look at merger retrospectives, see John Kwoka, *Mergers, Merger Control, and Remedies: A Retrospective Analysis of U.S. Policy*, MIT Press, 2015. Michael Vita and David Osinski critique part of Kwoka's book in "John Kwoka's Mergers, Merger Control and Remedies: A Critical Review," December 2016, available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2888485. Kwoka responds to this critique in "Mergers, Merger Control and Remedies" A Response to the FTC Critique," March 2017, available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2947814.

than firms with small market shares, and when two of them merge, it takes time for the competition lost due to the merger to be effectively replaced by smaller firms or by entrants.[32]

II. Structure and Presumptions in the Case Law and Guidelines

The structural presumption is very well established in the case law. As a result, the challenges facing the courts tend to fall into two categories: (a) what evidence is sufficient to establish the presumption, and (b) once established, what must defendants show to rebut the presumption?

The decision most identified with merger laws driven by structural presumptions is *Philadelphia Bank*, where the Supreme Court appeared to make market structure almost decisive.[33] The Court observed that private business needed to be able to engage in planning, requiring that merger rules be predictable. As a result, the courts should "simplify the test of illegality" in the "interest of sound and practical judicial administration."[34] With that, the Court held that a merger producing a firm that controls an "undue percentage share" of the market and that "results in a significant increase in the concentration of firms in that market" is "inherently likely to lessen competition substantially." As a result, it must be enjoined, at least "in the absence of evidence clearly showing that the merger is not likely to have such anticompetitive effects.…"

The Court then found such "undue" concentration based on the merging firms' premerger market shares of 17 and 13 percent and a four-firm concentration ratio of around 70 percent.[35] These numbers exceeded the standards for illegality in merger cases of that era,[36] although they would not necessarily generate a challenge today. Beyond condemning the merger in this case, the Supreme Court did not specify the size of an "undue" percentage or the amount of a "significant" increase, and said nothing about overall market concentration levels. The last observation is perplexing because it suggests that Court was apparently not worried about overall market concentration as such, but mainly about the market shares of the merging partners. The court

[32] While in theory sufficient merger-specific synergies could make up for the loss of competition resulting from the merger, so consumers gain rather than lose from the merger, we are aware of no economic evidence indicating that such efficiencies are common. Certainly there is no such evidence sufficient to undermine the structural presumption as a general matter. In any event, the structural presumption is rebuttable, and one means by which the merging parties might be able to rebut the presumption is through an efficiencies defense. While the Supreme Court has never recognized such a defense, lower courts have been open to evidence about efficiencies. *See* 4A PHILLIP E. AREEDA & HERBERT HOVENKAMP, ANTITRUST LAW, Ch. 9E (4th ed. 2016) (analyzing cases).

[33] United States v. Philadelphia Natl. Bank, 374 U.S. 321 (1963). See the symposium on Philadelphia National Bank at 50, 80 Antitrust L.J. 189 (2015).

[34] Id. at 362-363.

[35] The four-firm concentration ratio, or CR4, consists of the sum of the market shares of the market's four largest firms. The 1968 Merger Guidelines employed the CR4, but the index was replaced in the 1982/1984 Merger Guidelines by the Herfindahl-Hirschman index (HHI), which is measured by the squares of the market shares of all firms in the market. Steven Salop estimates that the merger between PNB and Girard would have increased the HHI from 1459 to 2037in the market for loans, and from 1442 to 2059 in the market for deposits. Salop, op. cit., Table 1.

[36] E.g., United States v. Von's Grocery Co., 384 U.S.270, 277 (1964) (premerger CR4 of 24.4, and merging partner shares of 4.7% and 4.2%). Other cases leading to condemnation on low market shares and/or concentration included United States v. Aluminum Co. (Rome Cable), 377 U.S. 271 (1964); United States v. Continental Can Co., 378 U.S. 441 (1964); United States v. Pabst Brewing Co., 384 U.S. 546 (1966); United States v. Third Natl. Bank in Nashville, 390 U.S. 171 (1968); United States v. Phillipsburg Natl. Bank & Trust Co., 399 U.S. 350 (1970).

also made clear that the market share-based conclusion was presumptive. It applied only "in the absence of evidence" suggesting showing that the merger would not have the feared anticompetitive effects. The decision did not decide how burdens of proof should be assigned.

The Supreme Court's first major qualifier of *Philadelphia Bank* came in 1974 in its *General Dynamics* decision.[37] In brushing aside the government's challenge, the Supreme Court concluded that the government's reliance on the merging firms' historical market shares in the production and sale of coal in certain geographic areas exaggerated the merger's anticompetitive effects. The district court had found the alleged market to be too narrowly defined, given that coal was steadily losing market share to oil and natural gas.[38] Further, the companies' depleted reserves strongly suggested that historical market shares would not be a reliable predictor of future competitive presence. The Supreme Court affirmed, focusing largely on the second ground.[39]

The Supreme Court's *General Dynamics* analysis was not an attack on the structural presumption as such. It is better read as a caution about how market shares should be measured and understood to determine whether the structural presumption applies.[40] The D.C. Circuit's opinion in *Baker Hughes* over-read *General Dynamics* on this point. However, the *Baker Hughes* decision also emphasized the esoteric nature of the market in that case, the U.S. market for hardrock hydraulic underground drilling rigs, which were characterized by a very small number of transactions and, as a result, wide annual variations in market share data based on sales.[41] While a low number of annual sales can make market share data noisy, which suggests measuring market shares over a longer period of time, we do not see why it reduces the danger of collusion. One might as well conclude to the contrary.[42] A low number of large sales for which suppliers bid could just as easily have served to make collusion more rather than less likely. The *Baker Hughes* opinion also produced a startling conclusion about the burden-shifting framework – namely, that "imposing a heavy burden of production" on defendants' rebuttal to structural evidence would be "anomalous where, as here, it is easy to establish a prima facie case."[43] The court appeared to be saying that where high market shares make the government's prima facie structural case strong, and thus easy to make,[44] some sense of justice requires that the defendant's case be correspondingly easy to make as well. This would make little sense to us.

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37 United States v. General Dynamics Corp., 415 U.S. 486, 497-498 (1974).

38 341 F.Supp. 534, 538-540 (N.D. Il. 1972).

39 *General Dynamics*, 415 U.S. at 501-502.

40 See PHILLIP E. AREEDA & HERBERT HOVENKAMP, ANTITRUST LAW ¶*962a (4th ed. 2015).*

41 United States v. Baker Hughes, Inc., 908 F.2d 981 (D.C.Cir. 1990).

42 *See* George Bittlingmayer, *Decreasing Average Cost and Competition: A New Look at the Addyston Pipe Case*, 25 J.L. & ECON. 201 (1982) (on relationship between lumpiness of sales and propensity toward collusion).

43 *Baker Hughes,* 908 F.2d at 992.

44 See Id. at 983 & n. 3. The pre-merger markets shares were 41% and 17.5%, and in one year the two firms enjoyed a combined share of 76%.

At that point the court launched an attack at the "role of statistics" in §7 actions, referring expressly to the HHI.[45]

Notwithstanding *Baker Hughes* analytic shortcomings, the decision has attained considerable importance in merger litigation, most of which takes place in Washington, D.C., giving rise to what is commonly called the "*Baker Hughes* presumption." As formulated in the D.C. Circuit's *Heinz* decision:

> First the government must show that the merger would produce a firm controlling an undue percentage share of the relevant market, and [would] result [ ] in a significant increase in the concentration of firms in that market. Such a showing establishes a presumption that the merger will substantially lessen competition. To rebut the presumption, the defendants must produce evidence that show[s] that the market-share statistics [give] an inaccurate account of the [merger's] probable effects on competition in the relevant market. If the defendant successfully rebuts the presumption [of illegality], the burden of producing additional evidence of anticompetitive effect shifts to the government, and merges with the ultimate burden of persuasion, which remains with the government at all times.[46]

In fact, the widely followed *Heinz'* statement[47] of the burden shifting framework is not very different from what the Supreme Court stated in *Philadelphia Bank*. There the Court wrote:

> we think that a merger which produces a firm controlling an undue percentage share of the relevant market, and results in a significant increase in the concentration of firms in that mark is so inherently likely to lessen competition substantially that it must be enjoined in the absence of evidence clearly showing that the merger is not likely to have such anticompetitive effects.[48]

Beginning with the 1992 Horizontal Merger Guidelines, some version of the burden-shifting framework has also been included in Agency enforcement policy. The 1992 Guidelines make market share thresholds presumptive, together with languages indicating that the "presumption may be overcome by a showing that factors set forth [elsewhere in the Guidelines] make it unlikely that the merger will create or enhance market power or facilitate its exercise, in light of market concentration and market shares.[49] Those Guidelines also state, however, that they do not "attempt to assign the burden of proof" or of coming forward with the evidence on any

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[45] Id. at 992.

[46] FTC v. H.J. Heinz Co., 246 F.3d 708, 715 (D.C. Cir. 2001) (quoting United States v. Baker Hughes, Inc., 908 F.2d 981, 982–83 (D.C. Cir. 1990)) (citations and quotations omitted).

[47] *See also* Saint Alphonsus Med. Ctr.-Nampa Inc. v. St. Luke's Health Sys., 778 F.3d 775, 783 (9th Cir. 2015) (similar); In re Se. Milk Antitrust Litig., 739 F.3d 262, 271–72 (6th Cir. 2014), cert. denied, 135 S. Ct. 676 (2014) (similar, dicta); FTC v. Univ. Health, 938 F.2d 1206, 1218–19 (11th Cir. 1991); United States v. Bazaarvoice, Inc., No. 13-CV-00133-WHO, 2014 WL 203966, *64 (N.D. Cal. Jan. 8, 2014) (similar); United States v. H & R Block, Inc., 833 F. Supp. 2d 36 (D.D.C. 2011).

[48] *Philadelphia Bank*, 374 U.S. at 364.

[49] Department of Justice and FTC, Horizontal Merger Guidelines §1.51(c) (Issued 1992, revised 1997), available at https://www.justice.gov/atr/horizontal-merger-guidelines-0.

particular issues.[50] The 2010 Guidelines actually come the closest to stating the presumption as it was originally articulated in *Philadelphia Bank*:

> The Agencies give weight to the merging parties' market shares in a relevant market, the level of concentration, and the change in concentration caused by the merger…. Mergers that cause a significant increase in concentration and result in highly concentrated markets are presumed to be likely to enhance market power, but this presumption can be rebutted by persuasive evidence showing that the merger is unlikely to enhance market power.[51]

The courts have been quite receptive toward changing structural standards in the Guidelines as they have evolved from the first set, issued in 1968, to the current 2010 Guidelines. Both the structural thresholds and the weight to be given to them have varied, and the courts have gone along – implicitly agreeing that as evidence and theory in this area change the agencies have the discretion to respond accordingly.[52]

III. The Structural Presumption in Unilateral Effects Cases

As noted above, in *Philadelphia National Bank* the Supreme Court determined that a merger that "results in a significant increase in the concentration of firms in that market" is "inherently likely to lessen competition substantially." The Court said that "elaborate proof of market structure market behavior, or probable competitive effects" was unnecessary, because of the deep concern expressed by Congress in 1950 when it amended the Clayton Act about the "rising tide of economic concentration in the American economy."[53] The Court also sought to "simplify the test for illegality," noting that "unless businessmen can assess the legal consequences of a merger with some confidence, sound business planning is retarded."[54] Importantly, the structural presumption was not originally based on any particular mechanism by which a merger would lessen competition, but rather on the general notion that competition is strongest when there are many firms, none with a large market share. The 1968 Merger Guidelines adopted this highly structural approach to merger review and enforcement, stating that "the primary role of the Section 7 enforcement is to preserve and promote market structures conducive to competition.[55]

All that changed when new Merger Guidelines were issued in 1982. Those Guidelines succeeded in taking merger enforcement in a different direction, giving much less weight to

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[50] Id. at §0.1.

[51] Department of Justice and FTC, Horizontal Merger Guidelines §2.1.3 (Aug. 19, 2010), available at https://www.ftc.gov/sites/default/files/attachments/merger-review/100819hmg.pdf.

[52] Noting the gradual evolution of standards, several apart and commenting on different sets of Guidelines are Donald I. Baker & William Blumenthal, *The 1982 Guidelines and Preexisting Law*, 71 CAL. L. REV. 311 (1983) (1982 (Guidelines); and Thomas B. Leary, *The Essential Stability of Merger Policy in the United States*, 70 ANTITRUST L.J. 105 (2002) (1992 Guidelines, as revised in 1997); Dennis W. Carlton, *Revising the Horizontal Mergers Guidelines*, 6 J. COMP. L. & ECON. 619 (2010) (2010 Guidelines)

[53] PNB at 362 citing *Brown Shoe*.

[54] PNB at 362 citing *Brown Shoe*.

[55] 1968 Merger Guidelines, Section 2.

market concentration and much more weight to the predicted competitive effects of a merger. The 1982 Merger Guidelines state: "The unifying theme of the Guidelines is that mergers should be permitted to create or enhance 'market power' or facilitate its exercise."[56] Under the 1982 Merger Guidelines, the predicted competitive effects of a proposed merger were generally evaluated based on whether that merger would make cartel-like coordination more likely or more effective. That approach fit well with the structural presumption, applying George Stigler's theory that the HHI metric of market concentration also measures of the risk of collusion.[57]

Ten years later, merger enforcement shifted again with the release of the 1992 Horizontal Merger Guidelines, which introduced "unilateral effects" into the analysis. Unilateral effects arise because the merger will eliminate competition between two merging firms; the concern is that the merged firm will "unilaterally" raise the price for this reason, even if it does not coordinate with its remaining rivals. Now, 25 years later, the clear majority of merger investigations focus on unilateral effects; only a minority focus on coordinated effects.[58] Overall, this has been a positive development, reflecting a shift in the U.S economy away from commodities and manufacturing and toward differentiated products and services. But this shift has posed a challenge for the structural presumption, since unilateral effects largely depend on the extent of direct competition, or "diversion," between the merging firms, not by the overall level of market concentration. Indeed, the 2010 Horizontal Merger Guidelines state: "The Agencies rely much more on the value of diverted sales than on the level of the HHI for diagnosing unilateral price effects in markets with differentiated products."[59]

Despite the shift in merger enforcement toward unilateral effects, the *Philadelphia National Bank* presumption based on structural evidence plus opportunity to rebut remains alive and well in horizontal merger analysis. As articulated in the 2010 Horizontal Merger Guidelines, the basic contours of the presumption have been adapted to unilateral effects analysis, where the primary inquiry is not based on overall market concentration, but rather on the relative degree of substitution between the merging firms' output and the predicted impact of the merger on the post-merger firm's prices, not necessarily on the prices charged by its rivals.[60]

The extent to which the structural presumption operates in unilateral effects cases invites an additional concern: to what extent can a "structural" presumption be said to apply when a particular type of merger analysis does not require a market definition at all? Economic analysis

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[56] 1982 Merger Guidelines, Section I.

[57] George Stigler, "A Theory of Oligopoly," 72 Journal of Political Economy 44-61 (1964). William Baxter, the Assistant Attorney General who issued the 1982 Merger Guidelines, was strongly influenced by Stigler's work.

[58]*See* Malcolm B. Coate and Shawn W. Ulrick, *How Much Does the Choice Between the Theories of Collusion and Unilateral Effects Matter in Merger Analysis* (government "merger investigations studied under a unilateral effects theory grew, with some ups and downs, from 16 percent in fiscal years 1989- 1992, to more than half in 1999-2000, to 76 percent in 2011-2014." (SSRN Working Paper, 22 July 2017), available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2995679.

[59] 2010 Horizontal Merger Guidelines, p. 21. See Shapiro (2010) op. cit. for an extended discussion of the analysis of unilateral price effects in markets with differentiated products.

60 See, e.g., FTC v. Sysco Corp., 113 F. Supp. 3d 1, 23 (D.D.C. 2015) (permitting rebuttal to prima facie unilateral effects case but agreeing with FTC on merits); FTC v. CCC Holdings, Inc., 605 F. Supp. 2d 26, 44 (D.D.C. 2009) (similar, focusing on evidence of historic entry by new firms).

of unilateral effects can proceed without defining a relevant market, although there is some question about whether such analysis is permitted by the statute. The language of §7 requires those challenging a merger to identify some "line of commerce" and "section of the country" in which the anticompetitive effects of a merger will be felt. In *Brown Shoe* the Supreme Court intuited that the term "line of commerce" referred to a relevant product market, and the term "section of the country" referred to a relevant geographic market.[61]

The legislative history of §7 is not entirely clear on the issue, but more likely than not the two phrases were never intended to have that precise a meaning. The phrase "line of commerce" was in widespread use by both business persons and courts to describe a particular "line" that a seller might sell, often including non-substitutable goods.[62] The phrase "section of the country" was very likely intended to be jurisdictional – that is, to insure that the statute reached only anticompetitive effects felt within the United States.[63] By 1950, when the amendments to §7 were drafted, courts had already begun to use the term "relevant market,"[64] and if that is what Congress meant they very likely would have used it. The effect of this reading is not particularly important in a traditional concentration-increasing merger where the threat is of collusion or collusion-like behavior. For example, use of the HHI also requires that a relevant market be identified before concentration can be assessed. The requirement can become an unnecessary and counterproductive encumbrance, however, in unilateral-effects cases, which examine diversion of sales as between specific pairs of firms. In unilateral effects cases involving differentiated products, drawing an artificial boundary between products that are close enough substitutes to be "in the market" and those that are not, is simply not a part of the economic analysis of likely competitive effects.[65] Put differently, in most cases, unilateral effects can be estimated without the need to define a relevant antitrust market, and the legal requirement that it be done can only get in the way. This is the consensus view among antitrust economists.

In any event, *Brown Shoe* not only equated the two statutory phrases with relevant markets, it also stated that

> Congress neither adopted nor rejected specifically any particular tests for measuring the relevant markets, either as defined in terms of product or in terms of geographic locus of competition, within which the anti-competitive effects of a merger were to be judged.[66]

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61 Brown Shoe Co. v. United States, 370 U.S. 294, 324 (1962) ("The 'area of effective competition' must be determined by reference to a product market (the 'line of commerce') and a geographic market (the 'section of the country'"). Accord United States v. Gen. Dynamics Corp., 415 U.S. 486, 491 (1974); FTC v. Whole Foods Mkts., Inc., 548 F.3d 1028, 1036 (D.C. Cir. 2008).

62 E.g., Gilbert v. Citizens' Nat'l Bank of Chickasha, 61 Okla. 112, 160 P. 635 (Okla. 1916) (contract interpretation depends upon the customs or usage of trade of "those engaged in that line of commerce").

63 See Herbert Hovenkamp, *Markets in Merger Analysis*, 57 ANTITRUST BULL. 887 (2012), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1945964 (discussing other decisions).

64 United States v. Columbia Steel Co., 334 U.S. 495, 508 (1948) (disagreeing with government on selection of relevant market); United States v. Aluminum Co. of America, 148 F.2d 416 (2d Cir. 1945) (using the term "market")

65 Various methods are available to evaluate competitive effects, including looking at diversion ratios, calculating upward pricing pressure, and performing merger simulation, but none of these rely on market definition.

66 *Brown Shoe*, 370 U.S. at 320-321.

A completely acceptable reading of this language is that any grouping of sales identified as experiencing a non-cost-justified price increase can be considered a "relevant market" for the purpose of merger analysis. Happily, from the perspective of economists, this approach lines up very well with relevant markets defined using the Hypothetical Monopolist Test: if the merged firm would find it profitable to significantly raise price unilaterally after the merger, then the HMT as applied to the merging firms products will be satisfied.[67] It does not matter if conventional market definition criteria (*Brown Shoe* criteria) would also have identified a broader grouping of products as a relevant market. Thus, for example, if a merger of firms A and B with harmful unilateral effects would lead to a significant price increase, then post-merger the products sold by firm AB becomes the grouping of products over which the effects of that merger are to be judged. It does not matter that firms A and B may also sell in a larger product market that also includes products sold by other firms.[68] *Brown Shoe* rather awkwardly gave some credence to this approach by acknowledging that even when a market is defined, relevant "submarkets may exist which, in themselves, constitute product markets for antitrust purposes."[69] The term "submarket" has been widely criticized as permitting narrow markets to be defined that are in fact not relevant groupings for determining a firm's ability to increase price. But the point here is that under unilateral effects analysis the term is being applied to a grouping of sales over which the post-merger firm *does* have the power to increase price. Indeed, that is how most courts interpret the term today: a relevant submarket, just like a relevant market, is a grouping of sales capable of profitably sustaining a non-cost-justified price increase.[70]

We suggest that courts either drop the awkward and unnecessary "submarket" label, since properly defined "submarkets" are themselves relevant markets, or simplify matters by explicitly stating that a merger harming competition in a "submarket" is illegal.[71] In speaking to this issue, the district court in *Oracle* observed that *Brown Shoe* really suggested that "the technical definition of a relevant market in an antitrust case may be smaller than a lay person would normally consider to be a market."[72] In any event, while some courts have employed the term "submarkets" in their analysis of unilateral effects cases,[73] most of them, including *Oracle*, have generally rejected the idea that a "submarket" is a different concept from a market. We reiterate, however, that in a unilateral effects merger case calling the two-firm grouping over which a price increase is threatened a "market" need not do any harm to the concept of market definition. It also does not preclude a finding that some larger grouping of sales including these two firms is

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[67] The converse is not true, since the HMT takes as given the prices of all products outside the candidate market and assumes no entry into the relevant market, which makes it more likely that the price increase in question will be profit-maximizing for the merged firm.

[68] See the discussion above about the HMT and our point that a merger violates Section 7 if it is likely to harm competition in any relevant market.

69 Id. at 325.

70 See 2B PHILLIP E. AREEDA & HERBERT HOVENKAMP, ANTITRUST LAW ¶522 (4th ed. 2015).

[71] See 4 Id. ¶913.

[72] United States v. Oracle Corp., 331 F.Supp.2d 1098, 1119 (C.D. Cal. 2004).

[73] E.g., FTC v. Staples, Inc., 970 F.Supp. 1066, 1075 (D.D.C. 1997).

also a relevant market. At the same time, however, at least some decisions appear to require a market definition in a unilateral effects case.[74]

IV. Market Structure, Competition, and Consumer Welfare

Section 7 of the Clayton Act was originally passed in 1914, and has been subject to only one major amendment of its substance, which was the Celler-Kefauver act of 1950.[75] Most of the dramatic changes in merger policy that came soon after resulted more from the legislative history of that provision rather than from changes in the statute's text.[76] The text itself merely expanded §7 to cover vertical as well as horizontal mergers, and also to reach asset acquisitions as well as stock acquisitions.

In the subsequent economic and enforcement literature, market structure has never been a free-standing target of merger policy. Rather, market structure has been a way of getting at merger law's more fundamental concerns, which are higher prices or reduced output or other consumer harms that result from less competitive market structures. Joe S. Bain, the principal architect of the so-called "Structure-Conduct-Performance" (S-C-P) paradigm was clear about this already in the 1950s,[77] as were his followers.[78]

Supreme Court merger policy has been less consistent, particularly in the 1960s. For example, although the *Brown Shoe* merger decision, which in 1962 was the first to interpret the 1950 amendments, emphasized the evils of high concentration, it actually condemned the merger based on district court fact findings that the post-merger firm would be in a position to undersell its rivals – offering either lower priced shoes or shoes of higher quality for the same price.[79] That is, the perceived evil of high concentration in that case was scale or scope economies[80] that

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[74] FTC v. Whole Foods Market, Inc., 548 F.3d 1028 (D.C. Cir. 2008). However, and somewhat mysteriously, the court suggested that a market definition would not necessarily be "crucial to the FTC's likelihood of success on the merits" in a case seeking a preliminary injunction. Id. at 1037.

75 Celler-Kefauver Antimerger Act of 1950, Pub. L. No. 81-899, 64 Stat. 1225, codified as amended at 15 U.S.C. §18. In addition, the statute was amended in 1980 to reach mergers by firms other than corporations, and also acquisitions "in or affecting" commerce. Antitrust Procedural Improvements Act of 1980, Pub. L. No. 96-349, §6(a), 94 Stat. 1154 (codified as amended at 15 U.S.C. §18).

76Derek C. Bok, *Section 7 of the Clayton Act and the Merging of Law and Economics*, 74 HARV. L. REV. 226 (1960).

77 E.g., JOE BAIN, INDUSTRIAL ORGANIZATION 408-410 (1959) (relationship between market structure and efficiency), 411-415 (relationship of market structure to price-cost margins, concluding that "high seller concentration tends to be connected with substantially higher rates of excess profit….")

78 E.g., Leonard W. Weiss, *The Structure-Conduct-Performance Paradigm and Antitrust*, 127 UNIV. PA. L. REV. 1104, 1104-1104 (1979).

79 United States v. Brown Shoe Co., 179 F. Supp. 721, 738 (E.D. Mo. 1959), aff'd, 370 U.S. 294 (1962) (condemning merger because it gave the post-merger firm decisive advantages, resulting in "lower prices or in higher quality for the same price"; as a result, "the independent retailer can no longer compete .. ..").

80 Most particularly, economies of distribution, resulting in condemnation of the vertical aspect of the merger from Brown's production facilities to Kinney's retail stores).

served to give a large firm a competitive advantage over its rivals. As then antitrust professor Derek Bok lamented, that concern was actually quite consistent with the legislative history.[81]

Except for that interlude, however,[82] the Department of Justice and later the FTC have generally agreed that the concern of merger policy is high prices and other consumers harms, and that measuring concentration is a mechanism for assessing the risk of such harms.[83] Even the 1968 Merger Guidelines recognized this, concluding that "a concentrated market structure, where a few firms account for a large share of the sales, tends to discourage vigorous price competition by the firms in the market and to encourage other kinds of conduct, such as use of inefficient methods of production or excessive promotional expenditures, of an economically undesirable nature."[84] As noted above, the 1982 Merger Guidelines were quite explicit about the purpose behind the Department's merger enforcement: "The unifying theme of the Guidelines is that mergers should not be permitted to create or enhance 'market power' or to facilitate its exercise."[85] The fundamental concern with high prices and consumer harms rather than concentration as such is particularly clear when we consider unilateral effects tests under the more recent Guidelines, including those issued in 2010. Under unilateral effects analysis, market concentration and even market definition itself are at most secondary concerns. Rather, one seeks to measure anticipated price effects more directly.[86]

One reason for the disconnect between current policy and the *Brown Shoe* concerns with the price-reducing potential of larger firms is the language of §7 itself. It speaks of mergers that may "lessen competition" without defining what competition means. Does "less competition" refer to lower output and higher price-cost margins, or rather to a market structure with fewer firms? If the former, then a merger creating a larger, more efficient firm that charges lower prices is welcome. If the latter, such a merger is unwelcome, especially if that firm will drive smaller, less-efficient firms out of business. Both of these are more-or-less consistent with the lay understanding of "competition." Applying a consumer welfare standard favors the former, and that is clearly the underlying point of the 2010 Horizontal Merger Guidelines, which define competitive harm in terms of mergers that "encourage one or more firms to raise price, reduce

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81 Bok, Section 7, supra note __.

82 *Brown Shoe* and other big 1960s era merger cases were brought by either the Antitrust Division or the FTC, not by private plaintiffs.

83 Prior to 1950 the Agency concerns were much more with high concentration as such. See, e.g., FTC, Report on the Merger Movement: A Summary Report (1948) (high concentration); Temporary National Econ. Comm. (TNEC), Final Report and Recommendations, S. Doc. No. 35 (1941) (observing trends toward greater concentration and recommending correctives).

84 1968 Merger Guidelines, *supra* note __, §2.

85 1982 Merger Guidelines, *supra*, note __, p.2.

86 Overall, the 2010 Guidelines, § 2.2.1. describe the relevant evidence as speaking to whether "the merging parties intend to raise prices, reduce output or capacity, reduce product quality or variety, withdraw products or delay their introduction, or curtail research and development efforts after the merger, or explicit or implicit evidence that the ability to engage in such conduct motivated the merger…."

output, diminish innovation, or otherwise harm customers as a result of diminished competitive constraints or incentives."[87]

V. Current Legislative Efforts to Strengthen Merger Enforcement

We believe that merger enforcement can be significantly strengthened through a combination of suitable enforcement actions taken by the Department of Justice, the Federal Trade Commission, and State Attorneys General, if the courts embrace the overall framework that the Supreme Court established in *Philadelphia National Bank*, updated to reflect the experience gained from merger enforcement and advances in industrial organization economics since that decision.

Legislative changes could, of course, go further and operate far more rapidly than can government enforcement actions and the resulting development of the case law. But legislative changes can also create new problems and have unintended effects, so caution is needed.

In September, 2017, Senator Amy Klobuchar of Minnesota, the ranking Democrat on the Senate judiciary antitrust subcommittee along with several Democrat co-sponsors, introduced the "Consolidation Prevention and Competition Promotion Act of 2017." This bill is designed to make merger enforcement more aggressive. The bill seems unlikely to pass in the current Republican-controlled Congress, but together with the antitrust plank in the Democrat party platform attending the 2016 election[88] it reflects concerns that merger enforcement has not been aggressive enough in recent years.

First, the bill would substitute the word "substantially" lessen competition with the word "materially," which the bill states to mean "more than a *de minimis* amount." We welcome this change, which clearly intends to strengthen the government's hand in court, although we are uncertain just how it will actually affect litigated merger cases.

Second, the bill would substitute the phrase "monopoly or a monopsony" for the term "monopoly." We are unclear why the drafters included this language, since Section 7 currently reaches mergers among buyers, as recognized by both the case law[89] and the 2010 Merger Guidelines.[90] But the language may help clarify and emphasize for the courts that harm to suppliers, such as farmers or workers, that results from a merger between their customers or employers, can violate Section 7.

In general, a merger that harms counterparties to the merging firms by restricting the competitive choices available to them can violate Section 7. In the "normal" case where two competing *sellers* are merging, the potentially harmed counterparties are their customers. The canonical harm comes in the form of higher prices charged by the merging firms, which restricts demand. These customers may themselves be businesses, or they may be final consumers. When two

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[87] 2010 Guidelines, §1.

88 See https://www.democrats.org/party-platform.

89E.g., United States v. Pennzoil Co., 252 F. Supp. 962 (W.D. Pa. 1965) (granting preliminary injunction)

90 U.S. Dep't of Justice & FTC, Horizontal Merger Guidelines §12 (2010), available at http://www.justice.gov/atr/public/guidelines/hmg-2010.html.

competing sellers merge, antitrust attorneys and economists usually refers to the impact on "consumers," but it is more accurate to refer to the impact on "customers."[91] An important question in any such merger is whether the merging firms are two of only a few suppliers to which certain customers can turn. When two competing *buyers* are merging, the economic analysis is formally equivalent, but a different set of labels applies. The potentially harmed counterparties are the suppliers to the merging parties. Now the canonical harm comes in the form of *lower* prices paid by the merging firms for the input in question, which restricts supply.[92] An important question in any such merger is whether the merging firms are two of only a few customers to which certain suppliers can sell. One reason there are relatively few buy-side merger challenges is that it is relatively rare for the merging firms to be two of only a few customers to which their suppliers can turn.

Third, under this bill, in a case brought by the DOJ, the FTC, or a State attorney general (but not private plaintiffs), a merger would be illegal if it "would lead to a significant increase in market concentration," in any domestic market, "unless the acquiring and acquired person establish, by a preponderance of the evidence, that the effect of the acquisition will not be to tend to materially lessen competition or tend to create a monopoly or a monopsony." This part of the bill appears to codify the *Philadelphia National Bank* structural presumption found in the case law, but it does not specify the level or increase in concentration required for the presumption to apply. This part of the bill also seems quite useful, as it would prevent the courts at all levels from undermining or otherwise weakening the structural presumption, as some have favored.[93] If desired, the bill could enable a more assertive merger enforcement policy by requiring clear and convincing evidence to rebut the structural presumption.

Fourth, the bill would permit one of the federal enforcement agencies or a state attorney general (but not private plaintiffs) to challenge a merger where, as a consequence, the acquiring firm's interest in the acquired firm exceeds an adjusted value of $5 billion; or one of the merging firms has assets, net annual sales, or market capitalization exceeding $100 billion; or if as a result of the acquisition the acquiring firm would hold an aggregate of voting securities and assets of the acquired firm exceeding $5 billion.[94] If one of these absolute value thresholds is exceeded, then the merger is presumptively unlawful and the burden shifts to the proponent of the merger to establish by a preponderance of the evidence that the merger will not have the stated anticompetitive result. This provision does not require that the merging firms be competitors or

[91] When the direct customers of the merging parties are harmed, it may be presumed that some harm will flow downstream to final consumers as well, as the higher prices are passed through to some degree.

[92] In the case of "classic monopsony," the sole buyer reduces the quantity purchased and this drives down the equilibrium price. This situation applies when a single buyer purchases from many suppliers of a homogeneous good who are price-takers. In the more common situation in which the inputs are differentiated, or in which the buyer negotiates with its suppliers, the mechanism is different, and the lower price will tend over time to reduce the quantity, quality, or variety of the products supplied, as suppliers make various investment decisions.

[93] As a notable example, in its public comments on the proposed 2010 Horizontal Merger Guidelines, the Antitrust Section of the American Bar Association took the position that "market share presumptions should be removed from the Merger Guidelines." Comments of the ABA Section of Antitrust Law, HMG Revision Project—Comment, June 4, 2010, p.4.

[94] The $100 billion and $5 billion limits would automatically be adjusted annually based on the growth of the U.S. gross national product.

potential competitors, or even in a supplier/customer relationship, provided the size thresholds are met. A merger between firms that do not compete does not increase market concentration.

We recommend that this part of the bill be revised to more accurately address competition concerns without encompassing mergers that pose no threat to competition. Assuming that this provision is motivated by a concern about market concentration and market power, and the obstacles that the government faces when challenging mergers in court, we would prefer to see this provision revised to target horizontal mergers. For example, the bill could provide that the government can establish a presumption that the merger violates Section 7 if the government can show that the merger would lead to a significant increase in concentration in any domestic market, so long as the alleged market is plausible. That would significantly reduce the burden on the government to define the relevant market in order to establish its prima facie case. Or the bill could specify that in order for the merging parties to rebut the government's presumption based on ease of entry, they must establish by clear and convincing evidence that entry will be timely, likely and sufficient to deter or counteract the feared anticompetitive effects.[95]

Lastly, the bill also contains a provision requiring ongoing post-acquisition reporting for transactions resolved through a consent decree with the DOJ or the FTC. We strongly support this provision. The bill also would establish an "Office of the Competition Advocate" within the FTC. The Competition Advocate's principal duty would be to listen to various interest groups and prepare reports about areas meriting antitrust investigation. We very much support these activities, along with the Data Center called for within that Office. While the FTC already publishes numerous reports relating to general policy questions of this nature, the Office of Competition Advocate would have subpoena authority to collect the information it needs, even if no litigation is in prospect. This provision, if enacted, would fulfill a critical need by greatly improving the FTC's ability to perform merger retrospectives.

VI. Conclusion

Merger analysis is almost always a predictive exercise involving considerable uncertainty. As a result, burdens of proof matter a great deal. The structural presumption – that a merger is anticompetitive if it leads to a significant increase in market concentration – has therefore proven essential to effective merger enforcement. In our view, this presumption is strongly supported by economic theory and evidence, and by the experience gained in merger enforcement over the past 50 years. Furthermore, the existing case law, going back to the Supreme Court's landmark 1963 decision in *Philadelphia National Bank*, gives room for the DOJ, the FTC, State Attorneys General, and the lower courts to apply the presumption more broadly, and to make the presumption more difficult to rebut. In other words, while the structural presumption is by no means the only way for the government to successfully challenge a horizontal merger, it can be used more aggressively within current law.

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[95] We assume that the bill is motivated by concerns about market power, rather than by other important concerns, such as the political power of large firms, a critical problem facing our democracy. We would strongly prefer that such concerns be addressed separately, e.g., through campaign finance reform, greater transparency, tougher ethics rules, or other legislation that addresses the problem more explicitly and more directly. Mixing up those concerns with competition concerns would, in our view, be counterproductive for solving both types of problems.

Looking more broadly, merger policy is one area where the courts have done a fairly good job of tracking prevailing economic thinking. This has been facilitated by the relatively general language of Section 7 of the Clayton Act. For example, both the rise and subsequent decline of structuralism in merger enforcement were accomplished without significant reliance on statutory amendment.[96] Section 7 also has proven quite able to accommodate "unilateral effects" theories, as they have developed over the past 25 years. And the courts have moved from a regime in which efficiencies were either irrelevant or mergers were actually condemned because they would make the merged firm a stronger competitor (the "efficiencies offense") to one that contemplates an efficiency "defense." The courts both recognized and then later pulled back on various theories of potential competition. In short, the current language of the provision has proven to be remarkably flexible. Given that the concerns of merger policy are fundamentally economic, this is a good thing.

[96] *See* HOVENKAMP, OPENING OF AMERICAN LAW, *supra* note __, Ch. 11.