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The Revolution in Antitrust: An Assessment

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Abstract

In this essay, we evaluate the impact of the revolution that has occurred in antitrust and in particular the growing role played by economic analysis. Section II describes exactly what we think that revolution was. There were actually two revolutions. The first was the use by economists and other academics of existing economic insights together with the development of new economic insights to improve the understanding of the consequences of certain forms of market structure and firm behaviors. It also included the application of advanced empirical techniques to large data sets. The second was a revolution in legal jurisprudence, as both the federal competition agencies and the courts increasingly accepted and relied on the insights and evidence emanating from this economic research. Section III explains the impact of the revolution on economists, consulting firms, and research in the field of industrial organization. One question it addresses is why, if economics is being so widely employed and is so useful, one finds skilled economists so often in disagreement. Section IV asks whether the revolution has been successful or whether, as some critics claim, it has gone too far. Our view is that it has generally been beneficial though, as with most any policy, it can be improved. Section V discusses some of the hot issues in antitrust today and, in particular, what some of its critics say about the state of the revolution. The final section concludes with the hope that those wishing to turn back the clock to the antitrust and regulatory policies of fifty years ago more closely study that experience, otherwise they risk having its demonstrated deficiencies be repeated by throwing out the revolution's baby with the bathwater.

Keywords

antitrust economics, mergers, antitrust critics

I. Introduction

This essay presents our views on the scope and impact of the major changes that have occurred in antitrust thinking and practice since the mid-1960s. We approach the issue from somewhat varied backgrounds. Carlton joined the University of Chicago in the mid-1970s, a time of intellectual ferment in antitrust thinking. Soon thereafter, two leading scholars in antitrust, Richard Posner and William

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Landes, together with Andrew Rosenfield, created a consulting firm, Lexecon, whose goal was to apply rigorous economic theory confirmed by empirical evidence to issues in antitrust and regulation. Carlton became associated with Lexecon in the late 1970s and since then has worked on hundreds of antitrust cases. He has frequently served as an adviser to both the Federal Trade Commission (FTC) and the Antitrust Division of the Department of Justice (DOJ) and has been involved in the drafting of several of the federal guidelines for horizontal and vertical mergers. He also served as Deputy Assistant Attorney General for Economic Analysis in the DOJ during the period 2007–2009. Heyer joined the Antitrust Division of the DOJ in 1982, after obtaining his PhD in economics from the University of California, Los Angeles. He was employed at the Division for three decades, initially as a staff economist and subsequently in a senior management capacity, including serving as Acting Economics Deputy on several occasions. After leaving DOJ, he worked for three years at the FTC, where he served as Deputy to the Chief Economist in that agency's Bureau of Economics. Heyer has worked on many of the federal competition agencies' most significant antitrust investigations and cases over the past several decades and participated in antitrust policy developments and their implementation—and has seen close up how antitrust policy at the federal level has evolved over the years. Together, our long and varied set of experiences has provided the two of us with a useful, perhaps idiosyncratic, vantage point from which to assess the antitrust revolution.[1]

In this essay, we evaluate the impact of the revolution that has occurred in antitrust and in particular the growing role played by economic analysis. Section II describes exactly what we think that revolution was. There were actually two revolutions. The first was the use by economists and other academics of existing economic insights together with the development of new economic insights to improve the understanding of the consequences of certain forms of market structure and firm behaviors. It also included the application of advanced empirical techniques to large data sets. The second was a revolution in legal jurisprudence, as both the federal competition agencies and the courts increasingly accepted and relied on the insights and evidence emanating from this economic research. Section III explains the impact of the revolution on economists, consulting firms, and research in the field of industrial organization. One question it addresses is why, if economics is being so widely employed and is so useful, one finds skilled economists so often in disagreement. Section IV asks whether the revolution has been successful or whether, as some critics claim, it has gone too far. Our view is that it has generally been beneficial though, as with any policy, it can be improved. Section V discusses some of the hot issues in antitrust today and, in particular, what some of its critics say about the state of the revolution. The final section concludes with the hope that those wishing to turn back the clock to the antitrust and regulatory policies of fifty years ago more closely study that experience, otherwise they risk having its demonstrated deficiencies be repeated by throwing out the revolution's baby with the bathwater.

II. What Was the Revolution?

As just noted, there were really two revolutions. The first had to do with advances in economists' thinking about the effects of high and/or increasing concentration, the efficiency of business practices within and between firms, the goals of antitrust, and the economic effects of regulation. The second had to do with the application of price theory and economic evidence to antitrust issues by federal agencies and the courts. We first discuss the state of thinking pre-1969 in economics and the courts and then contrast it to post-1969. (We choose 1969 somewhat arbitrarily, but the DOJ's first formal Merger

1. It also means that certain of the cases and firms mentioned in this article are ones for which the authors may have worked or are working.

Guidelines came out in 1968 and are in relatively sharp contrast to the Stigler Report[2] of 1969, therefore representing one rough dividing line in thinking.)

A. Pre-1969

1. Economics. The use of price theory and its application to antitrust cases was one of the hallmarks of what came to be called "the Chicago School" of thought, dating back to Aaron Director in the 1950s. Director co-taught antitrust in the University of Chicago Law School. Although he wrote little, he had a great influence on his students, many of whom subsequently became leading figures in the field of law and economics. Their writings helped lead the antitrust revolution. Using price theory, Director and his students would examine the economic logic, or lack thereof, employed by the courts in important antitrust cases that attacked a variety of business practices as being anticompetitive. Good examples would be an examination of the soundness of economic logic in cases alleging price predation, tie-in sales, and resale price maintenance. The application of economics to these cases often revealed that the Court had made economic errors, frequently confusing harm to competitors with harm to competition.

Several articles explained the flaws in economic logic and a number of them appeared in the *Journal of Law and Economics*, of which Director was the editor. Among the most well known of these are McGee's's[3] 1958 article on predation, Telser's's[4] 1960 article on resale price maintenance, and Bowman's's[5] 1957 *Yale Law Review* article on tying. In these and other articles, the authors applied economic theory to show that the alleged conduct at issue had either not actually taken place or that its use likely resulted in economic efficiency and benefits to consumers. Despite the strong influence of academics at Chicago, it would be misleading to suggest that only Chicago-trained academics contributed to advances in the use of price theory in antitrust pre-1969. For example, Donald Turner, a highly influential PhD economist and lawyer, and Phillip Areeda taught antitrust at Harvard Law School during the 1960s, and both played a significant role in advancing the use of economic analysis during the subsequent period.[6] We suspect that the important influence of Chicago in transforming antitrust arose in part from the close connection between the emphasis on price theory in the Economics Department and Business School, led by Milton Friedman and George Stigler, and its use in the Law School by Director, who was their close friend and Friedman's brother-in-law. Stigler's famous industrial organization seminar met in the Law School and included as regular attendees numerous well-known economists and lawyers.

2. Case Law and the Federal Agencies. The basic antitrust doctrine pre-1969 can somewhat crudely be summarized as (a) "big is bad" and (b) any constraints imposed upon some firms by others are suspicious and most likely represent an exercise of market power that reduces competition.[7]

2. George J. Stigler et al. *Report of the Task Force on Productivity and Competition*, 2 Antitrust L. & Econ. Rev. 13 (1969). The Stigler Report was a report to the President on antitrust policy. George Stigler was the Chairman of the President's task force that produced the report, with the other members being Ward S. Bowman, Jr., Ronald H. Coase, Roger S. Cramton, Kenneth W. Dam, Raymond H. Mulford, Richard A. Posner, Peter O. Steiner, and Alexander L. Scott.
3. John S. McGee, *Predatory Price Cutting: The Standard Oil (N.J.) Case*, 1 J.L. & Econ. 137 (1958).
4. Lester G. Telser, *Why Should Manufacturers Want Fair Trade?* 3 J.L. & Econ. 86 (1960).
5. Ward S. Bowman, Jr., *Tying Arrangements and the Leverage Problem*, 67 Yale L.J. 19 (1957).
6. William E. Kovacic, *The Chicago Obsession in the Interpretation of U.S. Antitrust History*, 87 U. Chicago L. Rev. 459 (2020).
7. As Ronald Coase wryly observed at the outset of the antitrust revolution, "One important result of this preoccupation with the monopoly problem is that if an economist finds something—a business practice of one sort or other—that he does not understand, he looks for a monopoly explanation. And as in this field we are very ignorant, the number of ununderstandable practices tends to be rather large, and the reliance on a monopoly explanation, frequent." Ronald H. Coase, *Industrial*

Furthermore, the very standards applied by courts in interpreting the antitrust laws contained a confusing and often internally inconsistent amalgam of objectives. This summarization, of course, oversimplifies somewhat, but probably by not too much.

Regarding horizontal mergers, the Court in *Brown Shoe* blocked a merger combining two firms that made and distributed shoes.[8] The Court indicated that a combined share of even 5% in a metropolitan area was enough to trigger antitrust liability. In *Philadelphia National Bank*, the Court indicated that an efficiencies defense would be fairly limited and established a since widely used presumption that even modest postmerger concentration levels justified blocking a merger.[9]

The Supreme Court's decision in *Procter & Gamble* reflected the confused state of antitrust thinking at the time and went further than *Philadelphia National Bank* in its treatment of efficiencies.[10] Citing to its earlier decision in *Brown Shoe*, the Court ruled that the efficiencies generated by the proposed merger did not constitute a legally cognizable defense, stating that "Possible economies cannot be used as a defense to illegality", as Congress "struck the balance in favor of protecting competition."[11] Indeed, the Court treated the merger-specific efficiencies as likely to raise entry barriers to smaller, higher cost rivals, and thus a reason for blocking the merger. In *Von's*, the Court blocked a merger of two supermarket chains even though their combined share in the metropolitan area was only 7.5%.[12] In 1968, the DOJ issued its first formal set of merger guidelines, which stated that the Department would likely challenge a horizontal merger between two firms in a less highly concentrated market (i.e., four-firm concentration ratio of less than 75%) if each firm had 5% of the market. For vertical mergers, a firm with a 6% market share would likely not be allowed to purchase a supplying firm with a 10% share unless there are no significant barriers to entry into the business of the purchasing firm. These shares are, of course, extremely low by modern-day standards and would not today merit anticompetitive concerns. There is, however, a certain perverse logic in the thinking of the courts and the agencies, since if efficiencies can't justify an otherwise anticompetitive merger, then virtually all mergers between horizontal competitors should be stopped since any horizontal merger reduces the number of competitors and thereby risks an anticompetitive effect.

For civil nonmerger practices that departed from those found in the then standard economic models of competition, there was general hostility. Exclusive territories, resale price maintenance, tying, and other vertical practices were either treated as illegal per se or at a minimum assumed to be suspicious and subjected to great scrutiny. As a further example of the hostility the courts showed toward successful competitors, in *Alcoa*, the court ruled that when a dominant firm seeks "to embrace each new opportunity as it opened"[13] that could subject it to antitrust liability.

The relative insignificance of economists in influencing the policy of the government agencies is perhaps best evidenced by the fact that it was not until 1973 that the DOJ formally established an internal group of economists, the Antitrust Division's Economic Policy Office (EPO), to work on antitrust issues. Prior to the establishment of the EPO, the role of trained economists at the DOJ was limited to that of occasional individual special advisors. At the FTC, prior to 1969, there had long been economists employed internally. Their role, however, was largely consigned to performing various, typically descriptive, industry studies, and they were not the regular and influential contributors to antitrust investigations that they have become since the 1970s.

Organization: A Proposal for Research, in POLICY ISSUES AND RESEARCH ISSUES IN INDUSTRIAL ORGANIZATION 59, 67 (Victor Fuchs ed., 1972).

8. Brown Shoe Co. v. U.S., 370 U.S. 294 (1962).
9. U.S. v. Philadelphia National Bank, 374 U.S. 321 (1963).
10. Federal Trade Commission (FTC) v. Procter & Gamble Company, 386 U.S. 568 (1967).
11. *Id*. at 580.
12. U.S. v. Von's Grocery Co., 384 U.S. 270 (1966).
13. U.S. v. Aluminum Co. of America, 148 F.2d 416, 431 (1945).

B. Post-1969

1. Economics. In addition to the continued use of price theory described earlier, a major economic insight influencing antitrust comes from Demsetz.[14] He made a simple but powerful point. The prevailing paradigm in studying markets was structure-conduct-performance (SCP), with market structure (e.g., concentration) influencing a measure of performance such as price, where a better level of performance was generally assumed to be negatively correlated with concentration. Demsetz explained that the logic could easily be reversed. The most efficient firm could expand in the market, increasing concentration, but at the same time lowering costs and prices and expanding output—just the opposite of the SCP prediction that greater concentration would lead to higher prices and reduced output. Demsetz's idea, and the papers contained in a subsequent book by Goldschmidt,[15] provided further support for the hypothesis, creating a revolution in understanding when or whether concentrated markets are inherently objectionable. Subsequent theoretical and empirical work by Sutton[16] using game theory built on Demsetz's claims that market structure is endogenous and confirmed that looking at only concentration could be seriously misleading. Not only might industries become more concentrated as market size (and hence output) increased (the opposite of what SCP might predict), but also product quality might rise and benefit consumers.

Following the tradition of Coase[17] and the use of price theory to understand business practices, Williamson[18] explained how a failure to appreciate the justifications for, and efficiency properties of, a firm had led to the condemnation of business practices that, when viewed from the vantage point of minimizing transactions costs across firms, explained a lot of conduct that otherwise had been assumed to be anticompetitive. Transactions cost analysis could explain not only why restrictions on distributors might be a desirable way to encourage distributor's selling effort or manufacturer's investments in marketing, but also the economic rationale for even more unusual practices such as "swaps" in which one firm swaps product with its rival in order to deliver the product to its customer rather than compete with its rival for the sale to the final customer.

Another major development was the publication of Posner's (1976) *Antitrust Law: An Economic Perspective*[19] and Bork's book, *The Antitrust Paradox.*[20] We list these developments under economics because these books brought to the attention of lawyers, judges, and other noneconomists the economic approach to antitrust, especially as conveyed by Director. Aside from making more accessible the price theory that had been used by Director and his students to analyze antitrust cases, one of the most significant achievements of both books, but especially identified with Bork's book, was that it helped transform antitrust into what it has become today, namely, a policy focused solely on the concept of consumer welfare (though in using the term, Bork actually meant society's total economic welfare, i.e., consumer plus producer surplus).[21] This would have been pretty standard[22] in the cost–benefit

14. Harold Demsetz, *Industry Structure, Market Rivalry, and Public Policy*, 16 J.L. & Econ. 1 (1973).
15. Harvey J. Goldschmidt, Industrial Concentration: The New Learning (1974).
16. John Sutton, Sunk Costs and Market Structure: Price Competition, Advertising, and the Evolution of Concentration (2007).
17. Ronald H. Coase, *The Nature of the Firm*, 4 Economica 386 (1937).
18. Oliver E. Williamson, Markets and Hierarchies: Analysis and Antitrust Implications (1975).
19. Richard A. Posner, Antitrust Law: An Economic Perspective (1976).
20. Robert H. Bork, The Antitrust Paradox: A Policy at War with Itself (1978).
21. We discuss later the distinction between consumer welfare and total welfare and its implication for policy. Antitrust has generally focused on consumer welfare (the welfare of the consumers of a particular product) rather than Bork's total welfare concept. Unfortunately, the terminology has created some confusion in the legal and economics literature. We will see that the distinction has little practical significance for policy.
22. *See* Arnold C. Harberger, *Three Basic Postulates for Applied Welfare Economics: An Interpretive Essay*, 9 J. Econ. Lit. 785 (1971).

literature in public finance, but for Bork to state so clearly and advocate so effectively for the proposition that consumer welfare—not the protection of small businesses, not access by competitors to "essential" facilities created by others, not the guarantee of full employment or whatever other worthy goal one could name, but simply a single-minded focus on this one objective—was (and should be) the goal of antitrust proved to be extremely influential.[23] Bork's advocacy for the consumer welfare standard helped shift attention away from what were otherwise diffuse and often mutually inconsistent standards, to a standard that could be practically applied and quantified (or at least supposedly could). Without question, and due largely to the work of Bork, Posner, and others sharing their views, the consumer welfare standard came to be widely accepted and employed throughout the antitrust community and in the courts. That consensus has recently been questioned, and we examine later some of the current critics' objections to such a standard.

Bork and Posner are clearly associated with Chicago, but as Kovacic[24] convincingly explains, scholars from Harvard Law School and elsewhere also had a lot to do with the revolution of bringing economics to antitrust. The Areeda and Turner paper on predation[25] employed price theory to address an important antitrust issue and to derive from price theory an implementable test that courts could use. It proved to be a milestone in understanding how antitrust could and should treat an action that is routinely alleged as common and harmful, especially by noneconomists and in the popular press. The subsequent Areeda and Turner treatises[26] were an important vehicle in influencing the use of economics in antitrust.

Finally, an important paper by Easterbrook[27] framed antitrust policy using cost–benefit analysis by employing decision theory or concepts based on it. Easterbrook explained that a decision maker must rely on inherently imperfect data or theory when deciding whether to permit or condemn some behavior, and thus has to consider the likely costs and benefits of his decisions, which can never be assumed with certainty to be correct. For example, if one thought (as Easterbrook suggests is true) that an incorrect decision that allowed market power to be created would have little consequence because of entry—that the market would self-correct relatively quickly—then making an error in favor of allowing a practice that creates market power would create little harm since the market power would be short-lived. Or, if one thought (as Easterbrook suggests is true) that incorrectly prohibiting a practice that is efficiency-enhancing would permanently prevent that practice from being adopted, then that error could create significant harm. Under either of these assumptions, it would be a mistake for a decision maker, uncertain as to the right decision, to engage in aggressive antitrust enforcement. Easterbrook's logic would, in such cases, favor adopting a rather lenient antitrust policy. Conversely, of course, if one thought that markets do not quickly self-correct and eliminate market power, then that would justify more aggressive antitrust enforcement. We return to these ideas later when we discuss the current criticisms of antitrust.

A final important development has to do with insights and evidence concerning the efficiency properties of regulation as a substitute for the market. Stigler[28] explains that, in contrast to the widely held view that regulators are omniscient and are acting always in the public interest, regulators themselves have imperfect knowledge, can be expected to respond to incentives, financial and political, and will often be swayed to act in the interests of—be "captured by"—the regulated. Numerous

23. *See* Ken Heyer, *Consumer Welfare and the Legacy of Robert Bork*, 57 J.L. & Econ. S19 (2014).
24. Kovacic, *supra* note 6.
25. Phillip Areeda & Donald F. Turner, *Predatory Pricing and Related Practices Under Section 2 of the Sherman Act*, 88 Harvard L. Rev. 697 (1975).
26. Phillip Areeda, & Donald F. Turner, Antitrust Law: An Analysis of Antitrust Principles and Their Application (1978). Herbert Hovenkamp joined as a third contributor to later volumes.
27. Frank H. Easterbrook, *The Limits of Antitrust*, 63 Texas L. Rev. 1 (1984).
28. George J. Stigler, *The Theory of Economic Regulation*, 2 Bell J. Econ. & Mgm't Sci. 3 (1971).

studies showed the harm regulation had done to various parts of the U.S. economy and emphasized the difficulty that even the most well-intentioned regulators might have in regulating an industry undergoing rapid technological change. This, of course, does not imply that regulation can never improve performance, but it does imply that regulation should not be viewed as easily able to correct whatever the economist thinks is not working perfectly in the marketplace.[29]

It would, of course, be wrong to think that the economic thinking and empirical knowledge of the 1970s have not advanced and that those advancements have not refined or replaced some earlier ideas. Nor can one seriously argue that antitrust policy should be frozen in place and fail to adapt to new evidence and new learning. Indeed, there has been theoretical work showing that several practices once believed to be invariably benign may, under certain circumstances, have anticompetitive consequences. For example, the use of tie-in sales, a practice that Director described as a means of efficiently price discriminating rather than excluding rivals, can under certain circumstances harm competition,[30] and there has been a growing appreciation that vertical mergers may be more likely to harm competition than economists writing early in the revolution had thought.[31] We return in a later section to a discussion of recent theoretical and empirical work claiming that the antitrust revolution has not been a success because it has failed to effectively constrain the growth of market power.

2. Case Law and the Federal Agencies. Drawing on the advances in the application of price theory to antitrust issues that began as early as the 1950s, the changes in antitrust case law since the end of the 1960s have been quite remarkable. Regarding horizontal mergers, a contrast of the 2010 Guidelines to the 1968 Guidelines illustrates the enormous change. A merger of two 5% firms, which the 1968 Guidelines would likely have challenged, does not even appear on the radar screen today as a potentially, let alone presumptively, harmful merger. Such a merger would lead to a change of fifty in the Herfindahl–Hirschman Index (a commonly used measure of industry concentration that equals the sum of the squares of the individual firms' market shares) and the current Guidelines strongly imply that such a small change would not warrant more than a cursory examination. There is also a de-emphasis in the current Guidelines on legal formality based on market shares and a greater emphasis on economic effects. So, for example, an analysis of comparable past mergers, and empirical evidence consistent with established theory for how and why the merger might be expected to produce anticompetitive effects, are important ingredients in just about every merger investigation today—including ones involving highly concentrated markets.

Regarding vertical mergers, government enforcement efforts declined from pre-1969. There is (or was) a prevailing view that vertical mergers are far less troubling than horizontal mergers, in large part because there is no relevant market in which the number of suppliers is reduced by such a merger. From 1961 to 1970, the federal agencies challenged twenty-seven purely vertical mergers, while from 1971 to 1980, they challenged only two.[32] The only litigated government challenge to a vertical merger

29. This error is commonly referred to as the "nirvana fallacy" based on Demsetz, who wrote: "The view that now pervades much public policy economics implicitly presents the relevant choice as between an ideal norm and an existing 'imperfect' institutional arrangement. This *nirvana* approach differs considerably from a *comparative institutional* approach in which the relevant choice is between alternative real institutional arrangements." Harold Demsetz, *Information and Efficiency: Another Viewpoint*, 12 J.L. & Econ. 1, 1 (1969).

30. *See*, *e.g.,* Michael D. Whinston, *Tying, Foreclosure, and Exclusion*, 80 Am. Econ. Rev. 837 (1990); Dennis W. Carlton & Michael Waldman, *The Strategic Use of Tying to Preserve and Create Market Power in Evolving Industries*, 33 Rand J. Econ. 194 (2002).

31. *See*, *e.g.,* Steven C. Salop & David T. Scheffman, *Raising Rivals' Costs*, 73 Am. Econ. Rev. 267 (1983).

32. Robert Pitofsky, *Past, Present, and Future of Antitrust Enforcement at the Federal Trade Commission*, 72 U. Chicago Law Rev. 209 (2005).

case in the last forty years is the recent *AT&T/Time Warner* case, though there have been several vertical merger cases in which the government and the merging firms entered into consent decrees.[33] In 1984, the Antitrust Division did publish Vertical Merger Guidelines. Those described the very limited circumstances under which such mergers "might" prove harmful to competition but did not describe when the Division would actually seek to prevent them. These Guidelines have just recently been replaced by a version containing more modern economic insights and reflect a greater skepticism that vertical mergers are as benign as was widely believed in the 1980s, though the new Guidelines have been interpreted by critics as continuing to support too strong a presumption that vertical mergers are not likely to harm competition. Both the 2010 Horizontal Merger Guidelines and 2020 Vertical Merger Guidelines discuss the importance of efficiencies as part of the overall competitive effects analysis. Despite *Procter & Gamble*,[34] it is hard to imagine a proposed merger in which market concentration is high enough to trigger a serious investigation where the government agencies and courts will not evaluate carefully the parties' claimed efficiencies and, at least in principle, treat them as a defense rather than an offense. Efficiencies do, at times, play a significant role in the agencies' internal decision-making process, though have yet to gain much (if any) traction with the courts. Rarely (if ever) have courts, having found that a merger might otherwise be harmful to consumers, permitted the merger to go forward because of the claimed efficiencies.[35]

In terms of vertical and exclusionary practices, since 1969, there has been a complete turnaround as to what practices are viewed as generally anticompetitive under the antitrust laws, including a dramatic decline in the number and type of practices that are treated as illegal per se. Apart from naked price-fixing, virtually all business practices once regarded as highly suspect are today considered untroubling in most circumstances, and the rule of reason balancing test, rather than a per se prohibition, generally governs allegations of price predation and the use of restraints such as exclusive dealing, exclusive territories, resale price maintenance, tying, and others. *Matsushita*[36] and *Brooke Group*[37] demolished the idea that predation was a frequent and likely strategy, raising the bar to winning such cases. The Supreme Court mentioned exclusive dealing in its *Jefferson Parish Hospital District No. 2 v. Hyde* decision, observing that an "exclusive-requirements contract . . . could be unlawful if it foreclosed so much of the market from penetration by . . . competitors as to unreasonably restrain competition in the affected market."[38] *GTE Sylvania* overruled the per se prohibition on exclusive territories.[39] *Leegin* overruled the per se prohibition on minimum resale price maintenance.[40] And

33. *See* U.S. v. AT&T Inc., 310 F.Supp.3d 161 (2018) and U.S. v AT&T, Inc., No. 18-5214 (D.C. Cir. 2019). Carlton served as an expert for AT&T.
34. *Procter & Gamble, supra* note 10.
35. Perhaps surprisingly, despite *Philadelphia National Bank, supra* note 9, and *Procter & Gamble, supra* note 10, the 1968 Guidelines also have a discussion of the importance of efficiencies. This is often attributed to the influence of Oliver Williamson, a then young economist hired by the then Assistant Attorney General Turner, under whom the 1968 Guidelines were issued. In 1968, Williamson published his ideas in his well-known article ("Economies as an Antitrust Defense"), which included an argument for applying a total welfare standard (i.e., Bork's "consumer welfare"), not a narrower welfare standard based only on consumer surplus. Oliver E. Williamson, *Economies as an Antitrust Defense: The Welfare Tradeoffs*, 58 Am. Econ. Rev. 18 (1968).
36. Matsushita v. Zenith Radio Corp., 475 U.S. 574 (1986).
37. Brooke Group Ltd. v. Brown Williamson Tobacco Corp., 509 U.S. 209 (1993).
38. Jefferson Parish Hosp. Dist. No. 2 v. Hyde, 466 U.S. 2, 30 (1984). This case was about tie-in sales, an area still in need of clarification based on economics. See, *e.g.,* Carlton & Heyer (2008) for a discussion of tying and a more general discussion of the distinction between extracting surplus versus extending market power. Dennis W. Carlton & Ken Heyer, *Extraction vs. Extension: The Basis for Formulating Antitrust Policy towards Single-Firm Conduct*, 4 Comp. Policy Int. 285 (2008).
39. Continental T.V., Inc. v. GTE Sylvania, 433 U.S. 36 (1977).
40. Leegin Creative Leather Products v. PSKS, Inc., 551 U.S. 877 (2007). Prior to that, the Court had overruled its per se prohibition on maximum resale price maintenance in State Oil Co. v. Khan, 522 U.S. 3 (1997).

the argument that an efficient firm should incur antitrust liability for seizing opportunities as they arise, as articulated in *Alcoa*, would surely fail in court if such a case were brought today.

Finally, as for the use of economists by the FTC and DOJ in antitrust matters, both agencies have for decades now each employed dozens of full-time PhD economists, and the number of economists involved in antitrust matters at the federal agencies has grown considerably since 1969. The EPO (subsequently renamed the Economic Analysis Group) has grown to several dozen PhD-level economists, typically from the country's most highly rated economics departments. Similarly, at the FTC, the number of economists employed in antitrust matters has grown considerably.[41] The economists at both agencies are part of most, if not all, antitrust investigative teams, produce their own independent memoranda and recommendations in all merger and civil nonmerger investigations, and engage actively in agency-supported research programs and the development of formal guidelines and other policy initiatives. The economists turn out substantial numbers of publications in leading antitrust and industrial organization journals. This is vastly different from the situation in the late 1960s.

III. The Effect of the Revolution on Economists and Economic Studies of Antitrust Matters

The growth in the application of economics to antitrust has not only increased the employment of economists at the government agencies involved with antitrust but has led to a sizable and growing industry composed of economic consulting firms, often associated with academics. The 1970s and beyond saw the establishment and rise of a number of the currently largest firms that started small but have grown significantly. Firms such as Compass Lexecon, Charles River Associates, Analysis Group, the Berkeley Research Group, Cornerstone, and Bates White employ literally hundreds of economists to research matters associated with antitrust questions, prepare expert reports, and testify. Precise data on size are hard to find, but using data based on annual reported domestic and international competition economists, *Global Competition Review* (2006 and 2020) estimates that the top five firms in 2006 employed around 700 economists while that number in 2020 is about 1300.[42] As George Stigler once quipped, these economists are rumored to make at least the minimum wage, as did he when he served as an expert. The length and sophistication of economic studies have greatly increased as economists' views have grown in influence, but also as theoretical and empirical techniques have themselves advanced together with the availability of large data sets. For example, in an early analysis of an airline merger, Carlton (together with William Landes and Richard Posner) submitted a theoretical and empirical analysis that was based on twenty-eight observations.[43] In contrast, in a study of some recent airline mergers, Carlton et al.[44] published an article based on 70,000 observations.

The growth of economic consulting firms alongside the growth in the number of economists at the government agencies is itself strong evidence that the antitrust revolution has brought economic analysis to the forefront. And yet, there are questions that need to be asked as the use of economics has increased substantially. One question is whether the economic analyses are themselves

41. Beginning in the early 1970s, the role of economists in antitrust investigations at the FTC expanded significantly, and the share of economists at the Agency holding PhDs grew. Aside from antitrust, economists at the FTC are also involved in consumer protection. *See* Paul A. Pautler, *A History of the FTC's Bureau of Economics* (American Antitrust Institute (AAI) working paper no. 15-03 & Institute for Consumer Antitrust Studies (ICAS) working paper 2015-3, Sept. 8, 2015).

42. *The Economics 20*, *in* GCR 100: The World's Leading Competition Law Practices, 87 (Global Competition Review, Supplement 2006), and Global Competition Review, *Economics 21* (Jan. 14, 2020), https://globalcompetitionreview.com//benchmarking/gcr-100-20th-edition/1212573/economics-21.

43. A version of the study appears as Dennis W. Carlton et al., *Benefits and Costs of Airline Mergers: A Case Study*, 11 Bell J. Econ. 65 (1979).

44. Dennis W. Carlton et al., *Are Legacy Airline Mergers Pro- or Anti-Competitive? Evidence from Recent U.S. Airline Mergers*, 62 Int. J. Ind. Org. 58 (2019).

scientifically sound rather than being primarily advocacy pieces in which biased empirical results based on cherry-picked data or econometric specifications are being presented. Second, how is it, if economics is a scientific discipline, that well-trained opposing experts often reach diametrically opposite conclusions?

Our experience is that, while there are undoubtedly attempts to present biased results based on cherry-picked data or econometric methods, the controls on consultants are much greater than, for example, those on academics. Any economic expert submitting an expert report based on empirical analysis must typically turn over his data either to the government agencies reviewing the matter or, if the matter is in litigation, to the opposing side. The expert can be sure that his econometric results or, in the case of theory, his underlying assumptions and logic, will be carefully analyzed by the other side and checked for both accuracy and robustness. In this sense, the typical consulting study triggered by antitrust issues is much more carefully vetted than the typical academic article, as it is still relatively rare for the analysis in academic articles to be reproduced and intensively checked, except perhaps for certain selected high-profile topics. That sounds good for consulting.

Despite this vetting of each side's expert economic report, however, it often happens that two highly skilled economists reach diametrically opposite conclusions. The two opposing experts will testify and offer critiques of one another's work, but these debates may be well beyond the competence of even the most intelligent laypersons and judges to follow. What accounts for the difference of opinions? And how is a judge or jury to evaluate the differences and decide which expert is correct? (The agencies with their own group of highly trained economists are well positioned to do so, though even here there can be irresolvable differences of opinion between the agencies' economists and the parties' economists, which is part of the reason why the agencies challenge mergers despite the analyses presented by the parties' economists.) The battle of the experts can lead to the result that each expert cancels the other out since the judge or jury may not be able to figure out what is going on. Throwing its hands up, the decision maker is left to issue its ruling based on an assortment of other evidence. This is indeed unfortunate. However, there are a variety of ways to address the problem. Before doing that, let's first try to answer the question of how it can be that two experts can reach diametrically opposite conclusions. There are at least two reasons.

One reason is that even if each expert is using the same modeling technique, say a merger simulation, they are using different assumptions for the variables in the model. For example, suppose one expert is told by his clients that their engineers predict a 25% savings in marginal costs, while the other expert is told by engineers on his side that there are no such cost savings. If that is the reason for the different predictions of the outcome of a merger, then that is not due to a difference in how the economists are modeling the merger, but rather to a difference in a key assumption, the veracity of which is for someone other than the economist to determine. If this is the explanation for the difference of opinion, then the judge or jury must look to experts other than the economists in deciding the case. Of course, there could be other reasons for the differences, such as the technical assumptions (e.g., the specific functional form of the demand curve) built into the merger simulation. These raise more complicated issues that can perhaps be partially resolved in ways that we discuss below.

A second reason is that the experts may have very strong initial beliefs—"priors"—either about how the market works or, for example, about the harm or benefit that is likely created by allowing or not allowing a merger to occur. This tracks the analysis presented by Easterbrook[45] as discussed earlier. Beliefs should be afforded a certain amount of deference, as long as they are based on evidence. There is, of course, a fundamental belief underlying the antitrust laws that, all else equal, competition is desirable. A significant benefit of recent advances in theory and empirical techniques is that now there is often more refined data and analyses that can be done to see whether the evidence supports the

45. Easterbrook, *supra* note 27.

expert's initial beliefs. If it does not, then those beliefs should be modified. When it is initial beliefs that govern an expert's opinion, then that fact should be made clear to the fact finder.

So what ways are there to deal with the situation when experts' opinions differ? The goal should be to create a process that helps the fact finder figure out the reasons for the differences and evaluate the justifications for the differences. One such process would be to appoint an independent economist as a special master to help the judge or jury to understand and evaluate the reasons for the discrepancy of opinion. For example, where the experts' opinions differ because they are employing different and perhaps nonobvious assumptions about the merger's ability to generate efficiencies, the appointed economist could discern this and explain it to the judge or jury, giving his views on which assumptions are most reasonable. Alternatively, suppose one expert uses old data while another uses more recent data, again the appointed economist could explain this and its potential relevance to the finder of fact.

These are relatively simple examples, and often the decision maker can be educated about these underlying differences through careful cross-examination by attorneys or by the two expert economists being asked during direct examination why they disagree with their opponent. At other times, things may be much more complicated. For example, suppose in modeling market behavior, one economist assumes price-taking behavior while another assumes quantity-taking behavior. An economist appointed by a judge rather than the judge himself might be better able to sort out which type of model is being used to produce which conclusions, and perhaps help also in determining which model may be more appropriate to use under the circumstances. Similar considerations apply when the experts are employing different and highly technical assumptions in performing their econometric or merger simulation analyses.

All of this having been said, the use of special masters can raise concerns about fair process. For example, there may be no opportunity for each side to cross-examine the independent economist, who may have his own biases or limitations.

Other possible ways of addressing the problem of differing expert opinions, used in some arbitrations and in court proceedings in other countries, might be to allow the experts to cross-examine each other before the judge, respond to a judge's questions, and then respond to each other's answers. (In the United States, a trial often has one expert testifying days or even several weeks before the opposing expert testifies, making it hard for a fact finder to even keep straight all or any of the differences between the two experts.) Even though judges are not PhD economists, their probing questions—and the questions asked by the rival economists of one another (rather than through the medium of their lawyers)—can reveal why experts differ and reveal key differences in assumptions that explain the opposing recommendations. At the very least, some experimentation with these alternatives might improve decision-making in antitrust disputes.

IV. Did the Revolution Succeed in Improving Antitrust Policy?

Compared to antitrust policy pre-1969, the answer is in our view yes, though there are several current criticisms that we discuss in the next section. Even if the revolution were a success, that of course does not mean that antitrust policy could not be improved further, and several practitioners have suggested improvements, some involving a drastic rethinking of the proper goals and purposes of antitrust policy itself. We discuss some of those suggestions in the next section as well. Here, we discuss briefly why we think the revolution likely was a success. There are five areas we discuss: cartels, horizontal mergers, price discrimination as addressed by the Robinson–Patman Act, vertical mergers, and vertical practices/exclusionary conduct. Collectively, these comprise the bulk of antitrust matters.

A. Cartels

Although there were really no major theoretical insights about the social desirability of cartels post-1969, there was a huge change in enforcement. A naked price-fixing cartel is per se illegal and we know of few, if any, antitrust economists who would dispute the justification for that. (There can be, of course, disputes as to whether a cartel actually *is* "naked price fixing," but let's stick to the simple example of major rivals sitting down and deciding what price to charge consumers.) That was the view pre-1969 and post-1969. Nevertheless, there was a huge shift in enforcement over the past half-century, and these changes appear likely to deter cartel formation more effectively. What happened was that in 1990 and then in 2004, Congress increased the maximum fines and criminal penalties (i.e., jail time) that the DOJ could levy on firms and individuals guilty of price-fixing.[46] The DOJ now has the ability (and has frequently used it) to offer leniency to a cartel participant if that participant was not the ringleader and is the first to report on an ongoing cartel. That firm also is able to escape the prospect of treble damages in follow-on civil trials brought by third parties who, if successful, obtain treble damages. Others in the cartel are not. To illustrate how cartel enforcement has changed, consider the following data based on Ghosal and Sokol (2014).[47] Comparing the period 1965–1974 to 2003–2012, one finds the following: the number of annual cartel cases varied from about five to thirty in the earlier period to about twenty-five to sixty in the later period, total annual fines levied in real 2005 dollars were near zero in the earlier period and varied from about US$0.1 to US$1.2 billion in the later period, the total annual court-ordered days of incarceration in the earlier period were close to zero and varied from about 5000 to 35,000 days in the later period, and annual fines per corporation in 2005 dollars were roughly zero in the earlier period and varied between about US$5 and US$55 million in the later period. Ghosal and Sokol have noted that the number of successful prosecutions of cartel cases has recently declined.[48]

B. Horizontal Mergers

Most economists believe that horizontal mergers can create efficiencies. When there is no serious chance of an adverse competitive effect, then stopping such a merger can harm the economy by depriving consumers of competition among more efficient firms, something that presumably would lead to lower prices and/or better products or services.[49] Most mergers in the United States raise no competitive issues and only a small fraction (under about 5%) are considered sufficiently worrisome as to merit detailed examination.[50] Although we have seen no study, we suspect that if one looked at all the mergers that have passed scrutiny under the Merger Guidelines since 1982 but would not have done

46. *See* Vivek Ghosal & D. Daniel Sokol, *Policy Innovations, Political Preferences, and Cartel Prosecutions*, 48 Rev. Ind. Org. 405 (2016). The Antitrust Amendments Act of 1990 not only increased maximum fines, but prison terms as well. In 1993, the Department of Justice (DOJ) revamped its leniency program. The Antitrust Criminal Penalty Enhancement and Reform Act of 2004 increased the maximum cartel fine to US$100 million for firms and US$1 million for individuals and created a treble damage exemption for private piggyback cases following leniency. The DOJ's leniency program is considered a major success and has been adopted in various forms by other competition authorities around the world.

47. Vivek Ghosal & D. Daniel Sokol, *The Evolution of U.S. Cartel Enforcement*, 57 J.L. & Econ. S51 (2014).

48. Vivek Ghosal & D. Daniel Sokol, *The Rise and (Potential) Fall of U.S. Cartel Enforcement*, 2020 U. Illinois L. Rev. 471 (2020).

49. *But see* Blonigen & Pierce (2016) questioning whether mergers in manufacturing generally bring efficiencies. Bruce A. Blonigen & Justin Pierce, *Evidence for the Effects of Mergers on Market Power and Efficiency* (National Bureau of Economic Research Working Paper no. 22750, 2016), https://www.nber.org/papers/w22750.pdf.

50. The number of mergers that the agencies asked for a second request for information (i.e., a more intensive investigation) was about 10% in the late 1970s, under 10% until 1983, under 5.5% until 2010, and under 4% since. *Source:* FTC & DOJ Hart-Scott-Rodino Annual Report for Fiscal Years 1980, 1990, 2000, 2010, and 2019, https://www.ftc.gov/policy/reports/policy-reports/annual-competition-reports.

so under the 1968 Guidelines, then even modest assumptions about small efficiencies would show the great harm that following those 1968 Guidelines would have created. The relatively few mergers that are likely to create harm should be able to be handled by adhering to the framework provided by the current Merger Guidelines and continued reliance on the Guidelines by courts.

That does not rule out the possibility—indeed, the near certainty, given our limited ability to predict the future—that some anticompetitive mergers might occur and lead to price increases as a result of the creation of additional market power. It simply means that those types of mergers deserve to be treated with greater skepticism *if* one can identify them beforehand. It does no good to tell a policy maker that 10 of the 100 potentially problematic mergers will lead to price increases while 90 are procompetitive unless one can somehow better identify the harmful ones at the time the merger is proposed. Otherwise, one would have to stop all 100 mergers if one wanted to prevent any merger-generated price increases.[51] Alternatively, one could unwind mergers found to be anticompetitive ex post, though even if one were certain of the analysis, unwinding mergers ("unscrambling the eggs") is fraught with difficulty and cost.

This conclusion is not inconsistent with the fact that several merger retrospectives—pointed to by current critics and employed as an argument for making antitrust policy toward mergers far more aggressive—have found that merger policy seems not always to have prevented anticompetitive mergers from taking place. We discuss this further in the section on current issues and critics, below.

C. Robinson–Patman

The Robinson–Patman Act protects small firms from larger rivals whose ability to obtain lower supply prices is limited by the Act. There is fairly uniform sentiment that the Act is pure protectionism and several panels reviewing antitrust statutes have recommended its abolition.[52] The number of cases that the FTC has brought under the Robinson–Patman Act has declined from an average of about twenty-seven per year during the period 1965–1968, to about three per year during the mid-1970s, and to zero since 2000.[53] While the Act remains on the books and is occasionally employed in private sector litigation, its decreasing use over time is a development that any who support either a consumer or a total welfare standard would surely applaud.

D. Vertical Mergers

By and large, the concern with vertical mergers since the late 1960s has lessened. Vertical mergers, unlike horizontal ones, have no associated change in the number of suppliers and so are less likely to raise competitive issues than horizontal mergers. Moreover, they commonly enable more efficient coordination between firms participating at different levels of the production and distribution process, including pricing efficiencies through the elimination of double (monopoly) margins. Although vertical mergers have become a hot topic that we discuss in more detail in the next section, we think the lessened concern over vertical mergers has been appropriate and desirable.

51. *See* Dennis W. Carlton, *Why We Need to Measure the Effect of Merger Policy and How to Do It*, 5 Comp. Policy Int. 77 (2009).
52. *See*, *e.g.,* Antitrust Modernization Commission, *Report and Recommendations* (Apr. 2007), https://govinfo.library.unt.edu/amc/report_recommendation/amc_final_report.pdf. Carlton served on that Congressional Commission.
53. *See* D. Daniel Sokol, *Analyzing Robinson-Patman*, 83 Geo. Wash. L. Rev. 2064, 2072–74 (2015).

E. Vertical Practices and Exclusionary Conduct

Allowing firms to engage in efficient practices can provide a benefit to consumers through lower prices or improved products or both. The changes in antitrust policy described earlier tried to identify and allow efficient practices and so that would seem to be an improvement in policy. However, firms with market power may claim that their practices are efficient when, in fact, they harm rivals, harm competition, and thereby harm consumers. Vertical practices and exclusionary behavior are a tough area for enforcers since conduct that harms rivals can be efficient or can be harmful to competition. One way to distinguish between efficient conduct and exclusionary conduct is to use the rough rule of thumb that if output in the relevant antitrust market rises or is likely to rise as a result of the conduct then leave the conduct alone. That test, unfortunately, can be difficult to apply if the conduct is new, has been ongoing for a long period of time, or if various elements of product quality change over time, making the level of output an imperfect proxy. Many of the practices challenged as exclusionary are often justified by some type of argument involving protection from free-riding, a topic we return to in the next section.

V. Current Issues and Critics

The policy situation in 2020 is almost the reverse of 1969. Critics today are calling for increased antitrust enforcement, with some wanting to break up large companies and others wanting to regulate some of them.[54] Curiously, some of the very industries whose performance the different critics pre-1969 wanted to improve through deregulation and more competition have similar characteristics to those that critics now want to restrain through increased regulation. One common characteristic of industries for which critics pre-1969 wanted to free of onerous regulatory burdens were network industries—then including railroads and airlines, and later telephone services. Today, the tide has turned and firms such as Google, Facebook, Microsoft, Apple, and Amazon are often the focus of calls for not simply increased antitrust attention but increased regulation as well.[55] The industries in which these firms operate often have network characteristics. We highlight some key areas of recent concern below.

A. The Economy Is Less Competitive Than It Was and Something Must Be Done

There are a number of recent and widely cited studies claiming to show that concentration in the U. S. economy has generally increased, that competition in the U.S. economy has greatly diminished, and that market power has significantly increased.[56] According to some measures, for example, the ratio of price to marginal cost—one commonly employed indicia of market power—has risen by 45% since 1980.[57] This type of evidence has been pointed to by some who have called for the breakup or regulation of some large firms, much like some calls during the 1950s and 1960s. In our view, the evidence does not support calls for such drastic changes. While the evidence does suggest that economy-wide concentration may indeed have increased, the reported levels of concentration

54. *See*, *e.g.,* Tim Wu, The Curse of Bigness: Antitrust in the New Gilded Age (2018); Jonathan B. Baker et al., *Joint Response to the House Judiciary Committee on the State of Antitrust Law and Implications for Protecting Competition in Digital Markets* (Apr. 30, 2020), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3632532.
55. Carlton has worked or may currently be working for or against some of these firms.
56. For a more detailed analysis of this concern, *see* Dennis W. Carlton, *Some Observations on Claims that Rising Market Power Is Responsible for US Economy Ills and that Lax Antitrust Is the Villain*, 2(1) Cpi Antitrust Chron. 10 (Aug 2020).
57. *See* Jan DeLoecker et al., *The Rise of Market Power and the Macroeconomic Implications*, 135 Quarterly J. Econ. 561 (2020).

are still so low in most industries that they would not typically raise any concerns about market failures requiring antitrust or regulatory action. Moreover, the measures employed in most of the more widely cited studies of changes in industry concentration use a definition of an industry that can be a poor proxy for an antitrust market and which may therefore be producing misleading results.[58]

This does not mean that concentration or market power may not have increased in certain antitrust markets, just that broad-brush claims about significantly increased market power throughout the U.S. economy are likely off the mark. Indeed, alternative calculations of the ratio of price to marginal cost show a much lower increase in the ratio than found by DeLoecker,[59] including perhaps no increase at all. More importantly, the evidence is fully consistent with Demsetz's[60] claim about concentration increasing as a result of efficient firms expanding. The evidence shows those industries, however imperfectly defined, in which concentration has increased are also industries in which productivity has increased.[61] Importantly, there is no evidence that this increased concentration is associated systematically with increased prices or other harms to consumers. To be sure, there are interesting research questions concerning recent dramatic changes in the U.S. economy, including whether measured increases in the ratio of price to marginal cost may be the result of increases in the ratio of fixed to marginal costs,[62] but the evidence does not support broad claims that the alleged increases in market power throughout the U.S. economy have harmed consumers. Any claim that productivity would have been even greater if only antitrust and regulation had been more aggressive are at best speculative, and in any event may be subject to the Nirvana fallacy's assumption that government institutions actually perform better in the real world than history suggests they do. Moreover, the largest increases in measured market power appear to be in industries subject to many regulations (e.g., finance, health care, and utilities), raising the possibility that regulation may be an important causal factor in—rather than, as some contend, a solution to—any diminution of competition in a particular industry.[63]

B. Has Antitrust Become Too Lax in Dealing with Mergers and Anticompetitive Conduct on the Part of Dominant Firms?

Several antitrust economists have called for more stringent merger control, claiming that the government is allowing too many mergers that harm competition to go unchallenged.[64] This is a hard proposal to evaluate since one consequence of increasing merger stringency would be to reduce the number of

58. *See, e.g.,* Gregory J. Werden & Luke M. Froeb, *Don't Panic: A Guide to Claims of Increasing Concentration*, 33 ANTITRUST 74 (Fall 2018).
59. DeLoecker et al., *supra* note 57.
60. Demsetz, *supra* note 14.
61. *See, e.g.,* David Autor et al., *The Fall of the Labor Share and the Rise of Superstar Firms*, 135 QUARTERLY J. ECON. 645 (2020); Sam Peltzman, *Productivity and Prices in Manufacturing During an Era of Rising Concentration* (Working paper, Booth School of Business, University of Chicago, 2018), https://papers.ssrn.com/sol3/papers.cfm? abstract_id=3168877; Sharat Ganapati, *Growing Oligopolies, Prices, Output, and Productivity* AM. ECON. J. MICROECONOMICS (forthcoming), https://www.aeaweb.org/articles?id=10.1257/mic.20190029&&from=f.
62. In markets with product differentiation, price-cost margins will normally be positive, and in markets where fixed costs are very high, equilibrium price-cost margins will be high even if economic profits are zero. To the extent that a greater portion of the economy or larger portions of growing industries in our economy (such as those created by the digital revolution) are characterized by high fixed and low marginal costs, one might expect to see higher price-cost margins on average even if competition remains robust.
63. Robert E. Hall, *New Evidence on the Markup of Prices over Marginal Costs and the Role of Mega-Firms in the U.S. Economy* (National Bureau of Economic Research Working Paper no. 24574, 2018), https://www.nber.org/papers/w24574.pdf.
64. *See*, *e.g.,* JOHN KWOKA, MERGERS, MERGER CONTROL, AND REMEDIES (2015).

efficient mergers. Firms may refrain from trying to achieve efficiencies through merger because of the costs associated with a more intrusive and protracted investigation, along with a greater risk of costly litigation and less certain success at trial. These would constitute real costs not only to the firms but to the economy as well.

Still, there is evidence based on retrospective studies that certain horizontal mergers that the agencies failed to challenge have both increased concentration significantly and led to price increases. These studies, in large part, form the basis for critics' call for more aggressive antitrust policy toward mergers. The key for policy, however, is whether one can readily identify such mergers at the time the merger is proposed rather than afterward in an *ex post* study. Otherwise, the policy advice is unclear, other than to say "don't allow mergers in oligopolies," or perhaps "don't allow mergers without first investigating them carefully."

It is also worth noting that the merger retrospectives that have been done are not based on a representative sample of industries. This is another reason for our reluctance to use them as justification for broad policy changes. The best conclusion to draw from those studies may be the ones that Ashenfelter[65] with others draw: The notion that mergers in oligopolies with only a few firms are unlikely to ever harm competition is false, but it is also false to conclude that mergers in oligopolistic markets always raise price. These conclusions just confirm what we doubtless knew already: that close scrutiny of such mergers is warranted. And it is fortunate that the competition agencies already do (or in our experience certainly try to) perform careful investigations before deciding whether to challenge mergers in oligopolistic markets.

One desirable feature of our antitrust laws is that well-done studies can have an influence on courts. The FTC, for example, sponsored a number of merger retrospectives of hospital mergers that it had permitted to go forward or that were challenged and lost.[66] These studies found that prices typically rose postmerger. Those studies gave the FTC added support when it challenged subsequent health care mergers, and the FTC started to see its challenges sustained by courts. By focusing on a particular industry and examining a wide variety of mergers, the conclusion emerged that there was a strong tendency for such hospital mergers to be problematic. Such retrospectives of a particular industry can be used to identify which type of mergers to stop or at least to examine with particularly great skepticism *ex ante*. We think that the studies of hospital mergers are a good example of how studies can improve policy. That having been said, whether such industry-specific studies provide a very useful guide for policies across markets other than those being studied carefully is far more ambiguous.

Regarding vertical mergers, there has been an upsurge of interest in more aggressive policy toward them.[67] Vertical mergers generally have several effects. On the one hand, they can lead to efficiencies that could not otherwise be achieved by contract. One of the standard such efficiencies, though hardly the only one, is the elimination of double marginalization (double monopoly markup, slightly oversimplified), where that elimination leads to lower prices. On the other hand, a vertical merger can lead to an incentive to raise the cost of rivals who are customers or suppliers of the merged firm. Whether doing so would be profitable for the firm and is empirically significant is often disputed, but there are now complicated models of negotiation (Nash bargaining) that can be combined with merger simulation models to try to sort out these pro- and anticompetitive influences. Such a model was used unsuccessfully by the government in its recent challenge of the merger of AT&T and Time Warner. There is no doubt that vertical mergers can sometimes harm competition, at least theoretically, but we think it appropriate

65. Orley Ashenfelter et al., *Did Robert Bork Understate the Competitive Impact of Mergers? Evidence from Consummated Mergers*, 57 J. LAW & ECON. S67 (2014).
66. *See* Martin Gaynor et al., *The Industrial Organization of Health Care Markets*, 53 J. ECON. LIT. 235 (2015).
67. *See, e.g.,* Jonathan B. Baker et al., *Five Principles for Vertical Merger Enforcement Policy*, 33 ANTITRUST 12 (Summer 2019); Steven C. Salop, *Invigorating Vertical Merger Enforcement*, 127 YALE L.J. 1962 (2018).

generally to continue the antitrust policy of presuming that a vertical merger is of far less concern than a horizontal one, even where one or both of the upstream and downstream markets may be concentrated, both because only a horizontal merger reduces the number of rivals and because efficiencies seem inherently more likely in the vertical context than in the horizontal one.[68]

In terms of allowing potentially exclusionary vertical practices that might have efficiency justifications even if they make life difficult for competitors, there has always been a concern that free-rider arguments are too readily accepted as justifications, and that in the instances where this justification does not clearly apply, competition should be presumed to be adversely affected when the firm imposing the restriction has significant market power. A typical free-rider justification concerns sales effort. A firm selling through distributors explains that its practice, such as exclusive territories or minimum resale price maintenance, is needed to induce selling effort. That justification arises because it is hard to charge for (or for a manufacturer to compensate a distributor for) the selling effort separately when the selling effort leads to the eventual sale of the product, particularly if one is unable to track where the consumer went before buying the product. We note that such tracking, especially on the internet, may be possible when certain data are shared, making some free-rider defenses in need of greater justification than in the past. It is also worth emphasizing that free-riding on sales effort is far from the only economic justification for vertical restraints. Exclusive dealing can help prevent free-riding by one manufacturer on another manufacturer's investments, minimum retail price maintenance can provide distributors with a premium to help incentivize them to provide high quality, and tying can facilitate efficient price discrimination and/or lower total distribution costs as well as help ensure the quality of the manufacturer's product.

One can always point to cases where analysts disagree with what the courts have done, but in terms of demonstrating that there have been widespread and systematic errors in policy or jurisprudence, we can think of one significant area—antitrust treatment of so-called two-sided markets—in which recent legal precedent may create systemic problems for antitrust policy unless corrected. A "two-sided" market is one where, roughly speaking, it is important to get economic actors on both sides "on board" in order for the product or service to be provided—or to be provided most efficiently.[69] One example could be a platform such as Microsoft's operating system, where the number of people using it influences the number of applications written for it (and vice versa). Each side finds it more desirable to participate if there are more agents on the other side of the platform. Although the economic logic underlying the analysis of pricing on the two sides of the market has been a subject of ongoing research, the way in which courts have begun applying the teachings of this literature creates potentially significant problems for antitrust policy. The recent legal precedent that raises our concerns is *American Express*, a case whose precedential value seems especially strong because it was decided by the Supreme Court.[70]

In *American Express*, the Court ruled that in the so-called two-sided market (merchants and retail customers are the two sides in the industry involving credit cards), the plaintiff has the legal burden not only to show clear harm on one side of the market but also to demonstrate that potentially positive effects on the other side of the market are not large enough to outweigh the harms.[71] Although this

68. For a more in-depth discussion, *see* Dennis W. Carlton, *Transaction Costs and Competition Policy*, Int. J. Ind. Org. (2019), https://www.sciencedirect.com/science/article/pii/S0167718719300670. It is sometimes argued that a vertical merger should be challenged because the merging firms are likely entrants—or could help facilitate entry into—one another's markets. While theoretically sound, this is of course a horizontal concern, not a vertical one, and the merger can be readily analyzed as such.

69. *See, e.g.,* Mark A. Rysman, *The Economics of Two-Sided Markets*, 23 J. Econ. Perspectives 125 (2009).

70. Ohio et al. v. American Express Co., et al., 138 S Ct 2274 (2018).

71. Carlton has worked adversely to credit card companies in the U.S. and foreign jurisdictions. For a fuller discussion of *American Express*, *id.*, *see* Dennis W. Carlton & Ralph A. Winter, *Vertical MFN's and Credit Card No-Surcharge*

might appear irrelevant to an economist, who in any case would agree that all effects are relevant in determining whether the practice is beneficial on net, the shifting of the legal burden is an important departure from how most antitrust cases are treated where it is the defendant that has the burden of justifying the practice once the plaintiff has shown that the practice is likely to harm competition. Reversing the burden because the market is two-sided requires that the plaintiff rather than the defendant (who one would expect to have more and better information) perform and present a full-blown efficiency analysis of the practice at issue. Placing this burden on the plaintiff makes it far less likely that net harm can be established, even where clear harm is manifest to at least one set of economic actors. Given the growing significance of two-sided markets in the economy—large platforms such as Google, Amazon, and Facebook are widely recognized examples, but a similar logic applies even to many mundane industries (newspapers, television, shopping malls, and even dating sites)—this burden-shifting formulation by the Court seems likely to make anticompetitive conduct far harder to prosecute. Indeed, the *American Express* precedent has led to a U.S. court more recently failing to uphold a DOJ merger challenge, even though anticompetitive effects on at least one side of the market were clearly demonstrated.[72]

C. Challenging Presumptions and Goals

In order to improve policy, one has to allow new theoretical and empirical findings to change beliefs. We have already seen in the discussion of Easterbrook's[73] work how certain policies can flow from the strong beliefs of a policy analyst. If entry is easy, then concerns about market power and antitrust harm are relatively unimportant and one should be more concerned with prohibiting potentially efficient practices than with worrying about creating transitory market power. Although there were some attempts in the 1970s to explain that many markets were "contestable" (i.e., subject to free entry and exit), or sufficiently close to being contestable such that market power could not be significant and durable, that belief failed as a general proposition as studies showed that entry was not always so easy, even in markets—airlines were an example—that were at one time argued to be "almost contestable." A good example of an empirical study that changed our beliefs is Dunne et al.[74] (1988), which showed how difficult successful entry into manufacturing generally is. We think evidence is the best way to change beliefs and influence policy and that seems to be what does often happen.

Compounding the difficulty of formulating a coherent antitrust policy is understanding what exactly is the goal (i.e., the objective function) of the decision maker. Is it to preserve competition in this transaction, to set a precedent for future transactions, or to not only protect competition but also address other important policy concerns such as employment, income inequality, or the viability of small businesses? The post-1969 antitrust revolution told policy makers to pay attention to one thing, the process of competition as measured by its effect on consumer welfare, and not to try to use antitrust to help achieve other objectives, however desirable the objective or well intentioned the advocate. More recently, a number of antitrust critics have advocated for employing antitrust in the service of multiple other goals, not simply total or consumer welfare per se.[75] We view these proposals as more

Restraints, 61 J.L. & Econ. 215 (2018). For further discussions of the flaws in the Court's opinion, see the dissent in *American Express* by Justice Breyer.

72. U.S. v. Sabre Corp., D. Del., No. 1:19-cv-01548, Order 4/7/20 (Apr. 7, 2020). Neither of us worked on that matter. The U.K. competition authority blocked the merger. Carlton worked adversely to Sabre in American Airlines, Inc., vs. Travelport Inc., Sabre, Inc., Sabre Holdings Inc., and Sabre Travel International Ltd., Case No. 67-249214-10 in District Court of Tarrant County, Texas.
73. Easterbrook, *supra* note 27.
74. Timothy Dunne et al., *Patterns of Firm Entry and Exit in U.S. Manufacturing Industries*, 19 Rand J. Econ. 495 (1988).
75. *See*, *e.g.,* Jonathan B. Baker & Steven C. Salop, *Antitrust, Competition Policy, and Inequality*, 104 Georgetown L. J. 1 (2015).

likely to do harm than good, by making antitrust enforcement unfocused, unpredictable, and ultimately standardless. Moreover, we believe that to the extent there are desirable social objectives that antitrust does not directly account for under its consumer welfare standard, these can be dealt with far more efficiently through other government policy instruments.

To see the problem that arises if one pursues other, even admittedly worthy, objectives through antitrust, imagine a merger of two manufacturers who pollute. The antitrust authority and the courts recognize the anticompetitive effect of the merger, but they do not challenge it or do not prevent it because the reasoning is that as a result of the anticompetitive price increase, the output will fall and pollution will fall. Although it may well be desirable to reduce pollution, this approach is likely to produce unpredictable and highly subjective antitrust policy decisions. How does the decision maker balance the goal of reducing pollution with the goal of protecting consumer welfare? What do antitrust economists know about the health effects of pollution? When policy decisions are hard to predict and objectives vague, the situation is ripe for ineffective and highly politicized policies and decisions. Moreover, pollution can surely be addressed in a more targeted and effective way through alternative government policies, such as an effluent tax.

Inequality is another issue that some feel antitrust policy should be modified to directly address. Problems inevitably arise, however, in attempting to reconcile the welfare of consumers with the goals of such a policy. Should anticompetitive mergers, or even cartels, be permitted when the beneficiaries are predominantly lower income suppliers serving higher income consumers? And again, to address social concerns over inequality, there are more efficient and targeted government policies.

Some critics explain that total welfare (which is what Bork and much of the subsequent literature called "consumer welfare") rather than consumer welfare (specifically, only the welfare of the consumers of the product being analyzed) is what should matter for antitrust policy since the profits of firms should also be given positive weight.[76] This debate strikes us as misguided for several reasons. First, the antitrust laws are concerned with market power whether on the selling side (e.g., monopoly) or on the buying side (e.g., monopsony) if that market power is attained through merger or through the use of unjustified business practices. Both monopoly and monopsony induce inefficiencies, though consumers gain from exercising their monopsony power. As the current antitrust policy does object to business practices that enhance monopsony power, it is in this sense already adopting a total welfare standard. We believe this to be appropriate. Perhaps a total welfare standard should be embraced more explicitly since the profits that firms earn create incentives for them to compete and innovate to the benefit of consumers. It is unclear why we should ignore those incentives. In any event, although there can as a matter of theory be differences in outcomes depending on whether consumer or total welfare is used, neither of us has seen that distinction matter in other than a tiny fraction (under 1%) of the hundreds (or perhaps thousands) of cases we have been involved in. Thus, whatever are the differences in antitrust policy from using a standard based on total welfare versus one based on consumer welfare, those differences are likely to be slight.[77]

Finally, we turn briefly to the topic of regulation. Several studies have called for widespread regulation of what are called platforms (i.e., two-sided markets such as those discussed above), rather than relying solely on the antitrust laws. Our only observation is that, as Stigler[78] (1971) showed long ago and numerous studies have confirmed, regulation can lead to costly inefficiencies. This is especially true in rapidly changing industries where the regulations wind up delaying innovations.[79] This

76. *See*, *e.g.,* Ken Heyer, *Welfare Standards and Merger Analysis: Why Not the Best?* 2 Comp. Policy Int. 29 (Autumn 2006).
77. This is also the conclusion of the Antitrust Modernization Commission, *supra* note 52, at 26.
78. Stigler, *supra* note 28.
79. The flipside of this argument is that courts move too slowly to prevent anticompetitive effects in rapidly changing industries and, by the time they do act, it is too late.

does not mean that regulations are always inappropriate, but it is somewhat ironic that the sentiment espoused by critics of pre-1969 policies to gain efficiency by deregulating is precisely the opposite of the sentiment expressed today by the current (albeit different) set of critics calling for greater regulation.

VI. Conclusion

The revolution that led to new thinking in legal and economic circles since 1969 has greatly improved antitrust policy. Economic reasoning whose sole purpose is to analyze the process of competition based on economic theories and facts replaced for the most part legal formalisms and muddled antitrust objectives. The main contribution of the antitrust revolution is to rely on sound economic theories and empirical studies in the formulation of a competition policy that benefits consumers. To the extent that new learning in economic theory refines or replaces the insights from earlier theories and new empirical studies modify our beliefs, such a process should be viewed as the triumph and continuation of the revolution, not as a repudiation justifying a call back to the dark ages of antitrust and regulation.

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