Article

The Antitrust Revolution

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Abstract

The Antitrust Revolution of the early 1980s arose from various intellectual currents, including specifically the growing acceptance of modern game theory. Its greatest impact, however, lay in the development of revised standards for merger policy. From ones which employed largely a set of per se standards, they rapidly evolved into those more compatible with the Rule of Reason. Large horizontal mergers were routinely approved, and concentration levels in major industries sored. Although efficiency levels were sometimes enhanced, there is little evidence that consumers generally benefited in the form of lower prices. As a result, the new merger policy may have contributed to the observed growing inequality in U.S. distributions of income and wealth.

Keywords

horizontal mergers, policy standards, economic consequences

Introduction

Keynes taught us that ideas have consequences and can be "dangerous for good or evil." He also observed that many such ideas arise from "some academic scribbler of a few years back."[1] In the 1980s, with the advent of the Reagan Administration in the United States, a revolution occurred in both antitrust thought and policy-making, which transformed the competition policy landscape. It is now more than forty years since that revolution rocked the antitrust world, which offers a good vantage point from which to review what occurred. My purpose here is to recall the ideas that were both created and discarded, consider the new policy doctrines that followed, and evaluate the results for both the antitrust enterprise and the larger economic landscape.

Although the Antitrust Revolution of the 1980s evolved from a spectrum of intellectual currents and concerned a large panoply of policy issues, its greatest impact may have been on policies dealing with large horizontal mergers. Indeed, of the 1267 investigations carried out in the decade ending in 2019, fully 60% concerned mergers.[2] In what follows, our attention is directed toward the striking shift in

1. John Maynard Keynes, The General Theory of Employment Interest and Money 383–84 (1936).
2. Thomas G. Wollmann, *Stealth Consolidation: Evidence from an Amendment to the Hart-Scott-Rodino Act*, 1 Am. Econ. Rev. Insights 77 (2019).

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antitrust standards specifically toward large mergers among competing rivals. Through the 1970s, enforcement practices largely followed the Department of Justice 1968 Guidelines that severely limited horizontal mergers. But that changed in the 1980s when enforcement actions published a new set of guidelines which pointed in a very different direction.

The Ideas

I. Merger policies are invariably linked to an underlying theory of oligopoly. Large horizontal mergers can alter an industrial landscape and impact economic performance. Permitting or rejecting such mergers therefore requires predicting outcomes. And making those predictions is the function of an oligopoly theory.

What occurred in the early 1980s is that the dominant economic model of oligopolistic industries changed. For some time, the accepted principles of conduct among firms that recognize their mutual interdependence had been those set forth by Edward Chamberlin and William Fellner.[3] Chamberlin's conclusions were dominant: so long as rivals responded rapidly (as was expected), to any price cuts, "the prices of all will move together, and . . . the equilibrium price will be the monopoly one."[4] Following him, Fellner embellished the Chamberlinean model and projected that, subject to interfirm differences, rivals would establish quasi-agreements at which near-monopoly prices would be set.

However, in a striking reversal, a conflicting model gained resonance, seemingly overnight. It led instead to the opposite conclusion: that competitive prices would likely be established without regard to the number of rivals. That result relied on a game theory concept fashioned originally by John Nash[5] and thereby known as the Nash equilibrium. And that concept served as the starting point for what Franklin Fisher has called the "game theory revolution."[6]

An interesting feature of this intellectual shift was that the proponents of both the established regime and the new paradigm paid homage to the same predecessors of a century before: Augustin Cournot writing in 1838, and Joseph Bertrand, writing nearly fifty years later, in 1883. However, the two policy regimes learned very different lessons from these classical precedents. Both Cournot and Bertrand saw that equilibrium required firms to accept their rivals' choices as compatible with their own, such that in equilibrium, firms would not have an incentive to change their parameter values (either price or quantity) in response to those set by rivals. Any equilibrium solution required mutually compatible values that could persist over time. Where Cournot and Bertrand differed was only whether firms set quantities or prices to reach their presumed equilibria.

In the earlier period, the common presumption was that decisions were made sequentially so that each firm could respond to its rivals. Indeed, that presumption underlay Fellner's critique, included in his leading treatise of the era, which applied to both the Bertrand and Cournot versions of the model:

> The characteristic feature of the Cournot model is that if each duopolist continues to assume that the other will not change his rate of output, then ultimately they will prove to be correct, although during the approach to the equilibrium, for a limited period of time, they will be wrong. A produces a quantity which maximizes his profits on the assumption that B will go on producing his present output, whereupon B adjusts his output, which induces A to adjust his output, etc.[7]

3. Edward H. Chamberlin, The Theory of Monopolistic Competition (7h ed., 1956); William J. Fellner, Competition Among the Few (Augustus M. Kelley, 1965), Original edition 1949.
4. Chamberlin, *supra* note 3, at 50.
5. John Nash, *Equilibrium Points in N-Person Games*, 36 Proc Nat'l Acad Sci 48–49 (1950).
6. Franklin Fisher, *Games Economists Play: A Noncooperative View*, 20 RAND J. Econ. 113–24 (Spring 1989).
7. Fellner, *supra* note 3, at 50–58.

Fellner continued:

> Each assumes that his rival follows a policy of fixed output while in reality each follows a policy of adjusting his own output to the requirements of profit maximization, on the assumption that the other follows a policy of fixed output.[8]

When the dupolists finally reach an equilibrium where neither has an incentive to change output (or price) in response to a rival's actions, Fellner characterized this outcome as one where "ultimately they prove to be right for the wrong reasons."[9]

That position remained the accepted judgment of the 1960s and into the 1970s, and I can still recall as a graduate student, Carl Kaysen's lecture on Cournot/Bertrand where he labeled both models as irrational. It was 1960–1961, and to be sure, I accepted the logic of my professor's judgment.

II. Following Fellner's rejection of the classical models of Bertrand and Cournot, as having "insuperable difficulties,"[10] he turned his attention toward prospects for collusive outcomes to be reached through some form of "quasi-agreement."[11] Such agreements required mutual forbearance and the parties' acknowledgment of their mutual interdependence. Critically, it would incorporate "a tendency towards the maximization of industry profits."[12] Fellner explained:

> If the aggregate industry profit is not maximized and the less-than-maximum profit is divided in some fashion, it is always possible to give every single participant more than he actually gets, by changing the quasi-agreement to a basis on which industry profit is maximized.[13]

In contrast to most current judgments, Fellner believed that oligopolistic industries would show a tendency toward monopoly pricing.

Reaching these quasi-agreements, however, would not be an easy matter, as Fellner's successors observed. For example, Phillips emphasized that rivalry was inevitable among competing firms so that reaching an agreement requires tacit if not explicit communication. And he argued that the number of firms engaged in the process was critical. Phillips wrote:

> As the number increases, . . . the probability that mutual understandings and implicit agreements will be effective in restraining rivalry decreases; . . . especially if the individuals communicating have conflicting interests and if the language used must be nonverbal.[14]

For such reasons, market concentration levels reflecting the number of significant rivals was considered a critical factor.

Among Fellner's most prominent successors was Joe Bain whose 1956 volume extended the relevant model to include potential entrants.[15] He asked whether a price equilibrium could even exist in the face of potential entry by outside firms. Bain's conclusion was that only if there were "advantages of established sellers in an industry over potential entrant sellers . . . can [existing firms]

8. *Id*. at 58.
9. *Id*. at 58.
10. *Id*. at 126.
11. *Id*. at 130.
12. *Id*.
13. *Id*.
14. Almarin Phillips, Market Structure, Organization and Performance 29 (1962).
15. Joe S. Bain, Barriers to New Competition (1956).

persistently raise their prices over a competitive level."[16] While Bain's position was presented as an empirical observation rather than a theoretical deduction, that factor did not make it less consequential. To this extent, Bain altered the terms of Fellner's conclusions.

Bain identified three leading sources of entry restraints—economies of large scale, product differentiation advantages, and absolute cost advantages—and then evaluated their respective importance in twenty manufacturing industries. His conclusion was significant: "High concentration may be a relatively innocuous phenomenon if entry barriers can be reduced to a moderate level."[17] It is noteworthy that this judgment has persisted across the theoretical divide. On this point, note the discussion of contestable markets that are defined as those which are fully "accessible to potential entrants; . . . [such that] a monopoly firm can only earn zero profits and must operate efficiently."[18]

Even George Stigler, the Nobel Prize-winning practitioner of industrial economics of that era, started from Fellner's premise. His "Theory of Oligopoly," appeared in 1964 (just a few months after my dissertation was submitted) and acknowledged that "oligopolists wish to collude to maximize joint profits."[19] However, Stigler noted that collusion is costly and not always feasible. While the simple model of firm behavior with fully homogeneous products may lead directly to quasi-agreements, he noted that differentiated products made it more difficult to reach collusive outcomes. While Phillips believed that a greater number of substantial rivals served as the leading impediment to effective collusion, and Bain the consequences of entry barriers, Stigler emphasized the difficulties with reaching agreements resulting from product and seller heterogeneity. In all these cases, however, the starting point was Fellner's objective of reaching a quasi-agreement aimed at maximizing joint industry profits. The debate was then limited to how close or how distant were the outcomes from this objective.

Critically, there was widespread acknowledgment at the time that high levels of concentration facilitated tacit or explicit collusion and therefore led to monopoly pricing.[20] Indeed, the leading text of the period offered a similar conclusion:

> Monopolistic pricing and profits are favored both by high seller concentration and by high entry barriers, and are especially likely to be acute if these two structural conditions exist together in the same industry.[21]

Throughout, concentration levels retained their position as the foremost index of monopoly power.

A derivative of this paradigm was the empirical model of "structure-conduct-performance" that flourished in the pre-1980 era. While Franklin Fisher's critique that there was "no hard analytic theory" formalizing this approach[22] is correct, its attraction was an effort to replace a moribund theoretical apparatus with a road map for empirical research. It offered a more inductive approach through which it was hoped to find generalizable insights. Therefore, while Fisher's critique is formally correct, it didn't confront the function or purpose of that empirical framework.

Among the more considered of the empirical studies of the era was that by Comanor and Wilson.[23] Its ostensible purpose was to estimate the leading determinants of industry market power which followed from Fellner-type quasi-agreements along with Bain's findings on entry restraints. The reported results pointed to the strong impact of heavy advertising expenditures characteristic of

16. *Id*. at 3.
17. *Id*. at 218.
18. William J. Baumol et al., Contestable Markets and the Theory of Industrial Structure 5–6 (1982).
19. George J. Stigler, *A Theory of Oligopoly*, LXXII J. of Pol. Econ. (Feb. 1964), reprinted in The Organization of Industry 39 (1968).
20. Richard A. Posner, Antitrust Law 69–70 (2001, 1t ed. 1976).
21. Joe S. Bain, Industrial Organization 458 (1968, 1t ed. 1960).
22. Fisher, *supra* note 6, at 113.
23. William S. Comanor & Thomas A. Wilson, *Advertising Market Structure and Performance*, 49 Rev. Econ. & Stat 423–440 (Nov. 1967).

substantial product differentiation. To be sure, some of the empirical findings were later called into question, in one case by the authors themselves,[24] but for the most part, these findings were simply superseded by the new game-theoretic paradigm.

III. While Fellner's joint profit maximization outcome was represented as a common result, it was not a theoretical equilibrium because each firm could gain increased profits by departing from it and thereby was incentivized to do so. Fisher recalled that the "temptation to cheat is very strong, [so] it will not be easy to [for]... the cooperative solution to hold up unless explicit communication is permitted." And also, without symmetry or side payments, some rivals might be severely disadvantaged and therefore not participate.[25] Since Fellner's solution rested on so limited a theoretical foundation, it was an easy mark for game theory and the Nash equilibrium concept to prevail, and prevail it did.

IV. Much changed, however, with the growing acceptance of game theory and its associated Nash solution concept. A Nash equilibrium is reached when the rivals' solutions are compatible.[26] A tenant of this solution concept is that both firms act simultaneously, and therefore, no attention was paid to any disequilibrium process. Much of economics deals with comparisons among alternate equilibria, and so the new paradigm brought oligopoly market outcomes into the same structure. A striking feature of the new approach was to breathe new life into the century-old models of Cournot and Bertrand.

This shift toward acceptance of these previously rejected models was a major factor in the Antitrust Revolution of the 1980s. Particularly, when the basic Bertrand model is employed, where prices are the decision variables, the model's conclusions are striking: where both firms have similar costs and sufficient capacity, "price would fall to the competitive level, even in duopoly.... The only equilibrium would be that where price equals marginal cost for each firm."[27] *This reconstituted version of the Bertrand pricing model emphasized that competition limited to even two rivals was sufficient to provide competitive prices*. Strikingly, this result was the polar opposite to the earlier, widely accepted, collusive outcome.

To be sure, some might argue that the Bertrand model is more relevant in the presence of differentiated products where consumer demand for specific products insulates sellers from some measure of competitive pressures. In that case, firms do not necessarily set prices equal to their marginal costs. That outcome, however, departs from the "sharp small-number competition" which Bertrand competition has come to signify[28] and which continues without regard to the number of rivals. While a contemporaneous text downplayed that result by adding additional factors to the model such as a capacity constraint and product differentiation,[29] that solution is hardly satisfying as it essentially adjusts the model to get preferred outcomes. Overall, the original Bertrand model remained dispositive.

In contrast, the Cournot case where quantities rather than prices are the decision variables leads to quite different results. In its base case, with two identical rivals selling a homogeneous product, the resulting market quantities lie between the competitive and monopoly values, and aggregate market quantities expand as the number of rivals increases. However, in most actual transactions, sellers set prices while buyers determine quantities. And for this reason, the Bertrand outcome was considered more relevant for policy decisions.

24. William S. Comanor & Thomas A. Wilson, *The Economics of Advertising and Steiner's Dual Stage Model*, 13 Int'l J. Econ. Bus. 39–44 (2006).
25. Fisher, *supra* note 6, at 114.
26. Clement G. Krouse, Theory of Industrial Economics 90–91 (1990).
27. *Id*. at 80.
28. Jean Tirole, Theory of Industrial Organization 212 (1988).
29. *Id*. at 211–12.

A more substantial critique is that most game-theoretic conclusions rest on "single-shot" outcomes while policy decisions invariably apply to continued interactions among rivals. To be sure, while economic models often depart from describing actual conduct, there remains the critical issue of how insightful are "single-shot" game-theoretic results. For repeated interactions, when firms seek to maximize discounted profits over a finite number of periods, "the equilibrium is, for any history, the Bertrand one."[30] On the other hand, when the firm faces an infinite horizon, this outcome, while still feasible, is not the only possibility, and indeed, tacit collusion becomes a possible alternative.[31]

A recent summary of the current game-theoretic landscape appears in a current text on industrial organization: "A central insight of game theory is that the rules of the game matter a lot."[32] Among the critical issues is whether to characterize repeated games as finitely or infinitely repeated, whether firms compete in prices or quantities, but also whether decisions are made sequentially or simultaneously. While game theory has altered the terms of the discussion, it has not led to definite conclusions. Policy judgments continue to depend on how individual firms interact with each other, and again, there are few universal rules that are followed in all circumstances.

V. Although challenges to the game theory revolution arose over time, its principal conclusions have resisted the attack. Equally important, they were buttressed by positions taken in two influential volumes. In the following section, we consider their impact but start first with their most prominent predecessor.

Academic Scribblers

I. Keynes' suggestion that the views of "academic scribblers" often frame policy debates applies to the Antitrust Revolution of the 1980s. Prior to the revolution, there was widespread support for an aggressive antitrust policy to promote both greater efficiency and enhanced equity in the industrial economy. In that era, the impediments to this policy were considered as political rather than policy-driven. But then suddenly, or so it seemed, a new set of concepts became broadly accepted, and new policy standards were propounded and enforced. In large part, the mantel was passed quickly from one set of "scribblers" to another.

Consider first the treatise by Carl Kaysen and Donald F. Turner, which appeared in 1959, and was itself a rejection of the previously widespread concept of "workable competition."[33] That loosely defined concept joined industrial performance with market structure, such that "competition is thus identified with desirable economic results, and competition as a process is accorded little or no weight."[34] In contrast, the Kaysen/Turner policy objective was stated more precisely: "the primary goal of antitrust policy [should] be the limitation of undue market power to the extent consistent with maintaining desirable levels of economic performance."[35]

The essential feature of the Kaysen/Turner proposal was that market power would be tolerated only when it led to improved efficiency, through for example, the realization of economics of scale. If defendants could not justify their actions by improved performance, an antitrust charge would proceed. Critically, defendants were assessed the burden of proof required to demonstrate greater efficiency, improved progressiveness, or some other measure of enhanced performance.

The implications of imposing a policy standard prohibiting "unreasonable market power" were significant. Bad conduct or objectionable actions, and specifically "the element of intent or fault,"[36]

30. *Id*. at 245.
31. *Id*. at 246.
32. Lynne Pepall et al., Contemporary Industrial Organization, A Quantitative Approach 147 (2011).
33. Carl Kaysen & Donald F. Turner, Antitrust Policy (1959).
34. *Id*. at 82.
35. *Id*. at 44–45.
36. *Id*. at 91.

would no longer be at issue. The presence of market power, not justified by improved economic performance, would be sufficient for antitrust liability. The underlying premise was that the presence of effective marker power would lead to joint profit outcomes with their attendant efficiency and distributive consequences. Preventing such outcomes, they argued, were those which the antitrust laws were designed to prevent.

A critical element of the Kaysen/Turner proposal was how unreasonable market power would be demonstrated. On this issue, the authors proposed two possible statutory provisions:

> Market power shall be conclusively presumed where, for five years or more, one company has accounted for 50 percent or more of annual sales in the market, or four or fewer companies have accounted for 80 percent of such sales.[37]

And in regard to horizontal mergers:

> Adverse effects on competition shall be presumed whenever a company that for five years or more has accounted for 20 percent or more of annual sales in a market acquires any competitor in that market, unless such competitor is insolvent or in obviously declining circumstances.[38]

Market power was explicitly defined by the size distribution of established firms.

II. In the 1970s, the policy pendulum began to shift; a change marked by the appearance of two authoritative volumes. The first by Richard Posner, effectively set the stage for the revolution that followed. Posner's stated purpose was to eliminate noneconomic factors from antitrust decisions so that policy actions would become a tool designed exclusively to promote economic efficiency. Distributive concerns were deemed irrelevant. Indeed, he declared that "the wealth distribution argument for antitrust has no implications for the content of antitrust policy."[39]

Posner's starting point arose from the same premise as did the Kaysen/Turner proposal: restraining the exercise of market power as represented by a firm's "power over price." And Posner also recognized the importance of concentration, which "appears to be a necessary condition for successful collusion."[40] However, and here he departs from the Kaysen/Turner precent, Posner observed there is no agreed-upon threshold above which collusion becomes more likely or even that "concentration is the only factor predisposing a market to collusion."[41] Instead, concentration levels were simply a starting point and not the sole criterion for determining the presence of market power. What had been a sufficient condition for market power was now at best a necessary one.

When joined, these two features of Posner's lexicon represented a dramatic departure from existing policy. While Kaysen and Turner had envisioned a greater role for structural remedies and deconcentration, particularly in the cases of "tight oligopolies" and "dominant firms,"[42] Posner's policy judgments led in the opposite direction. Large mergers would be permitted unless direct price effects could be demonstrated. *The burden of proof was effectively reversed from what it had been before.*

III. Posner's book was followed two years later by Robert Bork's treatise, which was even more dismissive of the existing policy. His purpose, like Posner's, was to rationalize antitrust practice through

37. *Id*. at 98.
38. *Id*. at 99.
39. Posner, *supra* note 20, at 24.
40. *Id*. at 66.
41. *Id*. at 70.
42. Kaysen & Turner, *supra* note 33, at 93.

his contention that "the only legitimate goal of antitrust is the maximization of consumer welfare."[43] Interestingly, that social objective did not appear such afar distance from what had gone before.

Consider the distinction between Bork's dictum and the Kaysen/Turner objective of limiting the exercise of market power to the extent possible without sacrificing economic performance. In broad strokes, there are merely semantic differences between them. Since more competitive outcomes, gained by restraining undue market power, also maximize consumer welfare, it appears superficially that the two objectives were not much different.

But despite their apparent similarity, Bork's dictum embodies two critical policy shifts as pertaining to merger policy. The most important is the implied standard of proof needed to demonstrate an antitrust violation. What outcome is warranted if neither positive nor negative effects on consumer welfare could be demonstrated in specific cases? Bork's position, and Posner's as well, was that consumer harm must be proved in each case to find an antitrust violation. To use the modern vernacular: "No harm, no foul." In contrast, the Kaysen/Turner proposal rested on more general findings depicting firm conduct in concentrated markets. Consumer harm was presumed unless improved efficiencies leading to consumer gains were demonstrated. What Bork and Posner advocated, in effect, was a change in the presumptions under which antitrust policy would be enforced.

A second point of departure was Bork's dismissal of the significance of high concentration levels. In his judgment, price effects needed to be demonstrated afresh in merger litigation under the market circumstances confronted in individual cases. While high concentration levels might be a logical starting point, he believed that this datum did not provide sufficient evidence of consumer harm. The burden of proof, Bork argued, should rest on those alleging increased prices rather than on those suggesting improved efficiency. Bork's consumer welfare standard focused on consumer price effects, and without this finding, there would be no antitrust violation. Merely demonstrating increased market concertation should no longer be sufficient.

A critical feature of a consumer welfare standard is which side has the burden of proof required to demonstrate a violation. Not only are such matters often ambiguous, but also it was here that the game theory revolution came into play. Recall the simple version of the Bertrand equilibrium which implied that competitive prices followed from the presence of merely two rivals. Following this theoretical prescription, and without strong evidence to the contrary since consumer harm from higher prices was difficult to demonstrate, fewer antitrust violations would be found.

An important corollary to Bork's restatement of antitrust objectives was that policy actions should "promote competition rather than protect competitors." Statements to this effect appeared in many judicial opinions and demonstrated the breadth of Bork's influence. At the heart of this principle was the uncoupling of competitive outcomes from the number of competing firms. To a large extent, this dictum described a growing skepticism that high concentration would lead directly to enhanced market power.

Prior to the game theory revolution, there was a wide acceptance that more concentrated market structures resulted in higher prices (and consumer harm) as rivals more readily achieved maximum joint profit outcomes. But as the accepted economic model shifted, and the simple Bertrand result gained greater prominence, existing policy judgments met growing skepticism, and antitrust standards adjusted accordingly. While Bork himself attributed his insights to Aaron Director and the Chicago economic tradition, the new antitrust regime arose from more varied sources.

Policy Standards

I. The game theory revolution, which offered a new model of pricing in oligopolistic markets, together with the policy critiques of Posner and Bork had their effect. In 1982, a new antitrust leadership at the

43. Robert H. Bork, The Antitrust Paradox 7 (1978).

Department of Justice (DOJ) imposed a revised policy regime. While it covered the gamut of antitrust issues, the most broadly consequential area was its revised merger policy.

II. In 1968, the U.S. DOJ had published the first edition of its Merger Guidelines, which put forth the Department's goals and practices in regard to merger enforcement policies. What is striking is the significant roles played by this first edition and by subsequent ones. As expressed by a Division official during that era, "So far as horizontal mergers were concerned, . . . we just applied the Guidelines fairly literally," and in many cases, "most of these mergers folded without trial."[44]

That the 1968 Guidelines followed on from the Kaysen/Turner proposal was hardly surprising since the Assistant Attorney General for Antitrust was then Donald F. Turner. Those Guidelines rested on the same premises as those put forth earlier: "Market structure is the focus of the Department's merger policy chiefly because the conduct of individual firms in a market tends to be controlled by the structure of that market."[45] The conduct at issue were actions designed to reach joint profit maximization quasi-agreements.

Similarly, the benchmark market shares resembled those proposed in the Kaysen/Turner volume. While their book emphasized markets with four-firm concentration ratios exceeding 80%, the Guidelines referenced markets with ratios exceeding 75%: Within such markets, only horizontal mergers where the acquired firms had declining or minimal market shares would go unchallenged. But even for less concentrated markets, many acquisitions would potentially be challenged, including firms with 5% shares from acquiring similarly sized rivals.[46] In this context, the Fellner paradigm was embodied in policy standards.

These Guidelines included vertical and conglomerate mergers as well as those between direct competitors. And it was in regard to Conglomerates that the following policy statement appeared:

> As with other kinds of mergers, the purpose of the Department's enforcement activity regarding conglomerate mergers is to prevent changes in market structure that appear over the course of time to cause a substantial lessening of competition that would otherwise exist or to create a tendency towards monopoly.[47]

These Guideline standards did not break new grounds or make new law. Indeed, the 1968 Statement largely followed the Supreme Court decision in the *Von's Grocery* case of two years earlier.[48] Although other factors were mentioned, the Court emphasized the merging parties' market shares: Von's was ranked third and Shopping Bag sixth even though together they accounted for only 7.5% of aggregate grocery sales in the relevant geographic market. However, these two firms together would create the second largest grocery chain in the area. The Court emphasized that its ruling rested not only on the immediate impact of the proposed merger but also on "its impact on competitive conditions in the future."[49]

The 1960s was an era where large horizontal mergers were effectively per se illegal, and the DOJ Guidelines largely reflected that reality. The Von's Court added an appendix to its decision, which referenced the following passage from a Congressional report:

> the outstanding characteristic of the merger movement has been that of large corporations buying out small companies, rather than smaller companies combining together in order to compete more effectively with their larger rivals. More than 70 percent of the total number of firms acquired during 1940–47 have been

44. Donald I. Baker, *Donald Turner's Merger Guidelines as an Antitrust Watershed*, 53 Rev. Indus. Org. 14 (Nov. 2018).
45. U.S. Department of Justice, 1968 Merger Guidelines, ¶12.
46. *Id*. at ¶16.
47. *Id*. at 13.
48. U.S. v. Von's Grocery Co., 384 U.S. 270, 1966.
49. *Id*. at 272, 278.

> absorbed by larger corporations with assets of over $5,000,000. In contrast, fully 93 percent of all the firms bought out held assets of less than $1,000,000. Some 33 of the Nation's 200 largest industrial corporations have bought out an average of 5 companies each, and 13 have purchased more than 10 concerns each.[50]

Policy decisions rested on the presumption that increased prices followed from higher concentration levels. There was no requirement to demonstrate price effects in individual cases as they were presumed to result from higher concertation.

III. The climate of opinion changed and the DOJ reacted. It issued in 1982, and revised in 1984, a new set of Merger Guidelines. As before, the objective was to describe current enforcement policies that had shifted from those enforced just a few years earlier. Following a useful discussion of the tests used to determine relevant markets, the new Guidelines moved on to describe market share "safe harbors," which were unlikely to trigger enforcement actions. But unlike the earlier document, market structures were measured not by four firm concentration ratios but rather by the Herfindahl–Hirschman Index (HHI) of market concentration, which also accounted for size differences among the leading four firms. To see the changes implied by the revised Guidelines, we can compare enforcement benchmarks in both concentrated and unconcentrated markets in the original and revised guidelines.

Consider first an industry composed of four substantial firms and a fringe of smaller ones. Let the four larger firms have market shares of 20%, 15%, 10%, and 5%, with none of the smaller firms having as much as 1%. In that case, the four firm concentration ratio is 50% and the HHI is 750, ignoring the smaller firms. Under the revised standards, these shares would indicate a "less highly concentrated" market in 1968, but instead an "unconcentrated" one in 1984. This distinction is significant since mergers among the leading firms would be challenged in the earlier period but not in the latter one.

While the revised Guidelines retained the earlier attention on concentration levels for "affect[ing]the likelihood that one firm, or a small group of firms could successfully exercise market power,"[51] that focus was attenuated by additional provisions which indicated that other factors were also relevant and might influence enforcement decisions. These additional factors included (a) changing market conditions, (2) entry conditions and in particular the prospect of new firms entering the market in response to small price increases, (3) product homogeneity and differentiation along with expected pricing conduct, and (4) any efficiencies resulting from the merger.[52] While concentration levels remained the first step taken in evaluating the competitive effects of a horizontal merger, it was not the only, or even the dominant, factor considered.

The next version of the Guidelines appeared in 1992 and diminished still further the attention paid to concentration levels:

> Market share and concentration data provide only the starting point for analyzing the competitive impact of a merger. Before determining whether to challenge a merger, the Agency also will assess the other market factors that pertain to competitive effects, as well as entry, efficiencies and failure.[53]

While the revised Guidelines had continued with generally similar concentration benchmarks, they were increasingly overridden by additional factors, including specifically entry conditions and differentiated products. By emphasizing market-specific factors in individual cases, the earlier attention paid to market concentration was further diminished.

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50. H. R. Rep. No. 1191, 81st Cong., 1st Sess. 3 (1949).
51. U.S. Department of Justice and Federal Trade Commission, Horizontal Merger Guidelines 12–13 (1984).
52. *Id*. at 16–23.
53. U.S. Department of Justice and Federal Trade Commission, Horizontal Merger Guidelines 17 (1992).

The 1992 Guidelines added an important provision to the antitrust lexicon under the name of "unilateral effects."[54] While previously mergers had been challenged solely because they increased prospects for effective collusion, there was now an additional class of issues that were effectively independent of overall market concentration:

> A merger may diminish competition even if it does not lead to increased likelihood of successful coordinate interaction, because merging firms may find it profitable to alter their behavior unilaterally following the acquisition by elevating price or suppressing output.[55]

These effects were most likely to occur when there was direct competition, or competitive overlap, between the merging parties for sales of differentiated products.

In short order, this provision became the predominant allegation used in merger investigations. By the years from 2011 to 2014, more than three-fourths of all merger investigations focused on unilateral rather than coordinated effects.[56] This shift in prosecutorial direction had important implications for the scope of merger enforcement policy. In the first place, market concentration levels became less significant; attention was directed instead at the merging parties rather than the industry as a whole. What was now central to the investigation were the prospective price effects resulting directly from the merger. The shift from concertation standards to price effects was inherent in the increasing prominence of allegations-based unilateral effects.

A second factor was also relevant. Where competitive overlap in limited product areas appeared likely to result in increased prices, this issue could often be cured without threatening the entire merger. Individual product lines or market locations could be divested, and the merger then permitted to proceed. There was now room for negotiation between the enforcement agencies and the merging parties, and as noted below, that process is largely what transpired.

Finally, as concentration benchmarks became less significant, they were also revised. In 2010, new Guidelines appeared with even more relaxed criteria. The HHI limit for unconcentrated markets was increased from 1000 to 1500, or by 50% and for highly concentrated markets from 1800 to 2500, by 38%. The criteria set for moderately concentrated markets lay in between. The most important feature of the new benchmarks was that for markets with HHI scores below 1500, markets would be considered as unconcentrated, and in such markets, few mergers would be challenged. The shift away from a concentration-based merger policy was complete.

Legislative Changes

I. Two important legislative changes occurred during the 1970s, which were also significant for the Antitrust Revolution of the 1980s. Because both legislative acts were procedural in design, they were not expected to have substantive effects, but this they did and to an unanticipated extent. The dynamics of antitrust litigation changed substantially, and both pieces of legislation supported the major changes that occurred.

II. In 1974, the Congress repealed the Expediting Act which had given the DOJ the automatic right to appeal District Court antitrust decisions directly to the Supreme Court without proceeding through one of the circuit courts.[57] An effect of this legislative change was that the Supreme Court reviewed many fewer antitrust cases than before and effectively relinquished its previously leading role on merger

54. *Id*. at 21–23.
55. *Id*. at 21.
56. Herbert Hovenkamp & Carl Shapiro, *Horizontal Mergers, Market Structure and Burdens of Proof*, 127 Yale L.J. 1996–2025 (2018).
57. 15 U.S.C. § 29.

antitrust cases. As Posner noted, "the Court has not decided a single major merger case" since that legislative change occurred.[58]

Although the Circuit Courts could have assumed a commanding role in setting policy standards, the fact is that they didn't. Instead, the Circuit Courts largely followed the published Guidelines: first the 1968 version and then the 1992/1994 version afterward. As Posner observed, lower appellate courts generally follow the Department's lead on antitrust policy.[59] The repeal of the Expediting Act in 1974 cemented the enforcement agency Guidelines as the premier policy setting statement.

III. Equally important was the passage of the Hart–Scott–Rodino (HSR) Act of 1976.[60] While this change was designed originally to facilitate efforts to restrain large horizontal mergers from occurring, in practice, it had the opposite effect. The new law required that premerger notification of large proposed mergers be submitted to the enforcement agencies. The law's ostensible purpose was to shift the litigation process to one of enjoining a proposed merger before it occurred from one of unraveling a merger after the fact which may have required shifting the ownership of the acquired assets.

While an admirable goal, the new law had various unintended consequences. Most significant was that the adjudication process was removed from the courts to the DOJ/Federal Trade Commission offices. Previously, the agencies' first step was to file a Complaint that put the merging parties on notice that court proceedings would follow in the absence of an agreed-upon settlement. In such circumstances, the Complaint emphasized anticompetitive effects and sought maximum relief. However, following passage of the HSR requirements, negotiations started at an earlier stage, before the merger was consummated and frequently before a Complaint had issued. Indeed, in many cases, the Complaint and the Settlement Agreement occurred concurrently.

Unlike the earlier period, the enforcement agencies did not now require judicial procedures to acquire the information needed to evaluate a merger and, therefore, were in a position to reach conclusions at an earlier stage. This led to negotiations with the merging parties and commonly leading to partial divestitures of overlapping interests. The process became one of regulatory oversight more than a judicial contest, and the current Guidelines that served as the agencies' road map became more consequential. In most cases, the merger proceeded following more or less substantive modifications. Although the partial divestitures were sometimes substantial, the revised process did not restrain the spate of large horizontal mergers.

Judicial Decisions

I. Although the number and importance of judicial decisions for merger policy were fewer and less consequential in the new era, there were still some worth noting. Among the most substantial was that by the DC Circuit in the *Baker Hughes* case.[61] Building on the Supreme Court's 1974 ruling in *General Dynamics*, the three-judge panel (which included future Supreme Court Justices Ruth Ginsberg and Clarence Thomas) commented on the markedly different emphasis in antitrust cases since the 1960s.[62] While the Court acknowledged that "undue concentration . . . establishes a presumption that the transaction will substantially lessen competition,"[63] that presumption can now be rebutted by "demonstrating that statistics on market share, market concentration, and market concentration trends portray inaccurately the merger's probable effects on competition."[64] Unlike the per-se-like treatment of large horizontal mergers in an earlier

58. Posner, *supra* note 20, at 131.
59. *Id*. at 136.
60. 15 U.S. C. §18a.
61. 908 F.2d 981, 1990.
62. *Id*. at 16.
63. *Id*. at 2.
64. *Id*. at 17.

era, the Court now accepted a "rule of reason" type analysis should be applied in merger cases. In this decision, the case law effectively accepted the larger panoply of factors listed in the 1984 Guidelines.

II. A significant merger action, although one decided largely on more traditional grounds, was that brought in 2004 by the DOJ against the proposed merger of Oracle and PeopleSoft.[65] The defendants were two computer companies that each supplied "enterprise application software," a particular variety of business software. The merging firms were the second and third leading sellers worldwide, although the Court identified three other possible vendors. While the case was tried before a district court judge, his decision was dispositive.

The judge's decision turned on his finding of the geographic limits of the relevant product market and the resulting market shares of the merging partners. On this issue, the government argued that the relevant market was limited to the United States, while the defendant's positon was that it was worldwide. Using the plaintiff's figures for the top three firms in the United States, their aggregate share was 87%, leading to an HHI of 2771 (including only the largest three firms), while the defendants' figures globally provided an aggregate share of 48% and an HHI (again including only the largest three firms) of 794.[66] While there was evidence submitted on both sides of this issue, the judge found the presence of a worldwide market. He was obligated to draw a sharp line where no such line was actually present, and he did so in favor of the merging parties.

The relevant question for this discussion, however, is not whether this decision was the correct one but rather whether the judge would have made the same decision with the same facts and circumstances in the earlier era as he did in 2004. In large measure, to ask this question is to acknowledge its answer. Indeed, the judge revealed his thinking earlier in his decision when he observed that the current trend in merger cases is "away from the 'very strict merger decisions of the 1960s'."[67] In an earlier era, it seems likely that markets would have been defined more tightly, and the merger would have been enjoined.

Market Effects

I. The new policy standards applied in merger policy under the 1982/1984 Guidelines had an impact, and we here review some relevant studies that both reported the effects and examined the economic consequences of this major policy shift. What had once been tantamount to a per se approach toward large horizontal mergers had become an adjudication process based on the "rule of reason." Many mergers were now approved that previously would have been prevented.

The dramatic shift that occurred is aptly demonstrated in Peltzman's recent findings.[68] He provides data on industry-specific changes in concentration levels from 1963 to 1982 and then on to 2007, with the critical year being 1982 when the revised Guidelines first appeared (see Tables 1 and 2 that reproduce some of Peltzman's data and that set the stage for his conclusions). In the first part of Table 1, he reports that average concentration levels were fairly stable in the earlier period, with increases found in the consumer goods sector but declines in the producer goods sector. However, in the years since 1982, the picture changed sharply. Mean concentration levels increased by 24% over a comparable twenty-year period: by 35% in the consumer goods sector and by 19% in the producer goods sector that had earlier shown declines.

Peltzman's data reprinted in Table 2 offer a more detailed picture of what occurred in the two eras. In the twenty years before 1982, the distribution of concentration changes was fairly flat although with

65. U.S. v. Oracle Corp. 331 F. Supp. 2d, 1098, 2004.
66. *Id*. at 102, 137, 140.
67. *Id*. at 25.
68. Sam Peltzman, *Industrial Concentration Under the Rule of Reason*, 57 J. L. Econ. 101–120 (Aug. 2014).

Table 1. Concentration in Comparable Manufacturing Industries: 1963–2007 Measured by Herfindahl–Hirschman Index Values.

Sample	No.	Mean	Median
I. All industries	348		
1963		710	484
1982		731	487
Consumer goods	138		
1963		614	379
1982		763	466
Producer goods	210		
1963		774	544
1982		709	495
II. All industries	326		
1982		747	565
2002		926	699
Consumer goods	114		
1982		769	527
2002		1039	824
Producer goods	212		
1982		735	570
2002		871	647

Source: Sam Peltzman, *Industrial Concentration Under the Rule of Reason*, 57, S3 J.L. & Econ. (Aug. 2014), Tables 1 and 6.

Table 2. Distribution of Industries by Change in Concentration (Herfindahl–Hirschman Index).

Sample	No.	<−20%	−20% to 20%	>20%
I. 1963–1982				
All industries	348	30.2	35.9	33.9
Consumer goods	138	20.3	30.4	49.3
Producer goods	210	36.7	39.5	23.8
II. 1982–2002				
All industries	326	21.4	26.1	52.5
Consumer goods	114	15.8	27.2	57.0
Producer goods	212	24.5	25.3	50.0
III. 1987–2007				
All industries	386	19.2	24.6	56.2
Consumer goods	130	16.2	22.3	61.5
Producer goods	256	20.7	25.8	53.5

Source: Sam Peltzman, *Industrial Concentration under the Rule of Reason*, 57 S3 J. L. & Econ. (Aug. 2014), Tables 3 and 8.

nearly half of all consumer goods industries showing substantial increases, but which was countered by 37% of all producer goods industries showing declines of 20% or more in the HHI index. However, increasing concentration levels became far more prevalent in the years following 1982 than before.

Peltzman's conclusions follow:

> [The earlier] era is characterized by a continuation of a long-established overall stability of concentration. Increased consumer goods concentration was roughly offset by decreased producer goods concentration. The overall stability did not rule out large increases in concertation even in highly concentrated industries.[69]

69. *Id*. at 111.

> The essential fact is that large increases in concertation became more frequent in the post-1982 period as much in concentrated markets as in unconcentrated markets.[70]
>
> We are left with . . . [this]result: policy is restrictive and concentration is flat. Then the policy becomes less restrictive, and concertation immediately starts rising, as it had failed to do for the better part of a century . . . . My tentative conclusion is that deregulating mergers also deregulated concentration.[71]

Although Peltzman has recently softened his conclusions on the importance of this policy shift, his empirical findings remain striking. He also remains quite neutral as to whether the documented shifts in concentration levels represented good policy decisions or bad ones.

II. The impact of concentration on prices is an essential issue for evaluating the new policies. Bain initiated this line of research in 1951 paper where profit rates were used to reflect price levels. He reported that industries with eight-firm concentration ratios exceeding 70% earned profit rates on average which were 75% greater than those with lower ratios.[72] Many similar studies followed, reporting comparable findings so this matter had appeared settled.[73]

When criticism was directed at profit rates used to reflect price effects, attention turned instead to direct measures of price–cost margins; however, the results were similar. The most prominent such study was by Collins and Preston who suggested that the ratios of prices to variable costs more closely approached the Lerner Index of Monopoly and, therefore, more accurately reflected the market conduct at issue.[74] Like others, they presumed that concentration levels were effectively exogenous and, on that basis, reported "a statistically significant, but not always strong, association between concentration and profitability in manufacturing industries."[75] However, they also report that "Concentration is more likely than not a significant variable in the analysis of industry profit and price-cost performance, but other variables also are important and sometimes appear to outweigh or offset completely the effects of concertation."[76] That conclusion confirmed Bain's earlier judgment that high concentration may be a necessary but not always a sufficient condition for high profit, collusive outcomes.

III. But just a few years later, Demsetz levied a challenging critique to the concentration—profits literature.[77] His argument was that concentration was not a policy-driven *exogenous* factor affecting oligopoly prices and profits but instead was an *endogenous* factor driven by firm-specific cost conditions. If successful firms were both profitable and large, that connection could explain a positive effect of concertation levels on price–cost margins even within highly competitive markets. To the extent that concentration was not exogenous, the Collins/Preston findings therefore could not be used to confirm any effect of concentrated markets on collusive outcomes. His critique was widely viewed as casting considerable doubt on the empirical support available for established policy standards.

IV. Following the Demsetz critique, the cross-industry approach became "unfashionable," and the economic literature declined sharply. Indeed, it was only in 1990 that a rigorous empirical study emerged on this subject. Salinger's paper employed data for the years from 1972 through 1984, which

70. *Id*. at 114.
71. *Id*. at 118.
72. Joe S. Bain, *Relation of Profit Rate to Industry Concertation*, 65 Q. J. of Econ. 293–324 (Aug. 1951).
73. F. M. Scherer & David Ross, Industrial Market Structure and Economic Performance 411 (Houghton Mifflin 3d ed., 1990).
74. Norman Collins & Lee E. Preston, Concentration and Price-Cost Margins in Manufacturing Industries 8–17 (1970).
75. *Id*. at 107.
76. *Id*. at 116.
77. Harold Demsetz, *Industry Structure, Market Rivalry, and Public Policy*, 16 J.L. Econ. 1–9 (1973).

reflected conditions in the prerevolutionary era.[78] After estimating equations for different years within that period, he found that "the concentration-profits relationship has been remarkably stable."[79] However, as Salinger acknowledged, its policy significance is impacted by the proposed endogeneity of concentration levels and "whether increases in concentration are associated with increases or decreases in prices."[80] And on this point, he recognizes that "even though concentration is associated with the higher margins that may arise from collusion, the process by which markets become concentrated entails cost reductions that dominate any effect of collusion."[81]

This finding is important but limited, however, because of the policy regime in effect during Salinger's sample period. In that era, large horizontal mergers were largely prevented. Therefore, whatever concentration increases occurred may therefore have resulted from lower costs attained by individual firms who subsequently saw their market shares increase. Indeed, various studies using data from the 1970s found stronger effects on profitability from firm market shares than from industry concentration levels.[82] While these results have implications for proposed deconcentration policies, such as those advanced by Kaysen/Turner, they have less significance for merger policy issues since the manner by which concertation increases is relevant for apprising their competitive effects.

V. In contrast, Peltzman's more recent study examines industry data in manufacturing for the years since 1982 and were thus generated under the new, less restrictive policy regime.[83] Because the industrial classification system changed during his study period, he employed two subsamples each of fifteen years: the first from 1982 to 1997 and the second from 1997 to 2012. The mean industry increase in concentration was 17% in the former sample and 12% in the latter. But unlike Salinger whose primary dependent variable was price–cost margins, Peltzman's counterpart was the industry percentage price change per year.

In Peltzman's concentration regressions, he controls for both annual changes in input costs and productivity growth. With these controls in place, he reports that output prices increase with input prices but decline with productivity growth. But also that "the margin of price over cost has widened where concentration has increased, . . . [there are] significant concentration change effects when holding changes in input costs and productivity constant."[84] Overall, he finds "the opposing tendencies . . . roughly cancel: the more concentrated industries seem to be more productive but firms in these industries also seem to retain most of the resulting efficiency gain in higher margins."[85]

These findings are consistent with a more recent study that attributes rapid technological progress to "superstar firms."[86] While the authors report that "rising concentration is more prevalent in dynamic industries that exhibit faster technological progress," they also note there is "little systematic correlation between increased concentration and higher prices."[87] Higher margins and enhanced market power are apparently gained despite largely stable consumer prices.

These conclusions are particularly important because they suggest some commonalities with Salinger's study of thirty years earlier. Both acknowledge that the endogeneity of concentration levels,

78. Michael Salinger, *The Concentration-Margins Relationship Reconsidered*, 1990 Brookings Papers on Economic Activity: Microeconomics 287–335 (1990).
79. *Id*. at 307.
80. *Id*. at 308.
81. *Id*. at 310.
82. Scherer & Ross, *supra* note 73, at 428–30.
83. Sam Peltzman, *Productivity and Prices in Manufacturing During an Era of Rising Concentration* (2020), https://ssrn.com/abstract=3168877.
84. *Id*. at 16.
85. *Id*. at 17.
86. David Autor et al., *The Fall in the Labor Share and the Rise of Superstar Firms*, 135 Q. J. Econ. 645–709 (2020).
87. *Id*. at 26–27.

and that improved productivity, resulting from either competitive advantages or successful innovation may be significant causative factors. But whether the gains received are inframarginal such that price levels are established by higher cost suppliers leading to unchanged prices or instead represent short-run monopoly profits as returns to innovation but which just equal the lower prices that would have followed from lower costs is unclear. In either case, direct consumer effects are largely unchanged. *While major improvements in overall economic efficiency may have occurred, the rewards largely accrued to firms and their owners, and with little directly benefiting consumers.* Increased concentration even with offsetting price effect may then still have had substantial distributive effects.

VI. In yet another study, Ashenfelter and colleagues[88] reviewed the published literature on price effects of mergers over the past thirty years, which encompasses both regulatory regimes. Their review includes forty-nine studies of mergers in twenty-one industries. From that sample, they report evidence of "merger-induced price increase" in thirty-six cases, of which twenty-three were "meaningful."[89] They conclude that "mergers in oligopolistic markets can result in economically meaningful price increases."[90] The authors emphasized that mergers that leave three or four major participants remaining lead generally to higher prices.[91]

That paper also addresses the question of whether any efficiencies resulting from particular mergers are not only present but also sufficient to offset the increased prices resulting from any expanded market power. Without general evidence on this issue, the authors point to a particular merger among beer suppliers where the increased prices associated with the merger were just offset by lower transportation costs so that postmerger prices remained fairly stable. In that case, consumer effects were offsetting; lower prices due to improved efficiency were just balanced by higher prices from enhanced market power. In such circumstances, any efficiency gains accrued entirely to the owners of the merging firms.

Ashenfelter's study stands for the finding that higher prices generally follow from large mergers in oligopolistic markets. But it also supports a concentration screen, such that mergers in nonconcentrated markets should not be impeded. However, in the "rule of reason" regime that followed the Antitrust Revolution, most horizontal mergers were simply approved even in concentrated markets.

VII. One further set of results should be noted, which places the findings offered above in a larger context. A recent study of the average markups realized by large public companies from 1960 through 2014 provides striking results.[92] Although fairly stable at the start of their period, average price–cost markups have followed a secular upward trend since 1980, such that "in 2016, the average markup charged is 61% over marginal cost, compared to 21% in 1980." [93] The authors report that increasing markups are associated with both large increases in profits and the market valuations of firms, which together suggest substantial increases in market power.[94]

Among the most important implications drawn by the authors of their findings is that related to the labor share of income associated with the increasing trend in market power. They conclude there is "firm level evidence of the direct inverse relation between markups and labor share,"[95] which in turn can have substantial distributive effects.[96]

88. Orley Ashenfelter et al., *Did Robert Bork Understate the Competitive Impact of Mergers, Evidence from Consummated Mergers*, 57 J.L. Econ. 67–99 (Aug. 2014).
89. *Id*. at 78–79.
90. *Id*.
91. *Id*. at 96.
92. Jan de Loecker et al., *The Rise of Market Power and the Macroeconomic Implications*, 135 Q. J. Econ. 561–644 (May 2020).
93. *Id*. at 10.
94. *Id*. at 27.
95. *Id*. at 31.
96. Michael Elsby et al., *The Decline of the U.S. Labor Share*, 2013 Brookings Papers on Economic Activity 1–52 (Fall 2013).

Distributive Concerns

The observed trade-off between prospective efficiency gains and enhanced market power effects was first explored in Williamson's 1968 paper. Significantly, he concluded that "a merger which yields non-trivial real economies must produce substantial market power and result in relatively large price increases for the net allocative effect to be negative."[97] At the time, however, this conclusion received little traction possibly because it did not conform with the accepted empirical evidence on firm size and scale economies. Bain's earlier finding (1956), resting on his sample of twenty manufacturing industries, was that the largest two to four firms in each industry were commonly larger than "needed for the lowest production and distribution costs."[98] For mergers that included such firms, therefore, the Williamsonian trade-off would not likely apply.

An important assumption that underlay Williamson's analysis is relevant here. He was forthright in noting that he treated "consumer and producer interests symmetrically," such that distributive concerns could be ignored. Otherwise, he wrote, "any undesirable income distribution effects associated with market power would be counted against the merger."[99] Despite this cautionary statement, distributive concerns were ignored and indeed were explicitly dismissed by Posner and Bork in their influential books.

Whatever may have been the distributions of household wealth in the 1970s, they were largely stable,[100] and ignoring distributive concerns raised few objections. But much has changed since then. In a more recent study of wealth inequality over the past century, it was reported that:

> The share of wealth owned by the top 1% families has regularly grown since the late 1970s and reached 42% in 2012. Most of this increase is driven by the top 0.1%, whose wealth share grew from 7% in 1978 to 22% in 2012.[101]

While various factors contributed to the expanding degree of wealth inequality, a pertinent question is whether the observed expansion in industrial concentration, occasioned by the Antitrust Revolution, was one of them.

Fully forty-five years ago, and just a few years before the Posner and Bork volumes appeared, I offered a model of the impact of monopoly on the distribution of household wealth.[102] While that analysis was preliminary, it suggested broad estimates of this effect. As of 1962, the model estimated that the wealthiest 0.27% of households, which controlled 18.5% of household wealth, would see their share fall to between 3% and 10% in the absence of monopoly profits. The conclusion follows: "Even if we take the midpoint of this range, the share of total wealth accounted for by the wealthiest members of society would decline by nearly two-thirds." Similarly, the largest 2.4% of U.S. Households that accounted for more than 40% of total wealth at the time would see their share decline, were monopoly profits excluded, to between 17% and 28%, or by nearly 50% of their share of household wealth.[103] If

97. Oliver E. Williamson, *Economies as an Antitrust Defense: the Welfare Tradeoffs*, 58 Am. Econ. Rev. 23 (Mar. 1968).
98. Bain, *supra* note 15, at 113.
99. Williamson, *supra* note 97, at 28.
100. Edward N. Wolff, *Household Wealth Trends in the United States, 1962 to 2013*, 2 Russel Sage Found. J. Soc. Sci. 24–43 (Oct. 2016).
101. Emmanuel Saez & Gabriel Zucman, *Wealth Inequality in the Unites States since 1983: Evidence from Capitalized Income Tax Data*, 131 Q.J. Econ. 519–578 (May 2016).
102. William S. Comanor & Robert H. Smiley, *Monopoly and the Distribution of Wealth*, LXXXIX Q. J. Econ. (May 1975).
103. *Id*. at 191.

these estimates are even roughly correct, they suggest that monopoly profits can have substantial distributive consequences.

A similar model was employed more recently by economists at the Organization for Economic Cooperation and Development.[104] Applying the model in eight advanced countries, they report "that of the share of wealth of the top 10% (richest), about one tenth to one quarter comes from market power."[105] Apparently, the distributive effect of monopoly power is common in a market economy. See also a study of the effects of concentration levels on income distributions.[106] The literature on this subject was surveyed earlier by Smiley.[107] For an opposing view, however, see Crane.[108]

While distributive concerns were largely dormant when the Antitrust Revolution began, the increasing degree of U.S. inequality has become more apparent, and important studies have appeared. The most prominent is by Piketty[109] who emphasized the importance of nonlabor income in promoting unequal outcomes. While widely disparate wages may promote inequality, he suggested that unequal returns to capital may be a more important factor.

Piketty's "fundamental force for divergence" is represented by the expression $r > g$, where r is the average rate of return on capital and g is the economy's growth rate. He concludes that when returns to capital exceed the overall growth rate, there are strong prospects that the distribution of wealth will become increasingly unequal. To be sure, Piketty's model generated many opposing views, most prominently from Acemoglu and Robinson.[110] Their essential critique is that both factors are themselves determined by underlying economic variables, particularly "institutions and politics."[111] These broad parameters are themselves determined by so much else so that they hardly represent causative factors.

Among the factors that may underlie both the return on capital and the growth rate of the economy is the prevalence of monopoly returns. Not only does monopoly power lead to higher prices and greater returns to the capital invested by firms with this power, but also it can influence economic growth rates. There is, however, little consensus on the direction of this second effect. While higher monopoly returns can increase the resources available for innovation, they can also dim the incentives to do so since innovation itself can detract from current rewards. What this suggests is that monopolistic factors may be more likely to promote Piketty's condition for wealth inequality than limit it.

Piketty's data on U.S. wealth inequality are generally consistent with the shift in antitrust policy regimes. After both the 1% and 10% wealth shares peaked in 1910 at 45% and 80%, respectively, these percentages declined steadily for sixty years, through 1970. At that point, an upward trend returned that has continued to the present. From about 30% and 68%, respectively, in 1970, the two wealth shares grew to more than 30% for the top 1% wealth share and above 70% for the highest 10% household units.[112] Although higher levels of market power may have contributed to higher returns to both the firms and their owners, it was surely not the only factor leading to greater wealth disparities.

104. Sean Ennis & Yunhee Kim, *Market Power and Wealth Distribution*, in A Step Ahead: Competition Policy for Shared Prosperity and Inclusive Growth (OECD Paris, June 2017, Ch. 5).
105. *Id*. at 130.
106. Irene Powell, *The Effect of Reductions in Concentration on Income Distribution*, 69 Rev. Econ. Stat. (Feb. 1987).
107. Robert H. Smiley, *Firm Size, Market Power and the Distribution of Income and Wealth: A Survey*, in The Economics of Firms Size, Market Structure and Social Performance 90–103 (John J. Sigfried ed., FTC Washington, July 1980).
108. Daniel A. Crane, *Antitrust and Wealth Inequality*, 101 Cornell L. Rev. 1171–1228 (July 2016).
109. Thomas Piketty, Capital in the Twenty First Century (2014).
110. Daron Acemoglu & James A. Robinson, *The Rise and Decline of General Laws of Capitalism* (National Bureau of Economic Research Working Paper No. 20766, Dec. 2014).
111. *Id*. at 10.
112. Piketty, *supra* note 109, at 348–49.

Policy Conclusions

The Antitrust Revolution that flowered in the early 1980s emerged from various seeds. One was the widespread acceptance of a new theoretical paradigm associated with game theory. Even those not versed in this theoretical structure recognized its conclusions as distant from what had gone before. Indeed, the revised conclusions were repeated so often that they quickly became the "conventional wisdom." The old theories had become just that: dictums from the past which no longer represented the modern approach.

But equally important were the new "academic scribblers" who pointed in a similar direction even while starting from more conventional premises. While the starting points of Bork and Posner seemed in line with what had gone before, their conclusions were sufficiently different that their recommended policies pushed the pendulum in a new direction. Strikingly, it was in the same direction as implied by the game theory paradigm shift. As with most revolutions, it was carried too far. It rested on principles and ideology as much as on experience and has already been subject to increasing criticism.

A difficulty with the new policies is that distributive concerns were ignored even though antitrust policy at its inception had rested on such matters. In an important article, Baker and Salop supported the growing recognition that market power has contributed to increased inequality.[113] They discuss whether antitrust and competition policies could be employed to combat rising inequality,[114] with the bulk of their discussion directed at policy options to meet distributive concerns.

Among the possibilities that Baker/Salop considered are the Kaysen/Turner proposals discussed above, which embodied both no-fault monopolization liability and structural remedies. However, they reject that approach on grounds of both distorting firm conduct and losing available scale economies, both appropriate concerns.[115] Yet they did not discuss an alternate route toward limiting concentration levels through more strictly enforced policies against large horizontal mergers. Since large mergers can offer substantial economies, despite Bain's much earlier findings, an efficiencies defense would be warranted.

An important question is whether the two policy objectives, economic efficiency and distributive equity, should be considered as lexicographic elements in a policy maker's objective function. What that question asks is whether promoting efficiency is so paramount among antirust objectives that distributive issues should become relevant only when efficiency effects are neutral. That presumption is commonly justified by the fact that increased outputs can later be redistributed to meet distributive goals; that in other words, "the gainers could compensate the losers." However, Bork and Posner both argued that distributive concerns should play no role in antitrust enforcement actions. Their positions, however, conflict with the increasingly widespread judgment that distributive equity is a more consequential objective than represented by the extreme lexicographic ordering.

The alternate position is that a trade-off between the two objectives exists so that the terms of a satisfactory trade-off between them becomes relevant. And here that Peltzman's findings are significant: that output price declines rarely follow from enhanced industrial concentration when productivity is improved. And so is his result that consumers do not largely benefit from any efficiencies but rather nearly all such benefits accrue to the firms and their owners. A related consideration is that in the years since 1980, gross domestic product has nearly doubled while in the same years, median weekly wages at constant prices have barely changed: from US$330 to US$345 in 1982 prices.[116] And there is evidence that enhanced market power has been a contributory factor.

113. Jonathan B. Baker & Steven C. Salop, *Antitrust, Competition Policy and Inequality*, 104 Geo. L.J. Online 11–13 (2015).
114. *Id*. at 3–5.
115. *Id*. at 23–24.
116. de Loecker, *supra* note 92, at 33.

An approach to this issue is to let this concern impact the essential issue of who should bear the "burden of proof" in merger proceedings, which is a critical matter in creating a more robust horizontal merger policy. *Should the merger proceed unless a price effect can be proven, or should the merger be enjoined unless efficiencies can be demonstrated?* That, moreover, is the same question as to whether that large horizontal mergers should be evaluated by means of a per se rule or under the "rule of reason."

More concentrated industries have two mutually reinforcing effects. First, there is long-standing evidence that firms with large market shares earn greater profits, although there is a dispute as to whether this finding is at the expense of or in addition to higher industry concentration levels.[117] And second, even with similar profit margins as between more and less concentrated industries, unequal distributions of monopoly returns lead to more unequal distributions of household income and wealth.

Even if the dissolution of large established firms imposed large economic disruptions, that cannot be said of a reinvigorated policy against substantial horizontal mergers. While the Antitrust Revolution of the 1980s may have placed merger policy on a more firm theoretical structure, it did so by depressing distributive concerns. As such, it may also have contributed to growing problems of inequality in U.S. distributions of income and wealth.

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117. Scherer & Ross, *supra* note 73, at 426–30.