Winter 2010 | Vol.52, No.2 | REPRINT SERIES

California Management Review

A TRIBUTE TO OLIVER WILLIAMSON:

# Antitrust Economics

**Carl Shapiro**



University of California
Berkeley
Haas School of Business

A TRIBUTE TO OLIVER WILLIAMSON:

# Antitrust Economics

**Carl Shapiro**

Oliver Williamson's influence on antitrust economics is enormous, yet all too easy to neglect as we laud his work on the comparative advantages of markets vs. organizations for directing economic activity. The work for which Williamson was awarded the Nobel Prize is directly relevant for basic business issues such as vertical integration (make vs. buy decisions) and vertical contracting (the managing of relationships with suppliers and customers). These same issues are central to antitrust economics, which concerns itself with the legal and regulatory limits on firms' competitive strategies.

Williamson was greatly influenced by the year he spent during 1966-67 at the Antitrust Division of the U.S. Department of Justice as Special Economic Assistant to the Assistant Attorney General for Antitrust. There he had the opportunity to study up close a variety of business practices and to consider their business rationales. He had the great good fortune to work under Donald Turner, who served as the Assistant Attorney General for Antitrust from 1965-1968 and who was committed to putting antitrust enforcement on sounder economic foundations.[1] Williamson was an important part of this effort, during a time period he has described as "transition years" for antitrust enforcement.[2]

Williamson was skeptical of the conventional wisdom of the time, which presumed that the purpose and effect of many vertical practices was the enhancement of market power and the erection of entry barriers. Contrary to this view, which was widely adopted by antitrust lawyers and courts in the 1960s, Williamson could see rationales for various vertical practices that were based instead on economic efficiency. Williamson brings us back to that time with clarity:

The author thanks Ken Heyer and Phil Weiser for valuable comments on an earlier draft.

> As Ronald Coase pithily observed: "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 very large, and the reliance on a monopoly explanation, frequent." The possibility that non-standard practices sometimes had economizing purpose and effect was ignored or, worse, efficiency was regarded as the source of unfair competitive advantage.[3]

Antitrust economics has evolved so much over the intervening 40 years that we now take many of Williamson's ideas and observations for granted. This evolution can be seen in the dramatic shifts in Supreme Court antitrust jurisprudence regarding all manner of business practices over the past four decades, shifts that have placed much greater weight on the economic analysis of the actual competitive effects of those practices, as advocated by Williamson in the 1960s.

But I get ahead of myself.

The key role played by antitrust considerations in Williamson's thinking can immediately be seen in the title of his seminal 1975 work *Markets and Hierarchies: Analysis and Antitrust Implications*. A close look at Williamson's curriculum vitae shows that much of his early work was motivated by antitrust considerations. One of his very earliest papers, in 1963, involved the key antitrust concept of barriers to entry.[4] Other early work addressed central issues in antitrust economics: the relationship between market structure and innovation,[5] and the sources of economies of scale.[6] Shortly after his year at the Antitrust Division, Williamson published an important paper that anticipated the subsequent literature on how a firm could enhance its market power by raising its rivals' costs.[7] This paper heralded a series of major contributions to antitrust economics by Williamson following his time at the Antitrust Division. Many of these are assembled in his 1987 collection of writings, *Antitrust Economics*. Looking back, nary a topic can be found today in the field of antitrust to which Williamson has not made substantial and lasting contributions.

Carl Shapiro is the Deputy Assistant Attorney General for Economics, Antitrust Division, U.S. Department of Justice. Transamerica Professor of Business Strategy, Haas School of Business, University of California, Berkeley (on leave).

## Efficiencies from Horizontal Mergers

Mergers and acquisitions are some of the most consequential decisions made by managers. In the case of horizontal mergers—mergers between direct competitors—such mergers are subject to probing antitrust review, primarily by the Antitrust Division of the Department of Justice (DOJ) or the Federal Trade Commission (FTC). An acquisition is prohibited under §7 of the Clayton Act if "the effect of such acquisition may be substantially to lessen competition."

Modern merger analysis essentially involves trading off two considerations. On the one hand, acquisitions can promote economic efficiency and enhance competition by allowing the assets of the acquired firm to be combined with the assets of the acquiring firm, under the management of the acquiring firm, where they (hopefully) can be deployed more effectively. On the other hand, when a firm acquires its direct competitor, the merged entity may face less competitive pressure and thus raise prices or otherwise harm customers, whose choices have been restricted. Under the merger analysis followed by the DOJ and the FTC for at least 25 years, efficiencies resulting from the merger count in favor of the merger, at least to the extent that they will be passed through to the customers of the merged entity.

However, such was not the case when Williamson arrived at the Antitrust Division in 1966. The Supreme Court had not been welcoming of merger efficiencies in the *Brown Shoe* case in 1962, stating:

> Congress appreciated that occasional higher costs and prices might result from the maintenance of fragmented industries and markets. It resolved these competing considerations in favor of decentralization. We must give effect to that decision. [8]

In 1967, evaluating Procter & Gamble's acquisition of Clorox, the Supreme Court had gone even further, ruling that efficiencies could actually be counted *against* a merger, since smaller rivals would find it difficult to compete against a highly efficient merged entity:

> Procter would be able to use its volume discounts to advantage in advertising Clorox. Thus, a new entrant would be much more reluctant to face the giant Procter than it would have been to face the smaller Clorox. Possible economics cannot be used as a defense to illegality. Congress was aware that some mergers which lessen competition may also result in economics, but it struck the balance in favor of protecting competition.[9]

While this position may have some populist appeal, and might indeed reflect Congressional intent, it never made a great deal of sense as a matter of economics, at least of one takes the modern approach of applying a consumer welfare standard to merger enforcement policy. As Williamson explains:

> The question was, how should a merger that would simultaneously yield both efficiencies and market power be evaluated? I discovered to my surprise that the allocative efficiency consequences of such a merger had never been worked out. The prevailing intuition, however, was that any increase in market power, however small, would trump the benefits of any cost saving. Was that intuition correct?[10]

To answer this question, Williamson developed what he called a "naïve tradeoff model" model of a merger that both enhanced market power and generated efficiencies. The resulting paper, published in the *American Economic Review* in 1968,[11] provided a foundation for subsequent merger analysis, to the point that economists studying mergers now commonly refer to the "Williamson tradeoff" in merger analysis. At least in the case where there was little or no pre-merger market power, Williamson was able to show in his simple model that a relatively modest cost savings would be sufficient to offset rather large price increase, if the ultimate objective of merger analysis is to maximize total surplus (profits plus consumer surplus). As is now well appreciated, the rectangle representing the cost savings can easily be larger than the triangle representing the deadweight loss associated with the price increase.[12] Williamson also took this opportunity to evaluate more generally the role of allocative efficiency in antitrust, a topic that has come to be of perennial interest.[13]

Modern merger analysis generally involves looking at consumer surplus rather than total surplus, which has lead to a different question: how large must the merger efficiencies be so that the merger leads to lower prices, notwithstanding some increase in market power accruing to the merged entity. However, in the bigger picture this is a detail: Williamson led the way in showing how to rigorously consider trading off market power and merger efficiencies. His approach was not embraced right away in the 1968 Merger Guidelines. He was too far ahead of his time. It took roughly thirty years for his ideas about merger efficiencies to be incorporated into the Horizontal Merger Guidelines, when the efficiencies section in the guidelines was revised in 1997.[14]

In subsequent years, Williamson remarked on the evolution of merger analysis, as reflected in the Merger Guidelines promulgated by the DOJ and later by the FTC. His comments in 2002, at the 20th anniversary celebration of the 1982 Merger Guidelines, were welcomed warmly.[15]

## Vertical Integration and Vertical Contracting Provisions

While Williamson's contribution to the treatment of efficiencies in horizontal mergers was prescient and had a lasting impact, his role in the treatment of vertical mergers (the coordination of multiple levels of economic activity within a single firm) and vertical contracting provisions (how firms structure their relationships with their customers and their suppliers) was more fundamental, broader, and much more tightly intertwined with his overall program of transaction cost economics. Put simply, Williamson recoiled at the unjustified presumption that "vertical restraints" were motivated by the desire to create or enhance market power rather than by the desire to align incentives and create efficiencies across firm boundaries.

Issues involving vertical integration and vertical contracting provisions are central to the contributions for which Williamson was awarded the Nobel Prize. He made enormous progress studying these issues in the years following his time at the Antitrust Division. The standard "theory of the firm" taught in economics classes at that time (and for years thereafter) viewed the firm as a production function, transforming inputs into output in a mechanical manner, determined by engineering considerations. Williamson took a very different view of the business enterprise, informed by sociology as well as economics. Williamson was cognizant of the complexities associated with large organizations and attentive to imperfect information and conflicting incentives. This perspective proved remarkably fruitful in studying a whole host of important issues surrounding vertical contracting and vertical relations. Williamson articulated his core reasoning in two short articles published in the early 1970s,[16] which anticipated his *Markets and Hierarchies: Analysis and Antitrust Implications*.

Williamson was inspired and motivated by what he experienced at the Antitrust Division during the 1960s and what he learned of how antitrust law treated vertical relations. The *Schwinn* case, which was before the Supreme Court, was of particular importance.[17] The Antitrust Division had challenged Schwinn's distribution practices some years earlier as violations of the Sherman Act. The case had reached the Supreme Court, and Donald Turner asked Williamson to look it over in September 1966, soon after he arrived at the Division. This was a time when the Court was quite hostile to vertical restraints, i.e., restrictions imposed by manufacturers on the ways in which distributors or retailers could sell that manufacturer's products. Williamson found the overall approach to vertical relations taken by antitrust law to be highly unsatisfactory:

> The prevailing thinking was self-limiting in three respects: (1) there was little appreciation for the possibility that product differentiation (as opposed to homogeneous product market exchange) might be the source of economic benefits; (2) there was even less appreciation for the possibility that the integrity of a distribution system could be compromised by subgoal pursuit among the parts (in this case, the individual franchisees); and (3) there was a preference for internal organization (hierarchy) over market organization (interfirm contract) if vertical restrictions, for whatever reason, were to be applied.

*Schwinn* provides a fine example to illustrate these points. Schwinn was a bicycle manufacturer, responsible for about 13% of the bicycles sold in the U.S. in 1961. Schwinn sold its bicycles to and through 22 wholesale distributors, who in turn sold to thousands of retail dealers. The Schwinn Cycle Dealers Association (SCDA) was a defendant in the case along with Schwinn and B.F. Goodrich, a large customer of Schwinn that sold Schwinn bicycles through its own retail stores and through franchisees. Critically, as the Court explains, the challenged Schwinn practices all involved the manner in which Schwinn controlled the distribution of its own brand of bicycles, and not any impediments to the ability of other bicycle manufacturers to compete against Schwinn:

> The United States does not contend that there is in this case any restraint on interbrand competition, nor does it attempt to sustain its charge by reference to the market for bicycles as a whole. Instead, it invites us to confine our attention to the intrabrand effect of the contested restrictions. It urges us to declare that the method of distribution of a single brand of bicycles, amounting to less than one-seventh of the market, constitutes an unreasonable restraint of trade or commerce among the several States.

Schwinn had revamped its distribution system in the early 1950s, reducing the number of retailers, franchising them at specific locations, and authorizing them to sell to consumers, but not to unfranchised retailers. Schwinn's 22 wholesale cycle distributors were assigned exclusive territories. The tenor of the Court's approach is illustrated by this passage:

> Schwinn contends, however, and the trial court found, that the reasons which induced it to adopt the challenged distribution program were to enable it and the

> small, independent merchants that made up its chain of distribution to compete more effectively in the marketplace. Schwinn sought a better way of distributing its product: a method which would promote sales, increase stability of its distributor and dealer outlets, and augment profits. But this argument, appealing as it is, is not enough to avoid the Sherman Act proscription; because, in a sense, every restrictive practice is designed to augment the profit and competitive position of its participants.

In the end, the Court condemned a number of Schwinn's practices, including the allocation of exclusive territories to distributors:

> Once the manufacturer has parted with title and risk, he has parted with dominion over the product, and his effort thereafter to restrict territory or persons to whom the product may be transferred whether by explicit agreement or by silent combination or understanding with his vendee—is a per se violation of § 1 of the Sherman Act.

Williamson disagreed with the approach taken by the Court, but he was ahead of his time:

> As of 1966, however, my efforts to place a more favorable construction on *Schwinn*'s restrictions and to reshape *Schwinn* got precisely nowhere….I viewed contract and organization from a combined economics and organizational perspective, which was a byproduct of my (unorthodox) training at Carnegie.[18]

However, the law was changing, and very rapidly by the standards of Supreme Court jurisprudence.[19] A mere ten years later, in the *GTE Sylvania* case, the Supreme Court overruled the *per se* rule stated in *Schwinn,* taking a more generous view of territorial restrictions imposed by manufacturers on distributors or retailers.[20] During the intervening years, Williamson explained how antitrust analysis of vertical restraints could be improved using the tools of transaction cost economics.[21] The *GTE Sylvania* decision itself afforded Williamson a well-deserved opportunity to explain how transaction cost economics could be used to assess vertical restraints.[22]

During the subsequent three decades, the Court has repeatedly recognized that vertical restrictions may have legitimate business justifications. Most recently, in *Leegin*, the Court overruled a 1911 precedent under which retail price maintenance was *per se* illegal under the Sherman Act.[23] The Court stated explicitly in *Leegin* that "The antitrust laws primarily are designed to protect interbrand competition from which lower prices can later result." By the time the Court ruled in *Leegin* that resale price maintenance should be evaluated on a case-by-case basis, and not condemned categorically, this approach had widespread support among economists. The path trod by the Court over the forty years from *Schwinn* in 1967 to *Leegin* in 2007 was very much illuminated by Williamson's work.

Transaction cost economics also proved valuable in assessing vertical mergers, another area in which antitrust thinking and enforcement has evolved greatly since the 1970s. Williamson was well positioned to comment on the new antitrust treatment of vertical mergers articulated by the Antitrust Division in the 1980s.[24]

## Monopoly Power and Monopolization

Williamson also contributed significantly to the long-running debate over the proper interpretation of Section 2 of the Sherman Act, which prohibits monopolization. He wrote an early paper discussing the "monopoly problem."[25] His paper on franchise bidding for natural monopolies was highly influential in shaping thinking about situations in which firms compete to obtain a monopoly position.[26] He also contributed to the debate over how to evaluate claims of predatory pricing, one of the most controversial practices in monopolization law.[27]

Here, as elsewhere in antitrust, Williamson steered a middle course. He insisted on a disciplined approach to evaluating predatory pricing claims, refusing to embrace the most aggressive treatments, under which a range of pro-competitive pricing could be condemned as predatory. Yet, unlike some adherents of the Chicago School, he did not reject as illogical claims of predatory pricing. In this regard, Williamson's review of Robert Bork's highly influential book, *The Antitrust Paradox*, illustrates his nuanced and practical approach to antitrust.[28] Williamson calls Bork's book "an important contribution to the antitrust dialogue" and states that the book is "essential reading for antitrust scholars and practitioners alike." However, he makes clear that he believes Bork over-reaches by relying too heavily on simple, static models that fail to capture important aspects of commercial reality:

> Although Bork's use of static economic analysis might be disputed, this is not because his economic reasoning is of a fragmentary kind. To the contrary, having once formulated the analysis in static economic terms, he relentlessly presses the argument to completion. His treatment of predatory pricing is illustrative, where his systematic application of the static model discloses that pricing efforts to destroy rivals lack rationality. This is a very strong result. I would caution, however, that static analysis is appropriate only if strategic considerations can be presumed to be absent…

Williamson made it clear that he did not think one could conduct reliable antitrust analysis without taking account of "strategic considerations." This has been one of the primary attacks on the more extreme positions of the Chicago School of antitrust economics that has since been mounted by the "Post-Chicago" School of antitrust economics. Williamson recognized that anticompetitive strategies could be employed, in suitable conditions, to exclude competition in highly concentrated markets. For example, entry into two vertical stages at once could be much harder than entry at just one level, opening up the possibility that vertical mergers or vertical contracting practices such as exclusive dealing could be used to foreclose competition.

By putting his finger on strategic considerations, which were absent from the simple, static model often used by adherents to the Chicago School, Williamson yet again went to the essence of the problem. In this case, he anticipated a huge body of work to come: the application of game theory to industrial organization economics and antitrust. Hopefully, the Courts will seriously consider strategic effects in monopolization cases when the evidence points in that direction, as urged by Williamson, and not overly enamored with the simple, static model promoted by Bork and the Chicago School when that model fails to capture business reality.

## Conclusion

Williamson's ideas are broader than any one area of antitrust law. The transaction cost economics framework which he championed, and the whole field of "new institutional economics" (a term coined by Williamson in *Markets and Hierarchies*), which he advanced, have also proven highly valuable and influential regarding antitrust remedies, the scope of antitrust law, and the proper boundary between antitrust and regulation.[29]

The antitrust economics community owes Oliver Williamson a great intellectual debt. In addition, as the chief economist at the Antitrust Division, I owe him a great institutional debt for helping to build the economics capability of the Antitrust Division and thus put antitrust law and antitrust enforcement on a firmer economic foundation. Olly, we are in your debt.

### Notes

1. Justice Stephen Breyer was another of Turner's Special Assistants, and Judge Richard Posner was working at that time in the Solicitor General's office handling antitrust cases.
2. Oliver E. Williamson, "Economics and Antitrust Enforcement: Transition Years," 2003.
3. Oliver E. Williamson, "Economics and Antitrust Enforcement," 2003, p. 61, citing Ronald H. Coase, "Industrial Organization: A Proposal for Research," in Victor Fuchs, ed., *Policy Issues and Research Issues in Industrial Organization* (New York, NY: National Bureau of Economic Research, 1972), p. 69.
4. Oliver E. Williamson, "Selling Expense as a Barrier to Entry," *Quarterly Journal of Economics*, 77 (February 1963): 112-188.
5. Oliver E. Williamson, "Innovation and Market Structure," *Journal of Political Economy*, 73 (February 1965): 67-73.
6. Oliver E. Williamson, "Hierarchical Control and Optimum Firm Size," *Journal of Political Economy*, 76 (April 1967): 123-138.
7. Oliver E. Williamson, "Wage Rates as a Barrier to Entry: The Pennington Case in Perspective," *Quarterly Journal of Economics*, 82 (February 1968): 85-116.
8. *Brown Shoe v. United States*, 370 U.S. 294 (1962), at p. 344.
9. *Federal Trade Commission v. Procter & Gamble, Co.*, 286 U.S. 568 (1967) at p. 579. As noted by Williamson in "The Merger Guidelines of the U.S. Department of Justice—In Perspective," (2002), p. 4: "The low opinion and perverse regard for economies went so far that beleaguered respondents disclaimed efficiency gains."
10. Oliver E. Williamson, "Economics and Antitrust Enforcement: Transition Years," 2003, p. 64.
11. Oliver E. Williamson, "Economies as an Antitrust Defense: The Welfare Trade-Offs," *American Economic Review*, 58 (March 1968): 18-36.
12. With pre-existing market power, any price increase resulting from the merger is more costly in terms of overall efficiency; in that realistic and important case, the deadweight loss is represented by a trapezoid, not a triangle. Williamson went on to analyze this point, and others as well, in a subsequent article, "Economies as an Antitrust Defense Revisited," *University of Pennsylvania Law Review*, 125/4 (April 1977): 699-736.

13. Oliver E. Williamson, "Allocative Efficiency and the Limits of Antitrust," *American Economic Review*, 59 (May 1969): 105-118.
14. <http://www.justice.gov/atr/hmerger/11251.htm>.
15. Oliver E. Williamson, "The Merger Guidelines of the U.S. Department of Justice—In Perspective," remarks presented at the 20th Anniversary of the 1982 Merger Guidelines, June 10, 2002, available at <www.justice.gov/atr/hmerger/11257.htm>.
16. Oliver E. Williamson, "The Vertical Integration of Production: Market Failure Considerations," *American Economic Review*, 61 (May 1971): 112-123; Oliver E. Williamson, "Markets and Hierarchies: Some Elementary Considerations," *American Economic Review*, 63 (May 1973): 316-325.
17. U*.S. v. Arnold, Schwinn & Co.*, 388 U.S. 365 (1967).
18. Oliver E. Williamson, "Economics and Antitrust Enforcement: Transition Years," 2003, p. 64.
19. These changes are often attributed to the influence of the Chicago School of law and economics, with good reason. Ironically, Richard Posner, one of the leaders of the Chicago School, was the author of the Department of Justice's brief in *Schwinn*. Williamson, applying his transaction cost perspective on vertical contracting, anticipated a number of the arguments made later by Posner, Robert Bork, and other exponents of the Chicago School.
20. *Continental TV Inc. v. GTE Sylvania, Inc.*, 433 U.S. 36 (1977).
21. Oliver E. Williamson, "The Economics of Antitrust: Transaction Cost Considerations," *University of Pennsylvania Law Review*, 122 (June 1974): 1439-1496.
22. Oliver E. Williamson, "Assessing Vertical Market Restrictions: Antitrust Ramifications of the Transactions Cost Approach," *University of Pennsylvania Law Review*, 127 (April 1979): 953-993.
23. *Leegin Creative Leather Products v. PSKS, Inc.*, 551 U.S. 877 (2007), overruling *Dr. Miles Medical Co. v. John D. Park & Sons Co.*, 220 U.S. 373 (1911). More precisely, *Leegin* ruled that minimum resale price maintenance, the practice of prohibiting retailers from setting price below a specific level, was no longer *per se* illegal. The Court had previously ruled that maximum resale price maintenance was no longer *per se* illegal, in *State Oil Co. v. Khan*, 522 U.S. 3, 15 (1997).
24. Oliver E. Williamson, "Vertical Merger Guidelines: Interpreting the 1982 Reforms," *University of California Law Review,* 71 (March 1983): 604-617; Oliver E. Williamson, "Transforming Merger Policy: The Pound of New Perspectives," *American Economic Review*, 78 (May 1986): 114-119.
25. Oliver E. Williamson, "Dominant Firms and the Monopoly Problem: Market Failure Considerations," *Harvard Law Review*, 85 (June 1972): 1512-1531.
26. Oliver E. Williamson, "Franchise Bidding for Natural Monopolies—in General and with Respect to CATV," *The Bell Journal of Economics*, 7 (Spring 1976): 73-104.
27. Oliver E. Williamson, "Predatory Pricing: A Strategic and Welfare Analysis," *Yale Law Journal*, 87 (December 1977): 284-340; "Williamson on Predatory Pricing, II," *Yale Law Journal*, 88 (May 1979): 1183-1200. See also Oliver E. Williamson, "Pretrial Uses of Economists: On the Use of 'Incentive Logic' to Screen Predation," *Antitrust Bulletin*, 29 (Fall 1984): 475-500.
28. Oliver E. Williamson, "Book Review: Robert H. Bork, *The Antitrust Paradox: A Policy at War with Itself*," *University of Chicago Law Review*, 46 (Winter 1979): 526-531.
29. These ideas were developed nicely by Paul Joskow in "Transaction Cost Economics, Antitrust Rules, and Remedies," *The Journal of Law, Economics and Organization*, 18/1 (2002): 95-116.