RECALIBRATING THE DIALOGUE ON WELFARE STANDARDS: REINSERTING THE TOTAL WELFARE STANDARD INTO THE DEBATE

Christine S. Wilson, Thomas J. Klotz & Jeremy A. Sandford[*]

INTRODUCTION

Antitrust enforcement and policy are currently the subject of significant political attention. Commentators argue that antitrust enforcement has been too permissive in recent years, causing the US economy to become more concentrated and less competitive.[1] Ultimately, these commentators blame the United States' longstanding, previously bipartisan antitrust policy for increasing income inequality, depressing wages, and reducing innovation.[2] These observers recognize that the consumer welfare standard,[3] the yardstick used to evaluate mergers and competitive conduct for more than forty years, is an intellectual barrier to their desired restructuring of antitrust policy and enforcement. Politicians and thinktanks consequently have issued numerous reform proposals designed to address the alleged failings of the American approach to competition law.[4]

---

[*] The views expressed in this article are solely those of the Authors and do not necessarily reflect the views of the Federal Trade Commission or any Commissioner. We would like to thank Danny Sokol, Joshua Wright, Alison Oldale, Bruce Kobayashi, James Cooper, and Bruce Hoffman for helpful comments on the oral remarks presented at the George Mason University Law Review Symposium that was the precursor for this article. *See* Christine S. Wilson, *Welfare Standards Underlying Antitrust Enforcement: What You Measure Is What You Get*, Luncheon Keynote Address at the George Mason University Law Review 22nd Annual Antitrust Symposium: Antitrust at the Crossroads? (Feb. 15, 2019), https://www.ftc.gov/system/files/documents/public_statements/1455663/welfare_standard_speech_-_cmr-wilson.pdf. We would also like to thank Nathan Wilson and participants at an FTC Bureau of Economics seminar for helpful conversations and comments.

[1] *See, e.g.*, MARSHALL STEINBAUM & MAURICE E. STUCKE, THE EFFECTIVE COMPETITION STANDARD: A NEW STANDARD FOR ANTITRUST 1 (2018), http://rooseveltinstitute.org/wp-content/uploads/2018/09/The-Effective-Competition-Standard-FINAL.pdf.

[2] *See, e.g.*, SENATE DEMOCRATS, A BETTER DEAL: CRACKING DOWN ON CORPORATE MONOPOLIES 1 (2017) [hereinafter A BETTER DEAL], https://www.democrats.senate.gov/imo/media/doc/2017/07/A-Better-Deal-on-Competition-and-Costs-1.pdf ("Over the past thirty years, growing corporate influence and consolidation has led to reductions in competition, choice for consumers, and bargaining power for workers. The extensive concentration of power in the hands of a few corporations hurts wages, undermines job growth, and threatens to squeeze out small businesses, suppliers, and new, innovative competitors.").

[3] The consumer welfare standard is discussed *infra* Part II.

[4] *See, e.g.*, A BETTER DEAL, *supra* note 2, at 1; Press Release, Amy Klobuchar, U.S. Senator, Senators Introduce Legislation to Modernize Antitrust Enforcement (Sept. 14, 2017), https://www.klobuchar.senate.gov/public/index.cfm/2017/9/klobuchar-senators-introduce-legislation-to-

Today's critics also reject the longstanding view that antitrust enforcement in the United States swung, like a pendulum, along a predictable path. Politics, and particularly the party inhabiting the White House, were believed to determine the way the pendulum swung.[5] Under this view, antitrust enforcement was aggressive during the 1960s and 1970s, permissive during the Reagan and first Bush Administrations, aggressive again during the Clinton years, and so on.[6] This earlier narrative, that antitrust enforcement depends on the outcome of Presidential elections, has been proven false.[7]

Today's critics instead contend that the pendulum has been swinging in only one direction—toward more permissive enforcement—since the late 1970s or 1980s. They disapprove of antitrust enforcement levels during both Republican and Democratic administrations. For instance, Professors Marshall Steinbaum and Maurice Stucke claim that "antitrust enforcement, outside of cartel prosecutions, declined during the . . . late 1970s–mid-2010s."[8] Similarly, Professor John Kwoka argues that concentration has increased steadily since the mid-1990s.[9] Although their characterizations are hotly disputed,[10] these critics believe that modern antitrust policy should be radically restructured to address these perceived failures.

---

modernize-antitrust-enforcement; Elizabeth Warren, U.S. Senator, Reigniting Competition in the American Economy, Keynote Remarks at New America's Open Markets Program Event 5–7 (June 29, 2016), https://www.warren.senate.gov/files/documents/2016-6-29_Warren_Antitrust_Speech.pdf.

5 *See, e.g.*, Walter Adams & James W. Brock, *Reagonomics and the Transmogrification of Merger Policy*, 33 ANTITRUST BULL. 309, 309 (1988) ("The Reagan Administration's most conspicuous antitrust achievement was its emasculation of the nation's merger policy."); Eleanor M. Fox, *Can We Control Merger Control? – An Experiment*, *in* POLICY DIRECTIONS FOR GLOBAL MERGER REVIEW: A SPECIAL REPORT BY THE GLOBAL FORUM FOR COMPETITION AND TRADE POLICY 79, 84–85 (1999) ("During the Reagan Administration . . . U.S. federal merger enforcement ground to a halt."); Jeffrey H. Birnbaum, *Washington's Most Dangerous Bureaucrats*, FORTUNE, Sept. 29, 1997, at 121 ("Charles Rule, a former head of the Justice Department's antitrust division under Reagan, considers Pitofsky's vigorous antitrust actions 'a swing back to what was going on in the 1960s and 1970s.'"); Robert Pitofsky, An Antitrust Progress Report for the FTC: Past, Present and Future, Remarks Before the 1996 Antitrust Conference, Business Development Associates Inc., 2 (Mar. 4, 1996), https://www.ftc.gov/public-statements/1996/03/antitrust-progress-report-ftc-past-present-and-future ("The Commission of the 1990s has tried to strike a middle ground between what many people believe was an excessively active enforcement in the 1960s and the minimalist enforcement of the 1980s.").

6 *See* Birnbaum, *supra* note 5, at 121.

7 *See* Thomas B. Leary, *The Essential Stability of Merger Policy in the United States*, 70 ANTITRUST L.J. 105, 114, 126 (2002) (explaining persistent themes and approaches to enforcement and showing consistent percentages of mergers challenged in succeeding administrations).

8 STEINBAUM & STUCKE, *supra* note 1, at 8.

9 JOHN KWOKA, MERGERS, MERGER CONTROL, AND REMEDIES: A RETROSPECTIVE ANALYSIS OF U.S. POLICY, 18–19 (2015).

10 *See, e.g.*, Michael Vita & F. David Osinski, *John Kwoka's* Mergers, Merger Control, and Remedies*: A Critical Review*, 82 ANTITRUST L.J. 361, 363, 368 (2018).

The problem with this critique is that consumers appear to be better off than ever before. Prices continue to fall and output continues to rise.[11] Under the traditional "consumer welfare" standard, antitrust policy has been a resounding success.[12] Yet these critics hardly see it that way, arguing instead that policymakers simply need a different way to measure the misery they know is there. Consequently, critics have proposed discarding the consumer welfare standard in favor of another metric.[13] Indeed, the Federal Trade Commission ("FTC") devoted more than four hours to the topic and heard many different proposals during its *Hearings on Competition and Consumer Protection in the 21st Century* in November 2018.[14]

How we measure the success or failure of US antitrust policies matters for two reasons. First, substantively, it has long been known that what you measure is what you get. That is, the standard we select will guide our enforcement approaches and ultimately will dictate results.[15] Second, procedurally, antitrust policy works best when stakeholders can reach consensus on its ultimate goals. Failure to agree on these basic goals would condemn antitrust policy to the "pendulum" of old. At its worst, instability of that kind might sap confidence in antitrust policy and legitimize more radical solutions at both ends of the ideological spectrum.

This Article examines the critiques of the consumer welfare standard and assesses some of the alternatives that have been proposed to replace it. Part I examines the historical perspective that led to the embrace of the consumer welfare standard to guide antitrust policy and enforcement in the United States. Part II considers the empirical support for critiques of the consumer welfare standard. Part III assesses several of the proposed alternative welfare standards that would replace the consumer welfare standard. Part IV examines the total welfare standard as an alternative to guide antitrust

---

[11] *See, e.g.*, Joshua D. Wright & Douglas H. Ginsburg, *The Goals of Antitrust: Welfare Trumps Choice*, 81 FORDHAM L. REV. 2405, 2406 (2013) ("[T]here is now widespread agreement that [antitrust's] evolution toward welfare and away from noneconomic considerations has benefitted consumers and the economy more broadly.").

[12] *See, e.g.*, Carl Shapiro, Opening Statement to the Senate Judiciary Committee, Subcommittee on Antitrust, Consumer Protection and Consumer Rights, The Consumer Welfare Standard in Antitrust Law: Outdated, or a Harbor in a Sea of Doubt? 3–4 (Dec. 13, 2017) ("During the 40 years that I have been studying and practicing antitrust, there has been a broad consensus among antitrust scholars and practitioners in favor of the 'consumer welfare' standard. No evidence whatsoever has been put forward calling this consensus into question. Indeed, I know of no serious antitrust experts who favor abandoning the 'consumer welfare' standard . . . .").

[13] *See* STEINBAUM & STUCKE, *supra* note 1, at 1; Tim Wu, *After Consumer Welfare, Now What? The "Protection of Competition" Standard in Practice*, 1 ANTITRUST CHRON. 12, 13 (2018); *Restoring Antimonopoly Through Bright-Line Rules*, OPEN MARKETS INST. (Apr. 26, 2019), https://openmarketsinstitute.org/op-eds-and-articles/restoring-antimonopoly-bright-line-rules/.

[14] *See* FEDERAL TRADE COMMISSION, COMPETITION AND CONSUMER PROTECTION IN THE 21ST CENTURY (Nov. 1, 2018), https://www.ftc.gov/system/files/documents/public_events/1415284/ftc_hearings_session_5_transcript_11-1-18_0.pdf.

[15] *See, e.g.*, Dan Ariely, *You Are What You Measure*, HARV. BUS. REV., June 2010, at 38.

enforcement, and Part V demonstrates that the total welfare standard can be implemented using data that are readily available in merger investigations.

This Article does not necessarily advocate for the adoption of the total welfare standard. Instead, it seeks to ensure that the current debate is not artificially restricted. For whatever reason, the present debate omits entirely the total welfare standard, even though it has long been discussed by commentators, enforcers, and academics.[16] An intellectually honest assessment of the possible goals of US antitrust law requires consideration of all viable standards, including the total welfare standard.

I. A BRIEF HISTORICAL PERSPECTIVE REGARDING THE GOALS OF ANTITRUST

The prevailing consumer welfare standard seeks to maximize consumer surplus or, in economic terms, the difference between what each consumer actually pays and what he or she would be willing to pay.[17] Generally speaking, under the consumer welfare standard, conduct is evaluated only by looking at the surplus that accrues to consumers, ignoring what accrues to sellers.[18] For instance, in a merger analysis, the gains to the merging producers do not count; only the effect on consumer prices is relevant.[19]

Of course, the consumer welfare standard approach is not dictated by the language of the Sherman and Clayton Acts, which are silent regarding welfare standards and the goals of antitrust. Consequently, commentators consider the legislative history and historical context to determine congressional intent.

Many of the advocates seeking to replace the consumer welfare standard argue that their alternatives are consistent with the original intent of Congress at the time the Sherman Act was enacted. For instance, Professor Robert Lande contends, "[T]he congressional debates and committee reports show

---

16 *See, e.g.*, MASSIMO MOTTA, COMPETITION POLICY: THEORY AND PRACTICE 19–20 (2004); RICHARD A. POSNER, ANTITRUST LAW ix (2d ed. 2001); Roger D. Blair & D. Daniel Sokol, *The Rule of Reason and the Goals of Antitrust: An Economic Approach*, 78 ANTITRUST L.J. 471, 481 (2012) [hereinafter Blair & Sokol, *Rule of Reason*]; Roger D. Blair & D. Daniel Sokol, *Welfare Standards in U.S. and E.U. Antitrust Enforcement*, 81 FORDHAM L. REV. 2497, 2499 (2013); Dennis W. Carlton, *Does Antitrust Need To Be Modernized?*, 21 J. ECON. PERSP. 155, 159 (2007); Kenneth G. Elzinga, *The Goals of Antitrust: Other Than Competition and Efficiency, What Else Counts?*, 125 U. PA. L. REV. 1191, 1193 (1977); Joseph Farrell & Michael L. Katz, *The Economics of Welfare Standards in Antitrust*, 2 COMPETITION POL'Y INT'L 3, 3 (2006); Ken Heyer, *Welfare Standards and Merger Analysis: Why Not the Best?*, 2 COMPETITION POL'Y INT'L 29, 30 (2006); Herbert Hovenkamp, *Implementing Antitrust's Welfare Goals*, 81 FORDHAM L. REV. 2471, 2473 (2013); Alan J. Meese, *Reframing the (False?) Choice Between Purchaser Welfare and Total Welfare*, 81 FORDHAM L. REV. 2197, 2199 (2013).

17 *See* Hovenkamp, *supra* note 16, at 2471–72.

18 *Id.* at 2472.

19 *See* U.S. DEP'T OF JUSTICE & FED. TRADE COMM'N, HORIZONTAL MERGER GUIDELINES 30–31 (2010) [hereinafter HORIZONTAL MERGER GUIDELINES], https://www.ftc.gov/sites/default/files/attachments/merger-review/100819hmg.pdf (discussing efficiencies).

that the antitrust laws primarily were enacted to prevent higher prices and wealth transfers from consumers to firms with market power. If Congress primarily had cared about enhancing economic efficiency, it would have enacted 'protrust' laws, not 'antitrust' laws."[20] Similarly, former Open Markets Institute Director of Legal Policy Lina Khan claims that,

> Through enacting the antitrust laws—the Sherman Act of 1890, the Clayton Act of 1914, and the Federal Trade Commission Act of 1914—Congress sought to check this extreme concentration of private power .... Taken as a whole, the antitrust laws were intended to preserve open markets and enhance opportunity, prevent large firms from extracting wealth from producers and consumers, and safeguard against extreme concentrations of private power.[21]

There is no question that critics of the consumer welfare standard are correct when they assert that the legislative history includes statements consistent with the view that the drafters were concerned with more than economic competition and economic efficiency. The political origins of the Sherman Act reflect the concerns of small businesses and farmers who blamed the trusts of the 1880s for many economic woes.[22] Even if the primary goal and "the preoccupation of the debates" surrounding passage of the Sherman Act was the effect of raising prices to consumers,[23] the legislative history of the Sherman Act contains statements reflecting the populist fear of market concentration.[24] For instance, Senator John Sherman stated, "It is the right of every man to work, labor, and produce in any lawful vocation and to transport his production on equal terms and conditions and under like circumstances. This is industrial liberty and lies at the foundation of the equality of all rights and privileges."[25] Senator James Z. George expressed concern that unchecked expansion by big businesses would "crush out all small men, all small capitalists, all small enterprises."[26]

Early Supreme Court cases reflected those broader concerns of protecting small businesses. For instance, in *United States v. Trans-Missouri*

---

20 Robert H. Lande, *A Traditional and Textualist Analysis of the Goals of Antitrust: Efficiency, Preventing Theft from Consumers, and Consumer Choice*, 81 FORDHAM L. REV. 2349, 2360 (2013) (footnotes omitted).

21 Lina M. Khan, *The Ideological Roots of America's Market Power Problem*, YALE L.J.F. 960, 965–66 (2018).

22 *See generally* Ilene Knable Gotts, Back to the Future: Should the "Consumer Welfare" Standard Be Replaced in U.S. M&A Antitrust Enforcement? 2–3 (Feb. 2018) (unpublished manuscript), https://www.wlrk.com/webdocs/wlrknew/AttorneyPubs/WLRK.26396.18.pdf.

23 John B. Kirkwood & Robert H. Lande, *The Fundamental Goal of Antitrust: Protecting Consumers, Not Increasing Efficiency*, 84 NOTRE DAME L. REV. 191, 201–02 (2008); *see also, e.g.*, 21 CONG. REC. 2462 (1890) (statement of Sen. Sherman) (explaining that trusts "restrain commerce, turn it from its natural courses, increase the price of articles, and therefore diminish the amount of commerce"); *id.* at 2457 (noting that trusts tend "to advance the price to the consumer").

24 *See* Herbert Hovenkamp, *Antitrust's Protected Classes*, 88 MICH. L. REV. 1, 23–24 (1989).

25 21 CONG. REC. 2457 (1890).

26 *Id.* at 2598.

Freight Ass'n,[27] the Court was concerned with protecting "small dealers and worthy men."[28] The Court expressed similar concerns in *Brown Shoe Co. v. United States*[29] and *United States v. Aluminum Co. of America*.[30]

Yet, there is another view about the origin of US antitrust laws. Eschewing the traditional approach to legislative history that seeks to determine Congressional intent based on the statements of legislators, Judge Robert Bork asserted that, while social and political values may have motivated Congress to act, Congress cared only about increasing the efficiency of the economy.[31] To reach his conclusion, Bork considered an "analytic critique of prominent views, statutory texts, legislative history, structural features of the law, and inferences from the scope, nature, consistency, and ease of administration of the law . . . [as a] means of divining legislative intent."[32] From this broader class of evidence that went beyond statements by individual legislators, he argued that Congress valued only consumer welfare[33] and explained that "[t]he Sherman Act was clearly presented and debated as a consumer welfare prescription."[34] His analysis concluded that Congress intended mainly to protect consumers from the harm inflicted by cartels without undermining efficiency.[35] Bork ultimately found that "[t]he conventional indicia of legislative intent overwhelmingly support the conclusion that the antitrust laws should be interpreted as designed for the sole purpose of forwarding consumer welfare."[36]

At about the same time that Bork offered his view of Congressional intent, economic research found benign explanations for highly concentrated markets, which broke from prior work that was suspicious of concentration. The research raised important arguments undercutting the Structure–Conduct–Performance paradigm that had guided antitrust policy and many judicial decisions through the 1970s.[37] In particular, research showed that accounting rates of return were not reliable support for the claim that profits

---

27 166 U.S. 290 (1897).

28 *Id.* at 323.

29 370 U.S. 294, 344 (1962) (antitrust protects "small, locally owned businesses").

30 148 F.2d 416, 428–29 (2d Cir. 1945) (antitrust law exists to "put an end to great aggregations of capital because of the helplessness of the individual before them").

31 Robert H. Bork, *Legislative Intent and the Policy of the Sherman Act*, 9 J.L. & ECON. 7, 12 (1966).

32 Daniel A. Crane, *The Tempting of Antitrust: Robert Bork and the Goals of Antitrust Policy*, 79 ANTITRUST L.J. 835, 839–40 (2014).

33 Although Bork used the phrase "consumer welfare," the economic concepts he used in his argument suggest he meant a total welfare standard. *See* Blair & Sokol, *Rule of Reason*, *supra* note 16, at 473; Gregory J. Werden, *Antitrust's Rule of Reason: Only Competition Matters*, 79 ANTITRUST L.J. 713, 718–21 (2014).

34 ROBERT H. BORK, THE ANTITRUST PARADOX: A POLICY AT WAR WITH ITSELF 66 (1978).

35 *See* Bork, *supra* note 31, at 21; *see also* Kenneth Heyer, *Consumer Welfare and the Legacy of Robert Bork*, 57 J.L. & ECON. S19, S21–22 (2014).

36 BORK, *supra* note 34, at 71.

37 The Structure–Conduct–Performance paradigm claimed that higher industry concentration was correlated with higher prices and profit margins. *See generally* Joe S. Bain, *Relation of Profit Rate to Industry Concentration: American Manufacturing 1936–1940*, 65 Q.J. ECON. 293 (1951).

were higher in concentrated industries than in unconcentrated industries; there is no reliable relationship between accounting rates of return and economic rates of return.[38] The research also showed that, even if there was a correlation between concentrated markets and higher returns, it was at least partially driven by returns justified by firms' efficiency.[39] For example, economists concluded that some firms were winning competitive battles and achieving large shares not for pernicious reasons but because they were more efficient than other firms, and that other firms with significant shares benefitted from economies of scale.[40] The research showed that supracompetitive rates of return were earned only by larger firms that were more efficient and therefore grew, while smaller firms in the same market earned only competitive returns.[41] The research also showed that efficient firms grew and earned higher profits, whereas other firms earned lower profits and perhaps dropped out of the market.[42]

Economic research from that period also addressed business conduct.[43] First, economists explained that firms behave competitively as long as entry into the market is easy.[44] Even if the number of firms operating in an industry is small, a price need not be above a competitive level if additional firms could easily enter.[45] Second, theoretical and empirical economic learning addressed alleged anticompetitive effects for various business practices.[46] The research showed that the anticompetitive effects for many previously challenged practices were ambiguous and that antitrust had been too quick to

---

38 *See* Harold Demsetz, *Accounting for Advertising as a Barrier to Entry*, 52 J. BUS. 345, 355–56 (1979); Franklin M. Fisher & John J. McGowan, *On the Misuse of Accounting Rates of Return to Infer Monopoly Profits*, 73 AM. ECON. REV. 82, 89–91 (1983).

39 *See* ERNEST GELLHORN ET AL., ANTITRUST LAW AND ECONOMICS IN A NUTSHELL 92–93 (5th ed. 2004) (citing Harold Demsetz, *Two Systems of Belief About Monopoly*, *in* INDUSTRIAL CONCENTRATION: THE NEW LEARNING 164, 178 (Harvey J. Goldschmid et al. eds., 1974)); Richard A. Posner, *The Chicago School of Antitrust Analysis*, 127 U. PA. L. REV. 925, 927 (1979) (summarizing this work in economics).

40 *See* GELLHORN ET AL., *supra* note 39, at 92–93; Posner, *supra* note 39, at 927. The new economic learning challenged the basis for decisions like *FTC v. Procter & Gamble Co.*, 386 U.S. 568 (1967), and *United States v. Trans-Missouri Freight Ass'n*, 166 U.S. 290 (1897). *See* Demsetz, *supra* note 38, at 355–56; Fisher & McGowan, *supra* note 38, at 89–91.

41 Harold Demsetz, *Two Systems of Belief About Monopoly*, *in* INDUSTRIAL CONCENTRATION: THE NEW LEARNING 164, 178 (Harvey J. Goldschmid et al. eds., 1974); Harold Demsetz, *Industry Structure, Market Rivalry, and Public Policy*, 16 J.L. & ECON. 1, 7 (1973) [hereinafter Demsetz, *Industry Structure*].

42 Demsetz, *Industry Structure*, *supra* note 41, at 3; Sam Peltzman, *The Gains and Losses from Industrial Concentration*, 20 J.L. & ECON. 229, 262 (1977).

43 *See generally* HERBERT HOVENKAMP, THE ANTITRUST ENTERPRISE: PRINCIPLE AND EXECUTION (2006); William E. Kovacic, *The Intellectual DNA of Modern U.S. Competition Law for Dominant Firm Conduct: The Chicago/Harvard Double Helix*, 2007 COLUM. BUS. L. REV. 1; D. Daniel Sokol, *The Transformation of Vertical Restraints: Per Se Illegality, the Rule of Reason, and Per Se Legality*, 79 ANTITRUST L.J. 1003 (2014).

44 *See* Harold Demsetz, *Barriers to Entry*, 72 AM. ECON. REV. 47, 50–51 (1982).

45 *Id.*

46 *See, e.g.*, Ward S. Bowman, Jr., *Tying Arrangements and the Leverage Problem*, 67 YALE L.J. 19, 19–20 (1957).

condemn them; the business conduct addressed included tying arrangements,[47] predatory pricing,[48] resale price maintenance,[49] and nonprice restraints.[50]

Reflecting both of these developments, the Supreme Court shifted its focus from a mix of economic, social, and political goals in cases like *Trans-Missouri Freight* and *Brown Shoe*, to the market impact of the alleged restraint in the late 1970s. In *Brunswick Corp. v. Pueblo Bowl-O-Mat, Inc.*,[51] the Supreme Court stated without caveat that "[t]he antitrust laws . . . were enacted for 'the protection of competition, not competitors.'"[52] Similarly, in *Reiter v. Sonotone Corp.*,[53] the Court again chose to interpret antitrust law to protect consumers, not small businesses, and described the Sherman Act as a "consumer welfare prescription."[54]

The Supreme Court's embrace of economic efficiency, as reflected in the evolving economic literature, occurred in *Continental T.V., Inc. v. GTE Sylvania Inc. (Sylvania)*.[55] In this important case, the Supreme Court relied on economic reasoning to hold that nonprice vertical restraints, including the territorial restraints on franchisees at issue in the case, should be evaluated under the rule of reason.[56] The Court expressly recognized that these restrictions can enable manufacturers to compete more effectively against other manufacturers.[57] Notably, the Court declared that the rule of reason standard must be based upon demonstrable economic effect.[58] The Supreme Court's *Sylvania* decision marked a major turning point in antitrust law. After this decision, the Court increasingly turned to modern economic theory to inform its interpretation and application of the Sherman Act.[59]

Adopting an economic approach meant the Supreme Court needed to modify its analysis and depart from precedent decided in earlier eras. The Court explained that Congress intended the Sherman Act to develop as

---

47 *See id.* at 36.

48 *See* John S. McGee, *Predatory Price Cutting: The* Standard Oil *(N.J.) Case*, 1 J.L. & ECON. 137, 168–69 (1958).

49 *See* Lester G. Telser, *Why Should Manufacturers Want Fair Trade?*, 3 J.L. & ECON. 86, 104–05 (1960).

50 *See* Benjamin Klein & Kevin M. Murphy, *Vertical Restraints as Contract Enforcement Mechanisms*, 31 J.L. & ECON. 265, 295–96 (1988); Howard P. Marvel, *Exclusive Dealing*, 25 J.L. & ECON. 1, 23–25 (1982); G.F. Mathewson & R.A. Winter, *An Economic Theory of Vertical Restraints*, 15 RAND J. ECON. 27, 37 (1984).

51 429 U.S. 477 (1977).

52 *Id.* at 488 (emphasis omitted) (quoting Brown Shoe Co. v. United States, 370 U.S. 294, 320 (1962)).

53 442 U.S. 330 (1979).

54 *Id.* at 343 (quoting BORK, *supra* note 34, at 66).

55 433 U.S. 36 (1977).

56 *Id.* at 54–59.

57 *Id.* at 54–55.

58 *Id.* at 58–59.

59 William E. Kovacic & Carl Shapiro, *Antitrust Policy: A Century of Economic and Legal Thinking*, 14 J. ECON. PERSP. 43, 53 (2000).

common law, explicitly grounded in economics.[60] In *Kimble v. Marvel Entertainment, LLC*,[61] the Court explained:

> Congress . . . intended [the Sherman Act's] reference to "restraint of trade" to have "changing content," and authorized courts to oversee the term's "dynamic potential." We have therefore felt relatively free to revise our legal analysis as economic understanding evolves and . . . to reverse antitrust precedents that misperceived a practice's competitive consequences. . . . [B]ecause the question in those cases was whether the challenged activity restrained trade, the Court's rulings necessarily turned on its understanding of economics.[62]

While the Supreme Court has endorsed an economic approach, it has not prescribed in detail the appropriate welfare standard to be applied.[63] On the one hand, the Court has cited Bork, who argued that economic efficiency, and therefore total welfare, should be the guiding principle.[64] But after examining the language and reasoning employed in Supreme Court decisions, Professors Roger D. Blair and D. Daniel Sokol concluded that "[m]ost of the Court's opinions arguably favor [use of a] consumer welfare [standard]."[65] Similarly, it is generally believed that lower federal courts and enforcers apply a consumer welfare standard.[66]

II. THE CONSUMER WELFARE STANDARD

This Part examines the consumer welfare standard, which is generally considered to be the standard underlying antitrust enforcement for more than forty years. As previously explained, the consumer welfare standard seeks to maximize consumer surplus, which equals consumers' benefits beyond what they actually pay. The discussion provides a simple economic application of the consumer welfare standard and explains that the standard is easy to administer and yields predictable results. The analysis also shows that critiques of the consumer welfare standard are contradicted by the evidence.

---

60 Kimble v. Marvel Ent., LLC, 135 S. Ct. 2401, 2412–13 (2015).

61 135 S. Ct. 2401 (2015).

62 *Id.* at 2412–13 (citations omitted) (quoting Bus. Elecs. Corp. v. Sharp Elecs. Corp., 485 U.S. 717, 731–32 (1988)).

63 *See* Blair & Sokol, *Rule of Reason*, *supra* note 16, at 476.

64 *See* Reiter v. Sonotone Corp., 442 U.S. 330, 343 (1979) (citing BORK, *supra* note 34, at 66).

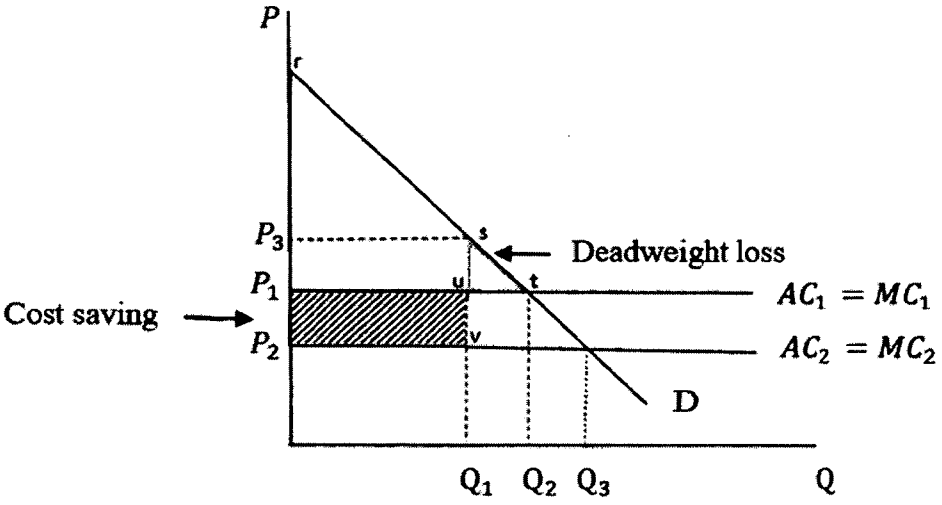
65 *See* Blair & Sokol, *Rule of Reason*, *supra* note 16, at 480.

66 *See, e.g.*, Hovenkamp, *supra* note 16, at 2476 ("[C]ourts almost invariably apply a consumer welfare test."); Jonathan M. Jacobson, *Another Take on the Relevant Welfare Standard for Antitrust*, ANTITRUST SOURCE, Aug. 2015, at 2 ("[The] consumer welfare standard is the standard understood to be employed in practice by the federal enforcement agencies . . . .").

A. *Application of the Standard*

The simple tradeoff model discussed by Professor Oliver Williamson illustrates the partial equilibrium welfare effects of a merger that produces efficiencies.[67] In Figure 1, the pre-agreement price, P_1, and quantity, Q_1, are determined by the intersection of the demand curve (D) and the competitive supply, which is shown as $AC_1 = MC_1$. The model assumes that industry marginal cost and average cost are constant. The merger increases efficiency, which is reflected in the decrease in cost from $AC_1 = MC_1$ to $AC_2 = MC_2$. If the firm were to continue to price at cost, the price would fall to P_2 and the quantity consumed would increase to Q_2. The cost savings would be passed on to consumers, and the welfare effects would be unambiguously positive.[68] The transaction would raise no antitrust concerns.

[Figure 1: Williamson's Welfare Tradeoff]



If, however, the merger creates market power as well as the cost reduction, the marginal cost curve still falls to $MC_2 = AC_2$, but the exercise of market power increases price to P_3. There is a corresponding decrease in quantity demanded to Q_3. For consumers, the merger is undesirable. The price consumers pay increases; consumers do not see the benefits of the reduced cost. The consumer surplus decreases from rtP_1 to rsP_3, which

---

[67] *See* Oliver E. Williamson, *Economies as an Antitrust Defense: The Welfare Tradeoffs*, 58 AM. ECON. REV. 18, 21–23 (1968).

[68] Due to the constant marginal cost and average cost, supply is perfectly elastic. Thus, all of the cost savings are passed on to consumers when the market remains competitive. If the marginal cost curve sloped upwards, not all of the cost savings would be passed on, but output would still rise and price would fall from P_1.

corresponds to a deadweight loss shown in the triangle *stu*. If the merger is evaluated on the basis of consumer welfare, the merger is unlawful.

Although irrelevant to evaluating the merger under the consumer welfare standard, in Figure 1, profit for the seller with market power is the rectangle P_3svP_2, which is equal to price (P_3) less cost (AC_2) times the quantity sold (Q_3). Part of the profit for the seller is attributable to cost savings,[69] reflected in the rectangle P_1uvP_2.[70] The rectangle P_3suP_1 is a transfer from consumers to producers, which reflects the increased price for each unit sold.

The consumer welfare standard is generally considered to be relatively easy to administer.[71] Under a simple rule of reason test employing the consumer welfare principle, one would have to consider whether the challenged practice is likely to result in lower market-wide output and higher prices.[72] If so, it is presumptively unlawful. Then, defendants have the opportunity to show that efficiencies produced by the challenged practice are of sufficient magnitude to reduce price down to a level that is no higher than it had been before the conduct.[73]

If consumers are harmed by reduced output, decreased product quality, or higher prices resulting from the exercise of market power, then this anticompetitive effect "trumps any amount of offsetting gains to producers."[74] In Figure 1, the focus is on whether price rises or falls relative to P_1. The size of the cost saving rectangle P_1uvP_2 does not matter. Thus, the simplest version of the consumer welfare test is not a balancing test, where one must attempt to measure productive efficiency gains and offsetting allocative efficiency losses. "In this sense, the consumer welfare test is eas[y] to administer on a case-by-case basis."[75]

Additionally, the consumer welfare standard yields predictable results because the standard is implemented using sound economics. Fact-specific inquiries to determine "a conduct's effect upon consumer welfare [are] not always easy or straightforward. But the economic framework antitrust law has embraced provides critical insights and guideposts."[76] Those insights and

---

69 Cost savings that are not passed on to consumers in the short run receive no credit under the consumer welfare standard.

70 This is the cost reduction ($AC_1 - AC_2$) multiplied by the quantity sold (Q_3).

71 *See, e.g.*, Hovenkamp, *supra* note 16, at 2473.

72 *See* Ohio v. Am. Express Co., 138 S. Ct. 2274, 2284 (2018) ("To determine whether a restraint violates the rule of reason . . . a three-step, burden-shifting framework applies. Under this framework, the plaintiff has the initial burden to prove that the challenged restraint has a substantial anticompetitive effect that harms consumers in the relevant market.").

73 Hovenkamp, *supra* note 16, at 2473.

74 *Id.*

75 *Id.*

76 Joshua D. Wright et al., *Requiem for a Paradox: The Dubious Rise and Inevitable Fall of Hipster Antitrust*, 51 ARIZ. ST. L.J. 293, 313 (2019).

guideposts are objective, and their use provides consistent results across cases and jurisdictions.[77]

B. *Attacks on the Consumer Welfare Standard Are Unfounded*

Critics seeking to overhaul antitrust enforcement have leveled several criticisms against the consumer welfare standard. A careful analysis reveals that the evidence contradicts the claimed shortcomings of the consumer welfare standard.

1. The Consumer Welfare Standard Is Not Narrowly Focused on Price to the Exclusion of Other Factors That Benefit Consumers.

A primary critique of the consumer welfare standard is that it focuses only on short-term prices that consumers pay but does not credit other aspects of competition. For example, Lina Khan contends that "the current framework in antitrust—specifically its equating competition with 'consumer welfare,' typically measured through short-term effects on price and output—fails to capture the architecture of market power in the twenty-first century marketplace."[78] Professor Maurice Stucke claims that "consumer surplus is seen as synonymous with static price competition that is of limited use in industries with dynamic competition."[79]

In fact, current analysis considers other factors as part of the competitive process. Although the language of agency guidelines and court decisions focuses on price, the term "price" is often shorthand for consideration of several other aspects of competition. As the D.C. Circuit explained, "[T]he . . . assumption that the prices paid by consumers (regardless of the quality of the resulting product) are the sole focus of antitrust law is flawed. 'The principal objective of antitrust policy is to maximize consumer welfare by encouraging firms to behave competitively.'"[80]

The Horizontal Merger Guidelines make this point clearly, stating that "[f]or simplicity of exposition," competitive effects are generally discussed as price effects.[81] As the Guidelines explain,

---

[77] *See* Joe Kennedy, *Why the Consumer Welfare Standard Should Remain the Bedrock of Antitrust Policy*, INFO. TECH. & INNOVATION FOUND., Oct. 2018, at 5, http://www2.itif.org/2018-consumer-welfare-standard.pdf.

[78] Lina M. Khan, *Amazon's Antitrust Paradox*, 126 YALE L.J. 710, 716 (2017) (footnote omitted).

[79] Maurice E. Stucke, *Reconsidering Antitrust's Goals*, 53 B.C. L. REV. 551, 575 (2012) (footnote omitted).

[80] United States v. Anthem, Inc., 855 F.3d 345, 366 (D.C. Cir.) (emphasis omitted) (quoting Kirtsaeng v. John Wiley & Sons, Inc., 568 U.S. 519, 539 (2013)).

[81] HORIZONTAL MERGER GUIDELINES, *supra* note 19, at 2.

> Enhanced market power can also be manifested in non-price terms and conditions that adversely affect customers, including reduced product quality, reduced product variety, reduced service, or diminished innovation. . . . When the Agencies investigate whether a merger may lead to a substantial lessening of non-price competition, they employ an approach analogous to that used to evaluate price competition.[82]

For instance, in hospital mergers, the analysis regularly considers price as well as nonprice competition.[83] In hospital mergers, there are two stages of competition. In "the first stage of competition, healthcare providers and commercial insurers negotiate reimbursement rates," as well as other terms.[84] "In the second stage of healthcare competition, in-network providers compete with each other" on a variety of nonprice facets of competition to attract patients, including the length of clinic hours, the convenience of location, the availability of services, the sophistication of technology, and the quality of care.[85]

The district court deciding the FTC's challenge of the proposed merger of Sanford Health and Mid Dakota Clinic in North Dakota found that, even though there would not be a decline in quality care provided by any doctor, "[t]he proposed transaction would eliminate the second-stage competition that currently exists . . . to provide better services."[86] Similarly, the FTC's complaint challenging a proposed hospital merger in Toledo, Ohio alleged that the acquisition would also "reduce the quality and breadth of services available in Lucas County."[87]

Competition on quality is also important in the analysis of vertical restraints under the consumer welfare standard. For tying and resale price maintenance ("RPM"),[88] the economic literature underpinning legal

---

82 *Id.*; *see also* Shapiro, *supra* note 12, at 3 ("[T]hose who say that the 'consumer welfare' standard is narrowly focused on price to the exclusion of other factors are simply incorrect: properly applied, the 'consumer welfare' standard includes a range of factors that benefit consumers, not just low prices but improved product variety and quality and of course more rapid innovation. Likewise, those who say that the 'consumer welfare' standard is overly focused on short-term outcomes are mistaken.").

83 In fact, the standard empirical and analytical models used in hospital mergers estimate willingness to pay, which is based on travel costs and nonprice competition. The models effectively translate nonprice effects into price.

84 FTC v. Sanford Health, No. 1:17–cv–133, 2017 U.S. Dist. LEXIS 215937, at *18 (D.N.D. Dec. 15, 2017), *aff'd*, 926 F.3d 959 (8th Cir. 2019).

85 *Id.* at *22–23 ("[S]econd-stage competition generally focuses on non-monetary factors which include, e.g., clinic hours, convenience of location, available services, technology, and quality. Witnesses testifying for both sides agreed that competition among providers improves the quality of services that patients receive and results in better patient outcomes. More convenient access to providers is of benefit to patients. More convenient access helps providers attract and retain patients. One provider's improvements in convenient patient access may prompt a competing provider to also make its services more conveniently accessible to patients." (citations omitted)).

86 *Id.* at *43.

87 Complaint ¶ 31, ProMedica Health Sys., Inc. v. FTC, 749 F.3d 559 (6th Cir. 2014) (No. 12-3583).

88 Resale price maintenance refers to agreements between participants at different levels of market structure that establish the resale price of a product or services. *See generally* Leegin Creative Leather Prods., Inc. v. PSKS, Inc., 551 U.S. 877 (2007).

decisions in these areas emphasizes the importance of competition on quality and the provision of services in the competitive process.[89] Moreover, even analyses that focus on price are analyses of quality-adjusted price. This kind of analysis appears frequently, for example, in hotel and airline markets.[90]

2. The Consumer Welfare Standard Does Not Ignore Effects on Innovation.

Critics complain that the consumer welfare standard is focused only on static competition and fails to consider effects on innovation. For example, Steinbaum and Stucke contend that "[s]ome courts equate a reduction of consumer welfare with an increase in price or reduction in quality. This, however, says nothing about other important facets of competition, such as innovation, variety, or quality/privacy degradation in digital markets with free goods."[91]

This critique is belied by the evidence. The FTC and the United States Department of Justice Antitrust Division ("Antitrust Division") (collectively, the "antitrust enforcement agencies") regularly consider effects on innovation in their analyses.[92] The Horizontal Merger Guidelines provide that "[t]he agencies . . . consider whether a merger is likely to diminish innovation competition by encouraging the merged firm to curtail its innovative efforts below the level that would prevail in the absence of the merger."[93] In fact, between 2004 and 2014, the FTC challenged 164 mergers and alleged harm to innovation in fifty-four of them.[94]

For example, the FTC focused only on effects on innovation when it considered whether the 2001 merger of the two firms conducting research for a possible treatment of Pompe disease would harm research and development or whether it might result in a treatment for the disease more quickly by integrating the research approaches of the two firms.[95] The FTC's analysis considered whether the merged firm would have engaged in a race to the market absent the merger and whether "the merger reduced R&D spending on either [firms'] program or slowed progress along either of the R&D paths."[96]

---

89 *See, e.g.*, Klein & Murphy, *supra* note 50, at 283.

90 *See generally* Mark Israel et al., *Airline Network Effects & Consumer Welfare*, 12 REV. NETWORK ECON. 287 (2013).

91 STEINBAUM & STUCKE, *supra* note 1, at 16 (footnote omitted).

92 *See, e.g.*, Joshua D. Wright, *Antitrust Provides a More Reasonable Regulatory Framework Than Net Neutrality* 9 n.17 (George Mason Univ. Law & Econ. Research Paper No. 17-35, 2017).

93 HORIZONTAL MERGER GUIDELINES, *supra* note 19, at 23.

94 Richard J. Gilbert & Hillary Greene, *Merging Innovation into Antitrust Agency Enforcement of the Clayton Act*, 83 GEO. WASH. L. REV. 1919, 1933 (2015).

95 Statement from Timothy J. Muris, Chairman, Federal Trade Commission (Jan. 13 2004), https://www.ftc.gov/system/files/attachments/press-releases/ftc-closes-its-investigation-genzyme-corporations-2001-acquisition-novazyme-pharmaceuticals-inc./murisgenzymestmt.pdf.

96 *Id.*

3. The Consumer Welfare Standard Does Not Ignore Buyer Power and Monopsony Concerns.

Critics of the consumer welfare standard contend that it ignores buyer power because buyer power does not directly affect consumers.[97] For instance, the Roosevelt Institute has asserted that large retailers such as Walmart and Amazon use monopsony power to squeeze small suppliers.[98] Critics also contend that the consumer welfare standard does not enable antitrust enforcers to address monopsony power.[99] For example, some claim that, free from antitrust scrutiny, large companies exert monopsony power in labor markets to reduce wages.[100]

The critique imagines that the consumer welfare standard is exclusively concerned with downstream prices, and that upstream monopsony power created by a merger may be seen as an efficiency that is likely to lower downstream costs. This characterization is incorrect. First, the Horizontal Merger Guidelines are clear that mergers that increase monopsony power are actionable, even absent evidence of harm to downstream consumers.[101] Second, as Professors Scott Hemphill and Nancy Rose demonstrate, increased monopsony power raises the downstream price (if demand is downward sloping) or leaves it unchanged.[102] Hence, under the consumer welfare standard, reductions to input prices resulting from increased monopsony power are not properly viewed as cognizable efficiencies.

Further, contrary to this critique, the economic approach and the consumer welfare standard employed by the antitrust enforcement agencies and applied by courts does address, and has long been used to challenge,

---

97 *See, e.g.*, STUCKE & STEINBAUM, *supra* note 1, at 17–21; J. Thomas Rosch, Commissioner, Fed. Trade Comm'n, Monopsony and the Meaning of "Consumer Welfare": A Closer Look at *Weyerhaeuser*, Remarks at the 2006 Milton Handler Annual Antitrust Review 6–7, 12 (Dec. 7, 2006), https://www.ftc.gov/sites/default/files/documents/public_statements/monopsony-and-meaning-consumer-welfare-closer-look-weyerhaeuser/061207miltonhandlerremarks_0.pdf.

98 *See* MARSHALL STEINBAUM ET AL., POWERLESS: HOW LAX ANTITRUST AND CONCENTRATED MARKET POWER RIG THE ECONOMY AGAINST AMERICAN WORKERS, CONSUMERS, AND COMMUNITIES 40, 42 (2018), http://rooseveltinstitute.org/wp-content/uploads/2018/03/Powerless.pdf.

99 In a monopsony, there are many sellers but only one buyer. A monopsonist's power over price results from the upward slope of the supply curve of the relevant input product. Even if not a literal monopsonist, a large buyer may exercise monopsony power if it can obtain an input at a lower price by purchasing less. For a general discussion of monopsony, see ROGER D. BLAIR & JEFFREY L. HARRISON, MONOPSONY: ANTITRUST LAW AND ECONOMICS 36–42 (1993).

100 *See, e.g.*, José Azar et al., *Labor Market Concentration* 4 (Nat'l Bureau of Econ. Research, Working Paper No. 24,147, 2017), http://www.nber.org/papers/w24147.

101 *See* HORIZONTAL MERGER GUIDELINES, *supra* note 19, at 33 (explaining that a merger between two firms that are the only buyers in the relevant geographic market for an agricultural product will enhance buyer power and depress the price paid to farmers for the product, which inefficiently reduces supply, and the "effects can arise even if the merger will not lead to any increase in the price charged by the merged firm for its output").

102 *See* C. Scott Hemphill & Nancy L. Rose, *Mergers That Harm Sellers*, 127 YALE L.J. 2078, 2106 (2018).

monopsony concerns.[103] In a recent example, the FTC required global health care company Grifols S.A. to divest blood plasma collection centers in three US cities, among other conditions, to resolve charges that Grifols's acquisition of Biotest US Corporation would be anticompetitive.[104] The FTC's analysis stated that Grifols and Biotest were the only two buyers of human source plasma in three US cities, and that these three cities constituted relevant geographic markets because plasma donors typically do not travel more than twenty-five minutes to donate plasma.[105] Without divestitures, Grifols likely would have been able to exercise market power by unilaterally decreasing the donor fees in the three cities.

Similarly, FTC staff investigating Staples's acquisition of Essendant considered whether the combined firm would be able to exercise monopsony power against office-supply product manufacturers.[106] After a thorough investigation in that case, the FTC concluded that the merged firm would not be able to exercise monopsony power.[107]

Beyond mergers, the antitrust enforcement agencies challenge restraints among competitors that affect upstream markets. For instance, in 1991, the Antitrust Division brought an action firms that procure billboard leases that had agreed to refrain from bidding on each other's former leases for a year after the other conspirator lost or abandoned the space.[108] The challenged agreement was limited to the input market—the procurement of billboard leases—and did not extend to downstream sales where the parties also competed.[109]

As in other input markets and contrary to the critique that the agencies do not protect the workforce, the agencies have challenged restraints that affect labor markets. In 2010, the Antitrust Division filed a civil complaint against six high-tech companies that had agreed not to cold call each other's employees when seeking to fill employment positions.[110] The Antitrust

---

103 *See, e.g.*, FED. TRADE COMM'N, 111-0210, STATEMENT CONCERNING THE PROPOSED ACQUISITION OF MEDCO HEALTH SOLUTIONS BY EXPRESS SCRIPTS, INC. (2012), https://www.ftc.gov/sites/default/files/documents/closing_letters/proposed-acquisition-medco-health-solutions-inc.express-scripts-inc./120402expressmedcostatement.pdf.

104 Grifols, S.A., 2018 FTC Lexis 147 (F.T.C. Sept. 17, 2018).

105 FED. TRADE COMM'N, 181-0081, ANALYSIS OF AGREEMENT CONTAINING CONSENT ORDERS TO AID PUBLIC COMMENT 2 (2018).

106 *See* FED. TRADE COMM'N, 181-0180, STATEMENT OF CHAIRMAN JOSEPH J. SIMONS, COMMISSIONER NOAH JOSHUA PHILLIPS & COMMISSIONER CHRISTINE S. WILSON, CONCERNING THE PROPOSED ACQUISITION OF ESSENDANT, INC. BY STAPLES, INC. 2–3 (2019), https://www.ftc.gov/system/files/documents/public_statements/1448328/181_0180_staples_essendant_majority_statement_1-28-19.pdf.

107 *Id.*

108 *See* United States v. Brown, 936 F.2d 1042, 1044–45, 1044 n.1, 1050 (9th Cir. 1991) (affirming jury verdict convicting defendants of conspiring to restrain trade in violation of Section 1 of the Sherman Act).

109 *Id.* at 1045.

110 *See* Competitive Impact Statement at 1–2, United States v. Adobe Sys., Inc., 1:10-cv-01629 (D.D.C. 2010).

Division found that the agreements "eliminated a significant form of competition to attract high tech employees" and that the reduced competition was "detriment[al] [to] the affected employees who were likely deprived of competitively important information and access to better job opportunities."[111] In 2016, the FTC and Antitrust Division issued a joint statement explaining that "the DOJ will criminally investigate allegations that employers have agreed among themselves on employee compensation or not to solicit or hire each other's employees."[112]

The FTC has also obtained consents involving conduct in labor markets.[113] In 2018, the FTC obtained a settlement with two companies that provided therapist staffing services to home-health agencies.[114] According to the FTC's complaint, the two owners agreed to lower their therapist pay rates to the same level, and they also invited several of their competitors to lower their rates in an attempt to keep therapists from switching to staffing companies that paid more.[115] The complaint charged the staffing agency and the two owners with violating Section 5 of the Federal Trade Commission Act by "unreasonably restraining competition to offer competitive pay rates to therapists," "fixing or decreasing pay rates for therapists," and "depriving therapists the benefits of competition among therapist staffing companies."[116]

This scrutiny of labor markets is not new. In 1995, the FTC secured a settlement with a trade association that represented most of the nation's best-known fashion designers and an organization that produced the two major fashion shows for the industry each year.[117] The FTC's consent order prohibited the two groups from attempting to fix or reduce modeling fees, and required them to take steps to educate fashion designers that price-fixing is

---

111 *Id.* at 10.

112 U.S. DEP'T OF JUSTICE, ANTITRUST DIV., & FED. TRADE COMM'N, ANTITRUST GUIDANCE FOR HUMAN RESOURCE PROFESSIONALS 4 (2016), https://www.ftc.gov/system/files/documents/public_statements/992623/ftc-doj_hr_guidance_final_10-20-16.pdf.

113 *See, e.g.*, Debes Corp., 115 F.T.C. 701, 703–04, 707–08 (1992) (consent order) (prohibiting boycott of temporary nurse registry by nursing homes that reduced the price of temporary nurse services).

114 *See* Proposed Consent Order at 3–4, Your Therapy Source, LLC, F.T.C. File No. 171–0134 (2018), https://www.ftc.gov/system/files/documents/cases/1710134_your_therapy_source_decision_and_order_7-31-18.pdf (proposing to prohibit physical therapist staffing companies from exchanging rate information and entering agreements to lower rates paid to therapists treating patients of home health agencies); Press Release, Fed. Trade Comm'n, Therapist Staffing Company and Two Owners Settle Charges That They Colluded on Rates Paid to Physical Therapists in Dallas/Fort Worth Area (July 31, 2018), https://www.ftc.gov/news-events/press-releases/2018/07/therapist-staffing-company-two-owners-settle-charges-they.

115 *See* Complaint at 3–5, Your Therapy Source, LLC, F.T.C. File No. 171–0134 (2018), https://www.ftc.gov/system/files/documents/cases/1710134_your_therapy_source_complaint_7-31-18.pdf.

116 *Id.* at 5.

117 *See* Council of Fashion Designers of Am., 120 F.T.C. 817, 817–18, 822–23 (1995) (consent order) (prohibiting agreements to fix price, terms, or conditions of compensation for modeling or modeling agency services).

illegal.[118] These FTC cases make it clear that antitrust laws prohibiting price-fixing apply to labor services, just as they do to other products or services.

III. ASSESSING ALTERNATIVE WELFARE STANDARDS

Critics of the consumer welfare standard have advanced numerous alternative frameworks to guide enforcement policy. This Part examines three of those alternatives: (A) a so-called "multiple goals" standard; (B) a so-called "consumer choice" standard; and (C) a standard that seeks to protect the competitive process. Although some of these proposals have subcategories of their own, for the sake of simplicity, this Part addresses the three alternatives generally.

For each alternative standard, this Part considers its performance on three criteria: (1) predictability, (2) administrability, and (3) credibility of enforcement decisions.

Predictability assesses whether enforcement decisions are likely to be consistent in similar cases, which enables the outcome of a particular case to be accurately predicted. Predictability is important for business planning.[119] It also is important for ensuring effective use of enforcement agency resources.[120] For example, when businesses and legal advisors prevent obviously anticompetitive mergers from being presented to the antitrust enforcement agencies, limited enforcement resources can be leveraged to greater effect.

Administrability assesses whether businesses and antitrust enforcement agencies can implement the standard in a manner that is analytically cost-effective and feasible with the evidence that is likely available in particular cases.

Credibility of enforcement decisions considers whether application of the particular standard leads to outcomes that are inconsistent with legal or economic norms. When analytical outcomes conflict with established and accepted societal norms, popular respect for enforcement decisions is undermined.[121] In addition, when a particular standard leads to a greater likelihood

---

118 *Id.* at 822–24.

119 *See, e.g.*, Philip Elman, *The Need for Certainty and Predictability in the Application of the Merger Law*, 40 N.Y.U. L. REV. 613, 613–15 (1965).

120 *See* OECD, REGULATORY ENFORCEMENT & INSPECTIONS, OECD BEST PRACTICE PRINCIPLES FOR REGULATORY POLICY 17–18 (2014), https://read.oecd-ilibrary.org/governance/regulatory-enforcement-and-inspections_9789264208117-en#page1 (explaining that predictable enforcement encourages compliance, which can reduce costs for governments).

121 *See generally* Arthur Selwyn Miller, *Public Confidence in the Judiciary: Some Notes and Reflections*, 35 LAW & CONTEMP. PROBS. 69, 73 (1970).

of Type I or Type II errors,[122] the enhanced prospect of systematic false positives or false negatives erodes public respect for antitrust enforcement.[123]

Part II addressed the application of these criteria to the consumer welfare standard, and Part IV addresses them for the total welfare standard.

A. *Multiple Goals*

Based on the legislative history of the Sherman Act and the early cases in which courts focused on the protection of small business, many observers concluded that antitrust pursued a variety of goals, including preserving a deconcentrated industry structure, dispersing economic power, and promoting fairness in economic dealings.[124] As discussed earlier, courts abandoned pursuit of these so-called "multiple goals" about forty years ago.[125]

More recently, a similar approach has been advocated to replace the consumer welfare standard. For example, according to one proposal for a "citizen interest" standard based on multiple goals advocates, "Antitrust should protect consumers from anticompetitive overcharges and small producers from anticompetitive underpayments, preserve open markets, and disperse economic and political power. While this 'citizen interest' standard would not adopt redistribution as an explicit goal, applying it would likely help mitigate inequality."[126] Other iterations adopt combinations of goals that include protecting consumers, competitors, and jobs, increasing fairness, and reducing income inequality.[127]

1. Predictability

A standard based on multiple goals does not lead to predictable outcomes. The pursuit of multiple goals necessarily requires tradeoffs among the different goals, a difficult task when there is ambiguity regarding the list of goals to be pursued. Moreover, once the list of goals is defined, advocates

---

122 A Type I error results in a false positive conclusion. In terms of antitrust enforcement, it would correspond to finding a violation when the conduct was not anticompetitive. Type I errors result in overenforcement. A Type II error results in a false negative conclusion, meaning that no violation is found when the conduct was, in fact, anticompetitive. Type II errors result in underenforcement.

123 *See* Miller, *supra* note 121, at 73.

124 *See supra* notes 20–30 and accompanying text.

125 *See supra* notes 51–54 and accompanying text.

126 Lina Khan & Sandeep Vaheesan, *Market Power and Inequality: The Antitrust Counterrevolution and Its Discontents*, 11 HARV. L. & POL'Y REV. 235, 276 (2017).

127 *See, e.g.*, BARRY C. LYNN, CORNERED: THE NEW MONOPOLY CAPITALISM AND THE ECONOMICS OF DESTRUCTION (2010); A BETTER DEAL, *supra* note 2 (proposing new merger standards that "will prevent not only mergers that unfairly increase prices but also those that unfairly reduce competition" and "will ensure that regulators carefully scrutinize whether mergers reduce wages, cut jobs, lower product quality, limit access to services, stifle innovation, or hinder the ability of small businesses and entrepreneurs to compete").

of this approach do not explain how to weight the individual goals. The assignment of weights necessarily makes enforcement subjective.[128] Consequently, even if the combination of goals is the same, it is likely that different weights will be applied in different cases, by different agencies, and at different times.

If the list of goals and the weights assigned to each is indeterminate, then firms contemplating particular conduct will not be able to predict reliably whether antitrust enforcement is likely in a particular case. Absent predictability, the standard will require firms to incur incremental counseling expenses to grapple with the indeterminacies and may unwittingly chill procompetitive transactions and conduct.[129] Equally important, indeterminate rules are more prone to capture by rent seekers.[130] The indeterminacy of the goals and weights inherent in a multiple goals standard would make antitrust enforcement more susceptible to political whims and influence.[131]

2. Administrability

A multiple goals standard also encounters problems with administrability. For the same reasons that this standard is unpredictable, it also becomes un-administrable. The subjectivity regarding undefined lists of goals and questions about weights assigned to those goals makes implementing the standard impossible. Even opponents of the consumer welfare standard recognize the issue. Steinbaum and Stucke explain,

> One generally cannot have, consistent with the rule of law, a fact-specific weighing standard, like the rule of reason, and multiple economic, political, and social policy objectives. Having the agencies and courts blend goals in every antitrust case is a recipe for disaster. It is questionable whether antitrust enforcers and courts can operationalize multiple goals in a systematic fashion in the vacuous rule of reason.[132]

The problems regarding subjectivity are compounded by evidentiary issues. For example, many goals are unlikely to be measurable or quantifiable.

---

128 *See* STEINBAUM & STUCKE, *supra* note 1, at 43; Herbert Hovenkamp, Is Antitrust's Consumer Welfare Principle Imperiled? 26 (Mar. 2019) (unpublished manuscript), https://scholarship.law.upenn.edu/cgi/viewcontent.cgi?article=2987&context=faculty_scholarship.

129 *See* Elman, *supra* note 119, at 613–15.

130 *See* Joshua D. Wright, Univ. Professor, Statement Before the U.S. Senate Comm. on the Judiciary, Subcomm. on Antitrust, Competition Policy and Consumer Prot., Hearing on "The Consumer Welfare Standard in Antitrust Law: Outdated or a Harbor in a Sea of Doubt?" 5 (Dec. 13, 2017) ("Rejecting the consumer welfare standard in favor of a multi-dimensional alternative would . . . *increase* agency discretion to justify any regulatory decision as consistent with the law. This increases the incentive and ability of rent seeking firms to exert control over agencies. Indeed, history has shown us time and again that establishing amorphous standards in antitrust law and enforcement invite [sic] rent seeking . . . .").

131 *Id.*; *see also* STEINBAUM & STUCKE, *supra* note 1, at 43 ("[A]llowing [antitrust enforcement agencies and courts] to blend goals provides greater freedom to make errors and be politically captured.").

132 STEINBAUM & STUCKE, *supra* note 1, at 43.

For instance, drawing lines about the "appropriate" size of firms involves value judgments, as does assessing fairness.[133] Even for factors that appear measurable, such as jobs, evidentiary standards may create complications. Many of the advocates of a multiple goals standard condemn current antitrust enforcement levels; one critique is that current enforcement credits efficiencies that are not adequately supported or verified.[134] Yet, if one of the multiple goals is to protect against the loss of jobs, estimates of the number of jobs at risk likely will come from the same company documents that currently are used to support efficiency claims.

3. Credibility

Finally, a multiple goals standard will likely result in outcomes that undermine its credibility. When multiple goals are pursued, by definition there will be a loss of consumer welfare because tradeoffs away from the current consumer welfare standard will leave consumers worse off.[135] Here, the "approach would trade off low prices and high output in favor of a set of goals defined as curbing excessive political power or large firm size, or perhaps values expressed by such things as loss of individual autonomy."[136] Thus, the proposed standard is "broadly redistributive, although consumers are not the beneficiaries; rather the benefits flow mainly to smaller firms or those that are wed to older technologies that have been displaced or threatened by newer ones."[137] It is likely that consumers would question antitrust enforcement that chooses to eliminate low prices, whether in the interest of protecting small businesses that wish to charge consumers higher prices or to protect jobs at firms that are acknowledged to be inefficient. We agree with Professor Herbert J. Hovenkamp, who observes that, "to the best of [his] knowledge there are not even opinion polls indicating that people who understand the consequences would prefer a world of small but higher priced firms."[138]

---

133 Hovenkamp, *supra* note 128, at 35.

134 *See, e.g.*, MARC JARSULIC ET AL., REVIVING ANTITRUST: WHY OUR ECONOMY NEEDS A PROGRESSIVE COMPETITION POLICY 16 (2016), https://cdn.americanprogress.org/wp-content/uploads/2016/06/28143212/RevivingAntitrust.pdf (explaining merging parties "should be forced to do more than just identify hypothetical efficiencies"); Statement of Rebecca Kelly Slaughter, Comm'r, Fed. Trade Comm'n 9 (Jan. 28, 2019), https://www.ftc.gov/system/files/documents/public_statements/1448321/181_0180_staples_essendant_slaughter_statement.pdf (dissenting from the Commission's merger approval in the matter of Sycamore Partners, Staples and Essendant, in part due to lack of cognizable efficiencies).

135 *See generally* LOUIS KAPLOW & STEVEN SHAVELL, FAIRNESS VERSUS WELFARE (2006) (examining the tradeoffs between legal policies that focus on welfare analysis and policies aimed at "fairness").

136 Hovenkamp, *supra* note 128, at 35.

137 *Id.* at 21.

138 *Id.* at 36.

B. *Consumer Choice*

The consumer choice standard posits that "[t]he antitrust laws are intended to ensure that the marketplace remains competitive so that worthwhile options are produced and made available to consumers, and this range of options is not to be significantly impaired or distorted by anticompetitive practices."[139] It finds that "[a]n antitrust violation can . . . be understood as an activity that unreasonably restricts the totality of price and nonprice choices that would have otherwise been available."[140] Yet, under the consumer choice standard, antitrust does not "prevent all conduct or transactions that have the effect of reducing the number of options available to consumers."[141] Nor does it specify the number of options that must be preserved.[142]

1. Predictability

Similar to a multiple goals standard, the consumer choice standard is unpredictable because the necessary line-drawing is subjective. To the extent that the consumer choice standard does not specify the requisite number of options and does not create bright lines for those reductions in choices that matter, outcomes are unpredictable. Consequently, implementation of the standard is necessarily arbitrary. Whether a reduction in choices from one hundred to ninety-nine is unreasonable or whether a reduction from five to four meets the standard is not an objective determination.[143] Moreover, the standard does not reveal the economic forces at play when drawing the lines; consequently, the tradeoffs and magnitudes of competitive effects being considered are hidden.[144] If the tradeoffs are hidden, then choices are unlikely to be consistent across cases and jurisdictions.

2. Administrability

The subjectivity involved in the line-drawing also means that insufficient guidance is provided to enforcers regarding its application, leading enforcement based on the consumer choice standard to encounter problems with administrability. The subjectivity of determining the line where the loss

---

139 Robert H. Lande, *Consumer Choice as the Ultimate Goal of Antitrust*, 62 U. PITT. L. REV. 503, 503 (2001) [hereinafter Lande, *Consumer Choice*] (footnote omitted); *see also* Lande, *supra* note 20, at 2351; Robert H. Lande, *Wealth Transfers as the Original and Primary Concern of Antitrust: The Efficiency Interpretation Challenged*, 34 HASTINGS L.J. 65, 68 (1982).

140 Neil W. Averitt & Robert H. Lande, *Using the "Consumer Choice" Approach to Antitrust Law*, 74 ANTITRUST L.J. 175, 182 (2007).

141 Lande, *Consumer Choice*, *supra* note 139, at 503.

142 *Id.*

143 Jacobson, *supra* note 66, at 4.

144 *See* Wright & Ginsburg, *supra* note 11, at 2417–18.

of an option to consumers is meaningful makes the consumer choice standard unworkable.[145] Moreover, the inherent subjectivity in the standard renders it susceptible to influence or capture by rent-seeking market participants.

3. Credibility

Finally, the consumer choice standard is likely to result in outcomes that are contrary to accepted norms and thus lack credibility. As explained in the Horizontal Merger Guidelines, not all reductions in variety or choice are anticompetitive.[146] Professor Joshua Wright and Judge Douglas Ginsburg explain, "The flaw in [the consumer choice] approach is that both economic theory and empirical evidence are replete with examples of business conduct that simultaneously reduces choice and increases welfare in the form of lower prices, increased innovation, or higher quality products and services."[147]

C. *Protection of the Competitive Process: Werden's Version*

There are two versions of the "protection of the competitive process" welfare standard. In both versions, the claimed focus is on competition as a process.[148] As Professor Tim Wu describes, "[T]he protection of competition standard puts the antitrust law in the position of protecting the competitive process, as opposed to trying to achieve welfare outcomes."[149]

The first version of the protection of the competitive process standard is articulated by former Department of Justice Senior Economic Counsel Gregory Werden.[150] Werden contends that Supreme Court decisions "identify a single criterion for evaluation the legality [sic] of a trade restraint—impact on competition."[151] Thus under this approach, practices and transactions that interfere with competition as a process would be condemned. Practices that do not impair the competitive process would not be prohibited, even if they decrease consumer surplus. For Werden, "the best decision rule for promoting a particular welfare objective [like maximizing consumer or total welfare] could be a criterion other than the objective itself."[152] The Werden

---

145 *See id.* at 2416–17.

146 HORIZONTAL MERGER GUIDELINES, *supra* note 19, at 24 ("Reductions in variety following a merger may or may not be anticompetitive. Mergers can lead to the efficient consolidation of products when variety offers little in value to customers.").

147 Wright & Ginsburg, *supra* note 11, at 2411. Wright and Ginsburg illustrate their conclusion with a discussion of the supply of nonprice promotional services associated with resale price maintenance. *Id.* at 2418–22.

148 *See generally* Werden, *supra* note 33; Wu, *supra* note 13.

149 Wu, *supra* note 13, at 13.

150 *See generally* Werden, *supra* note 33.

151 *Id.* at 731, 737 ("These decisions exhibit a single-minded focus on the competitive process.").

152 *Id.* at 726.

version of the competitive process standard does not reject economics; "economics is the primary source of wisdom as to what we think we know about the impact of trade restraints on the competitive process."[153]

1. Predictability

This version of the standard is likely to be predictable. If the standard is consistent with current enforcement and judicial decisions, case outcomes should be both predictable and consistent across jurisdictions. Predictability would be further enhanced because the standard is tethered to economics, which provides an objective frame of reference.

2. Administrability

This version of the standard could be administrable. To the extent that the protection of competitive process standard is consistent with and embodies what courts are already doing, it seems at first glance that courts would easily be able to implement the standard. Further consideration, however, raises questions. Antitrust practitioner Jon Jacobson notes that, since *Sylvania*, "proof of economic harm has been essential to any antitrust case, but saying that a practice interferes with the competitive process does not tell us what kind of economic harm is required."[154] Absent certainty regarding cognizable economic harms, the standard could be quite difficult to administer.

3. Credibility

The standard also has the potential to encounter credibility problems. The standard could easily metastasize from protection of the competitive process to protection of competitors. Some monopolization cases already assert that maintaining competition requires the protection of competitors.[155] Adoption of a welfare standard expressly premised on protection of the competitive process may hasten antitrust enforcement down that slippery slope, and that is the aspect that gives us most pause about this otherwise commendable standard.

---

153 *Id.* at 747.

154 Jacobson, *supra* note 66, at 6 (footnote omitted).

155 *See, e.g.*, Spirit Airlines, Inc. v. Nw. Airlines, Inc., 431 F.3d 917, 951 (6th Cir. 2005) ("[I]n a concentrated market with very high barriers to entry, competition will not exist without competitors.").

D. *Protection of the Competitive Process: Wu's Version*

The second version of the competitive process standard, advocated by Tim Wu,[156] asks the question, "Given a suspect conduct (or merger): Is this merely part of the competitive process, or is it meant to 'suppress or even destroy competition?'"[157] Yet, for Wu, the purpose of the standard seems to approximate the multiple goals standard previously discussed. Wu explains that, "as a policy matter, [focusing on the competitive process rather than consumer welfare] would do much to give antitrust room to achieve its historic goals, and generally make antitrust far more attentive to dynamic harms."[158] When explaining implementation of the standard, Wu suggests that enforcers should consider the identities of the complainants and the alleged lawbreaker, as well as the conduct at issue.[159] But Wu contends the analysis also asks whether "the complained-of conduct or merger tend to implicate important non-economic values, particularly political values."[160] In addition, he calls for a "return to strong and real structural presumptions . . . that operate . . . as a substantive inference of harm to the competitive process."[161]

1. Predictability

The standard encounters the same predictability problems associated with the multiple goals standard. To the extent that Wu's competitive process standard incorporates political values, it introduces uncertainty into outcomes and makes antitrust enforcement more susceptible to capture by rent seekers and to political influence.[162]

2. Administrability

Because this version of the protection of the competitive process standard starts with the same fundamental question as the Werden version, it encounters the same administrability problem. Namely, the competitive process standard does not provide the evidentiary standards necessary to satisfy the economic harm requirement demanded by courts. In addition, because this

156 *See generally* Wu, *supra* note 13.

157 *Id.* at 13 (quoting Chi. Bd. of Trade v. United States, 246 U.S. 231, 238 (1918)).

158 *Id.*

159 *Id.* at 19.

160 *Id.* at 9.

161 Tim Wu, Univ. Professor, The "Protection of the Competitive Process" Standard, Fed. Trade Comm'n Hearings 5 (Nov. 1, 2018), https://www.ftc.gov/system/files/documents/public_comments/2018/11/ftc-2018-0091-d-0008-156114.pdf.

162 Hovenkamp, *supra* note 128, at 33 ("[R]efocusing antitrust policy so as to make political theory the driver will return us to repeated cycles of special interest capture and protected local monopoly.").

version of the standard attempts to incorporate noneconomic goals into antitrust enforcement, it encounters the same administrability problems as the multiple goals standard. A standard that seeks to achieve multiple goals creates a subjective and unwieldy process that fails to guide the enforcer on how to incorporate conflicting goals or weigh complementary ones.

3. Credibility

Finally, this version of the competitive process standard faces credibility issues. It runs the risk of protecting competitors instead of competition. Additionally, because it introduces political values in addition to consumer welfare, consumer welfare will decrease in at least some circumstances. The loss of consumer benefits will reduce antitrust's credibility as consumers pay higher prices to provide a benefit to others. Further, the introduction of "strong and real structural presumptions"[163] increases the likelihood of Type II enforcement errors if the presumptions move antitrust enforcement decisions away from the current fact-based analysis.

IV. THE TOTAL WELFARE STANDARD AS AN ALTERNATIVE GUIDE FOR ANTITRUST ENFORCEMENT

Absent from the current debate regarding the standard to guide antitrust enforcement is another alternative that has many benefits to commend it. The total welfare standard, also known as the aggregate economic welfare standard, should be part of the current discussion. This alternative has been addressed extensively in an earlier literature.[164] That prior learning should not be ignored.

The total welfare standard measures the effect of a practice or transaction on the economic welfare of all participants in a market, including both producers and consumers.[165] It refers to the aggregate value created, without regard for how gains or losses are distributed.[166]

Williamson's tradeoff model effectively illustrates the analysis of the relevant welfare effects of an efficiency-enhancing merger that also results in market power under the total welfare standard.[167] As before, Figure 1 shows the welfare effects of a merger that results in cost savings and market power for the merged firm.[168] The premerger price and output are P_1 and Q_1, and constant marginal and average costs are shown as $AC_1 = MC_1$. The

---

163 *See* Wu, *supra* note 161, at 5.

164 *See* sources cited *supra* note 16.

165 *See* Blair & Sokol, *Rule of Reason*, *supra* note 16, at 473; Heyer, *supra* note 16, at 54.

166 *See* Hovenkamp, *supra* note 16, at 2471.

167 *See* Williamson, *supra* note 67, at 21–23.

168 *See supra* Part II.

merger results in efficiencies, which reduces costs to $AC_2 = MC_2$. If market power is created by the merger, price rises to P_3, and output falls to Q_3. As previously discussed, the profit to sellers is equal to the rectangle P_3svP_2. Part of that rectangle is cost savings, P_1uvP_2, and the remainder represents a transfer from consumers to producers, P_3suP_1. The allocative inefficiency or deadweight loss is the triangle *stu*.

If this merger is evaluated under the total welfare standard, the relative sizes of the areas reflecting cost savings and deadweight loss matter. Whether total welfare rises or falls depends on the relative sizes of those effects. If the cost savings (P_1uvP_2) exceed the allocative inefficiency (*stu*), then total welfare rises. The gain for producers exceeds the harm to consumers. In such a case, under the total welfare standard, the merger would not be challenged. If, on the other hand, the cost savings are smaller than the deadweight loss, total welfare (as well as consumer welfare) falls, and the merger would be challenged. Because the merger's effect on total welfare depends on the relative magnitudes of the cost savings and the deadweight loss, in many cases, implementing the standard requires measurement of both.

A. *The Total Welfare Standard Would Maximize Welfare, Not Determine Its Distribution*

If total welfare were the standard, Hovenkamp notes that antitrust would "promote[] allocative efficiency by ensuring that markets are as competitive as they can practicably be and that firms do not face unreasonable roadblocks to attaining productive efficiency, which refers to both cost minimization and innovation."[169] In other words, if competition policy and enforcement were to consider and maximize only economic efficiency, total gains from trade would be maximized.

Maximizing social welfare is consistent with the comparative advantage of the antitrust enforcement agencies. The antitrust enforcement agencies have experience employing the tools of industrial organization economics.[170] Evaluating efficiency and assessing claimed cost reductions are already key components of that toolkit.[171] Thus, applying a welfare standard based on economic efficiency would capitalize on the comparative advantage of the agencies, as they already implement an economically based standard.

Unlike the total welfare standard, which eschews redistribution and instead seeks solely to maximize welfare, the consumer welfare standard makes judgments about the distribution of wealth. Specifically, the consumer welfare standard measures only the surplus that goes to consumers, while the

---

169 Hovenkamp, *supra* note 16, at 2471.

170 *See generally* Michael Salinger & Paul A. Pautler, *The Bureau of Economics at the U.S. Federal Trade Commission*, *in* 2006 HANDBOOK OF COMPETITION ECONOMISTS, GLOBAL COMPETITION REVIEW 3–5, https://www.ftc.gov/sites/default/files/attachments/careers-bureau-economics/06beover.pdf.

171 *Id.*

surplus that goes to sellers is ignored.[172] As Hovenkamp explains, "The consumer welfare principle must therefore be counted as 'distributive' to the extent that it produces outcomes that shift wealth or resources in favor of consumers even though an alternative outcome would produce greater total wealth."[173] The consumer welfare standard shares its redistributive characteristics with some of the other welfare standards that have been proposed as alternatives to the current antitrust approach. Other commentators state that

> [a] revived antitrust movement could play an important role in reversing the dramatic rise in economic inequality. . . . [O]ur argument is not that antitrust should embrace redistribution as an explicit goal, or that enforcers should harness antitrust in order to promote progressive redistribution. Instead we hold that the failure of antitrust to preserve competitive markets contributes to regressive wealth and income distribution and—similarly—restoring antitrust is likely to have progressive distributive effects.[174]

It is decidedly not the comparative advantage of antitrust enforcement agencies to focus on questions of distribution. Instead, government entities with a different comparative advantage can address the redistribution issues.[175] Professors Joseph Farrell and Michael Katz explain that there should be

> a division of labor among public policies: if antitrust enforcement and some other public policies focus on total surplus, other public policies can redistribute that surplus in accord with notions of fairness. A number of reasons suggest that antitrust policy is poorly suited as a redistribution vehicle in comparison with various tax and subsidy schemes.[176]

Moreover, if policymakers wish to achieve goals other than maximizing surplus (e.g., altering distribution of wealth), there are more direct ways to accomplish these goals.[177] Notably, if antitrust enforcement were to maximize total surplus by applying the total welfare standard, then policymakers redistributing that surplus would have greater resources with which to work.[178]

---

172 *See* Blair & Sokol, *Rule of Reason*, *supra* note 16, at 473.

173 Hovenkamp, *supra* note 16, at 2472.

174 Khan & Vaheesan, *supra* note 126, at 237.

175 Farrell & Katz, *supra* note 16, at 11–12.

176 *Id.* at 11 (footnote omitted).

177 Carl Shapiro, *Antitrust in a Time of Populism*, 61 INT'L J. INDUS. ORG. 714, 746 (2018) ("[W]hile antitrust enforcement does tend to reduce income inequality, antitrust cannot and should not be the primary means of addressing income inequality; tax policies and employment policies need to play that role. Nor can antitrust be the primary policy for dealing with the corruption of our political system and the excessive political power of large corporations; that huge problem is better addressed by campaign finance reform, a better-informed citizenry, stronger protections for voting rights, and far tougher laws to combat corruption. Trying to use antitrust to solve problems outside the sphere of competition will not work and could well backfire.").

178 *See* Heyer, *supra* note 16, at 50; Hovenkamp, *supra* note 16, at 2492.

It will be argued that consumers would be harmed under the total welfare standard. The argument contains an implicit suggestion that adopting the total welfare standard will contribute to greater income or wealth disparity. A closer look, however, reveals that this concern may be overstated for several reasons.

First, underlying the concern is an assumption that "producers" equates to shareholders and other owners of the firms that produce the goods. Yet there is no basis to assume that consumers are more or less wealthy than the owners of firms.[179] Moreover, benefits to producers may also benefit employees, perhaps increasing employment.

Second, many consumers are shareholders, either directly or through investment vehicles, such as 401(k) programs. In 2016, 49.3% of US households owned stock in public corporations, either directly or indirectly, and stocks comprised 22.4% of total household assets.[180] Research conducted in the 1990s also documented the breadth of stock ownership in the US.[181]

Third, attempting to categorize market participants exclusively as either consumers or producers fails to recognize that, in a society characterized by an efficient division of labor, consumers in some markets are producers in other markets.[182] As a result, consumers and producers perform many roles. Even within the same industry, consumers may also be producers. Some home cooks also work at grocery stores, some restaurant diners work for wholesale food distributors, and some athletes work at sportswear companies.

These examples demonstrate that consumers may also be employees and shareholders, either directly or through other investment vehicles. A given consumer might not perform all of these roles simultaneously, and might never participate within a given industry. Nonetheless, an antitrust policy that applies the total welfare standard in the aggregate will benefit all of these interests. In short, issues regarding wealth distribution do not provide a basis for valuing the consumer role over the others when assessing competitive effects in antitrust.

---

179 To make this point, Ken Heyer gives an example of a merger of automotive repair shops serving consumers who drive Mercedes-Benz cars. *See* Heyer, *supra* note 16, at 49–50.

180 Edward Wolff, *Household Wealth Trends in the United States, 1962 to 2016: Has Middle Class Wealth Recovered?* 4, 15 (Nat'l Bureau of Econ. Research, Working Paper No. 24085, 2017), https://www.nber.org/papers/w24085.pdf.

181 *See* Robert G. Hansen & John R. Lott, Jr., *Externalities and Corporate Objectives in a World with Diversified Shareholder/Consumers*, 31 J. FIN. & QUANTITATIVE ANALYSIS 43, 53 (1996) ("[A]s of 1990, 47.3 million Americans directly owned stock in public corporations and another 25.3 million owned stock mutual funds; if we consider the ultimate owner of pension funds, these numbers would be still greater. . . . In America, 9,500 stock ownership plans covered 10 million employees in 1994." (citations omitted)).

182 *See* ADAM SMITH, AN INQUIRY INTO THE NATURE AND CAUSES OF THE WEALTH OF NATIONS 15 (Edwin Cannan ed., 1976) (describing the division of labor).

B. *A Shift from Consumer Welfare to Total Welfare Would Alter Some Case Outcomes*

For the vast majority of cases, there likely would be little difference in enforcement decisions if a total welfare standard were used instead of the current consumer welfare standard. Indeed, Hovenkamp notes that "[t]he volume and complexity of the academic debate on the general welfare compared to consumer welfare question creates an impression of policy significance that is completely belied by the case law, and largely by government enforcement policy. Few if any decisions have turned on the difference."[183]

Indeed, antitrust analysis already relies on a total welfare standard in particular circumstances. Adopting a total welfare standard would provide clarity in these situations. For instance, current antitrust law forbids monopsony, even when ultimate consumers might not be harmed.[184] In *Weyerhaeuser Co. v. Ross-Simmons Hardwood Lumber Co.*,[185] a jury verdict finding a Section 2 violation was vacated, but the Court's analysis focused on the possibility of harm to upstream sellers.[186] The case was premised on the claim that Weyerhaeuser obtained a monopsony over red alder logs supplied to Pacific Northwest sawmills, thereby excluding competing mills from the upstream market, even though red alder logs competed in a competitive downstream market for finished lumber.[187] The Court did not base its decision affirming liability on effects for consumers in the downstream market.[188] In effect, the courts and enforcement agencies employ a broad welfare concept, not an end-user consumer welfare standard, when addressing monopsony.[189] Here, adopting a total welfare standard would provide clarity regarding how the analysis should be undertaken. The effect on sellers would expressly be considered and any current analytical confusion about identifying "consumers" affected by monopsony would be eliminated.

Similarly, adoption of a total welfare standard would provide clarity for the analysis of vertical mergers.[190] Current analysis considers whether the merged (and vertically integrated) firm could harm downstream rivals.[191] Potential harm to downstream rivals is weighed against the benefit to the downstream portion of the merged firm.[192] A court's concern with the ambiguous

---

183 Hovenkamp, *supra* note 16, at 2474.

184 *See* Gregory J. Werden, *Monopsony and the Sherman Act: Consumer Welfare in a New Light*, 74 ANTITRUST L.J. 707, 720 (2007).

185 549 U.S. 312 (2007).

186 *See id.* at 321–26.

187 *Id.* at 314–16.

188 *Id.* at 321 ("[T]his case does not present . . . a risk of significantly increasing concentration in . . . the market for finished lumber.").

189 Werden, *supra* note 184, at 722–23.

190 Vertical mergers combine firms that have or could have supplier-customer relationships.

191 *See* Leary, *supra* note 7, at 128–32 (discussing foreclosure theory with regard to vertical merger cases).

192 *Id.*

meaning of "consumers" could lead to confusion if it sought to determine whether customers of the downstream rivals and merged firm would be harmed. A total welfare standard would provide clarity, as effects on firms are expressly considered.

Moreover, the application of a total welfare standard could lead to a more accurate evaluation of some types of conduct, including some vertical restraints. For example, resale price maintenance ("RPM") could lead to increases in output and total welfare but a decrease in consumer surplus. This outcome could arise if the loss of surplus by inframarginal consumers from the higher price exceeds the gain in surplus by marginal consumers who are attracted by increased demand-enhancing services. In this situation, assessing output under the total welfare standard could be more instructive than analyzing consumer effects.

There are additional situations, like the RPM example, where consumers are impacted in different ways by a given type of conduct.[193] In these cases, identifying net consumer harm may be difficult. "[W]hen a practice causes both consumer harm and consumer benefit but net effects are unknown, producer gains may become more relevant, particularly if they result from significant production efficiencies."[194] In these cases, adoption of a total welfare standard that expressly considers production efficiencies may be easier to implement and may alter case outcomes.

Of course, there are circumstances where application of the total welfare standard would be outcome outcome-determinative. Take, for example, a merger that leads to increased prices but also results in large fixed cost efficiencies. A merger with these characteristics would fail to pass muster under the consumer welfare standard, as fixed cost savings typically are not passed through in the short run, and consumers consequently would face higher prices for some period. Under the total welfare standard, however, the fixed cost savings would be considered and could be sufficiently large for total welfare to increase, thereby earning a green light. Crediting fixed cost savings acknowledges the potential for optimizing resource allocation and overall economic growth. Firms in dynamic industries can use these cost savings to invest in innovation. Additionally, some of the efficiency gains are likely passed on to benefit society through higher tax revenue and wages.

In a similar vein, Blair and Sokol identify "restraints that have purely distributional effects."[195] These practices would pass muster under the total welfare standard but would be found objectionable under the consumer

---

193 Hovenkamp, *supra* note 16, at 2480 (identifying "some practices that fall into this category, mainly (1) variable proportion ties; (2) ties that result in interproduct price discrimination; (3) tying and bundled discounts of imperfect complements; (4) vertical restraints and other practices used to facilitate third-degree price discrimination; and (5) resale price maintenance which causes nominally higher prices but produces services that are more valuable to some customers than to others").

194 *Id.*

195 Blair & Sokol, *Rule of Reason*, *supra* note 16, at 497–501.

welfare standard. Restraints that fall into this category include all-or-none offers, two-part pricing, and collusion in bidding.[196]

C. *A Total Welfare Standard Would Expand the Potential Role for Efficiencies Analysis*

For several reasons, adoption of the total welfare standard would give antitrust enforcers greater latitude to consider efficiencies. First, efficiencies would be more broadly cognizable under the total welfare standard than under the Horizontal Merger Guidelines.[197] Fixed costs today generally are not credited because they typically are not passed through to consumers in the short run.[198] A total welfare standard would render cognizable fixed cost reductions that would not be passed through in the short run.

Second, a total welfare standard would better enable the agencies to consider multimarket effects. Under the consumer welfare standard, efficiencies typically must arise in the same relevant market in which the merger is likely to increase prices or reduce output.[199] Thus, for a merger between firms manufacturing or selling multiple product lines, the reviewing agency is unlikely to offset higher prices for one product line with anticipated cost reductions for a second product line.[200] Although the Horizontal Merger Guidelines allow the agencies to engage in cross-market balancing in the exercise of their prosecutorial discretion, the dictates of *United States v. Philadelphia National Bank*[201] too often carry the day.[202] In contrast, under the total welfare standard, efficiencies that reduce costs in other markets may be considered and could justify a merger that decreases output or increases price in one particular relevant market.[203]

---

196 *Id.*

197 Adopting a total welfare standard would make a greater range of efficiencies cognizable without changing the demand that efficiencies be substantiated. Parties would still be required to provide adequate support for any claimed efficiencies.

198 *See* HORIZONTAL MERGER GUIDELINES, *supra* note 19, at 31 n.15 ("The Agencies normally give the most weight to the results of [efficiencies] analysis over the short term. . . . Efficiencies relating to costs that are fixed in the short term are unlikely to benefit customers in the short term . . . .").

199 *See id.* at 30 n.14.

200 *See id.* at 31 n.15.

201 374 U.S. 321, 370 (1963) (finding anticompetitive effects of a merger in one market could not be offset by procompetitive effects in other markets to avoid liability under Section 7 of the Clayton Act).

202 *See* Christine Chambers Wilson, *Markets in the Balance: Efficiencies Analysis of Mergers Should Consider Multiple Markets*, LEGAL TIMES, Oct. 25, 1999, at 34.

203 *See also* Jan M. Rybnicek & Joshua D. Wright, *Outside in or Inside out? Counting Merger Efficiencies Inside and Out of the Relevant Market*, *in* 2 WILLIAM E. KOVACIC: AN ANTITRUST TRIBUTE (Nicolas Charbit & Elisa Ramundo eds. 2014). For purposes of administration, agencies likely would need to limit the scope of out-of-market efficiencies. Further, we recognize that the ability to credit out-of-market efficiencies may be limited by Sherman Act language that focuses the analysis on the effects on any line of commerce.

Third, the total welfare standard may better capture dynamic efficiencies. For instance, many firm-specific efficiencies generated by a merger may, over time, spill over to the market as a whole, as other firms in the sector imitate innovations and cost-saving measures.[204] Even recognizing that the diffusion of innovations through imitation and emulation is not instantaneous or complete, accounting for dynamic efficiencies would facilitate an increase in long-run welfare.[205] As a matter of administrability, however, antitrust enforcement agencies would likely need to place limits on the product's distance from the merging parties for the spillover to be cognizable. In addition, as with other efficiencies, enforcement agencies likely would require parties to substantiate spillover efficiency claims.

D. *A Total Welfare Standard Would Be Predictable, Administrable, and Credible*

Having added the total welfare standard to the list of possible solutions, this Section scores it using the same three criteria: (1) predictability, (2) administrability, and (3) credibility.

1. Predictability

It is perhaps most notable that the total welfare standard, like the consumer welfare standard, employs well-developed economic insights and evidence, thereby providing a principled framework for evaluating competitive effects and finding violations. The total welfare standard consequently provides an objective basis for making enforcement decisions. "[D]ecisions are amenable to standard market analysis using economic principles and data, thereby inserting some uniformity into outcomes."[206] Accordingly, this standard would provide an objective and systematic framework that could be applied consistently across cases and agencies. That consistency "free[s] companies from having to worry that they will become antitrust targets even if they do not engage in clear anticompetitive behavior."[207]

2. Administrability

Some have claimed that a total welfare standard would be more difficult to implement than the consumer welfare standard because it would require

---

204 *See* Gary L. Roberts & Steven C. Salop, *Efficiencies in Dynamic Merger Analysis*, 19 WORLD COMPETITION L. & ECON. REV. 5, 8 (1996).

205 *See* Steven C. Salop, *Question: What Is the Real and Proper Antitrust Welfare Standard? Answer: The True Consumer Welfare Standard*, 22 LOY. CONSUMER L. REV. 336, 349 (2010).

206 Kennedy, *supra* note 77, at 5.

207 *Id.*

all of the steps that the consumer welfare standard requires to assess price and output, *plus* an analysis of fixed cost and marginal cost savings that are not passed on to consumers.[208] But this misperceives the real question, which is whether total welfare is likely to increase by virtue of a particular transaction or a given type of conduct.

Indeed, for many cases, implementing a total welfare standard would not be particularly difficult. For example, naked price-fixing, unaccompanied by any integration of research, production, or output, produces no measurable efficiency gains and leads directly to higher prices with a corresponding output reduction and deadweight loss.[209] "On the other side, many purely vertical practices, including vertical territorial restraints, tying or exclusive dealing, may not result in higher consumer prices at all and have efficiency benefits that serve to explain them."[210]

In the merger context, former Economics Director of the US Department of Justice's Antitrust Division, Ken Heyer, states that in many situations, the analysis "would be able to conclude from the likely magnitude of merger-specific cost savings—whether marginal or fixed—that these benefits to society would exceed any plausible deadweight welfare loss. In such cases, a total welfare standard would likely be far *easier* than a consumer welfare standard to apply."[211] In fact, when the pure transfer of surplus from consumers to producers is treated as welfare-neutral, which is what a total welfare standard would do, "the deadweight loss from many mergers would often be quite small relative to any significant cost savings."[212]

Even for mergers that do not fall within the category that Heyer contemplates, a total welfare standard can be implemented to analyze transactions using premerger data and information that is available to the antitrust enforcement agencies.[213] Part V considers approaches both for mergers between firms selling differentiated products and mergers between firms selling homogeneous products. Through an analysis of Canada's experience with the total welfare standard, Part V also considers related administrability issues.

3. Credibility

Strict application of a total welfare standard could result in outcomes contrary to the longstanding principle that antitrust protects competition, not competitors.[214] Professor Steven C. Salop provides an example in which a merger reduces a firm's costs and lowers prices to consumers but also causes

---

208 *See* Hovenkamp, *supra* note 16, at 2479.

209 *See* Gordon Tullock, *The Welfare Costs of Tariffs, Monopolies, and Theft*, 5 WESTERN ECON. J. 224, 232 (1967).

210 Hovenkamp, *supra* note 16, at 2473–74.

211 Heyer, *supra* note 16, at 46 (emphasis added) (footnote omitted).

212 *Id.* at 46 n.37.

213 *Id.* at 46.

214 *See* Brunswick Corp. v. Pueblo Bowl-O-Mat, Inc., 429 U.S. 477, 488 (1977).

less efficient rival producers to exit the market.[215] If the gain to consumers is less than the loss in aggregate producer surplus from the harmed rivals, then the merger would reduce aggregate welfare and should be condemned.[216] A similar result would occur if a vertical restraint lowers prices to consumers but causes a larger loss to rivals. Outcomes like these could impair the credibility of the standard.

Maintaining the credibility of the standard likely would require a competition screen to be applied to the analysis. That is, not all conduct that reduces total welfare is an antitrust violation. For example, in the absence of competitive effects, unprofitable or ill-advised mergers are not an area for agency intervention.

V. IMPLEMENTING A TOTAL WELFARE STANDARD: AN APPROACH FOR MERGERS THAT INCREASE PRICE

This Part demonstrates the administrability of a total welfare standard by examining its application to a case of a merger involving producers of substitutes. Absent sufficient marginal cost efficiencies, such a merger results in increased prices and thus would be subject to challenge under a consumer welfare standard. Under a total welfare standard, an antitrust agency must weigh the size of the deadweight loss associated with the price increase against merger-specific and verifiable fixed cost savings.[217] The agency would allow the merger if the verifiable fixed cost savings are greater than the deadweight loss. This Part suggests practical steps for measuring deadweight loss using information commonly available to agencies via subpoena. Section A focuses on the widely applicable case of differentiated yet substitutable products competing on price. Section B covers mergers in markets for homogenous goods. Section C discusses the implementation of Canada's total welfare standard and issues that have arisen in connection to it.

A. *Differentiated Goods*

While a small body of literature examines the application of a total welfare standard to markets for *homogenous* goods,[218] we are not aware of a comprehensive treatment of how a total welfare standard would affect antitrust analysis of markets involving *differentiated* goods. This Section proposes a method for estimating deadweight loss generated by merging firms

---

215 *See* Salop, *supra* note 205, at 342–43.

216 *Id.*

217 A merger that decreases price because it produces marginal cost efficiencies would not produce deadweight loss and would be allowed under either the consumer welfare or total welfare standard.

218 *See generally* Lin Bian & D.G. McFetridge, *The Efficiencies Defence in Merger Cases: Implications of Alternative Standards*, 33 CAN. J. ECON. 297, 303–04 (2000); Ralph A. Winter, Tervita *and the Efficiency Defence in Canadian Merger Law*, 28 CAN. COMPETITION L. REV. 133 (2015).

using only limited information on the merging firms' premerger quantities, prices, margins, and diversions. This Section then tests the validity of our method using a simulated dataset consisting of hypothetical mergers in 10,000 randomly generated industries. This method generates estimates that are, on average, close to the true deadweight loss that would be observed with unlimited information about market conditions, even across a variety of demand conditions. The estimates are also strongly correlated with true deadweight loss. This method can be used to implement a total welfare standard by comparing estimated deadweight loss to estimated fixed cost savings, challenging only those mergers whose deadweight loss exceeds fixed cost savings.

For simplicity, the bulk of our exposition concerns mergers that result in both price increases and fixed cost savings, but not marginal cost savings. Section A.4 discusses the straightforward extension of our method to mergers that result in both fixed and marginal cost savings, with marginal cost reductions resulting in lower deadweight loss regardless of whether they are passed through to consumers.

1. Defining Total Welfare

This Article defines deadweight loss as the reduction in total surplus associated with a merger that increases price. Total surplus is equal to the sum of two components, consumer surplus and producer surplus. Consumer surplus is a quantitative measure of consumer welfare, equal to the value that consumers get from purchasing a good (as measured by the demand curve), net of the price.[219] Producer surplus is the variable profit a firm receives from selling a good.[220] Both consumer and producer surplus measure benefits from sales of a good; neither measures fixed costs, which are those costs borne by a firm regardless of how many units are sold, or even if no units are sold. Thus, accounting for fixed costs separately:

$$Total\ welfare = consumer\ surplus + producer\ surplus - fixed\ costs$$

$$Decrease\ in\ total\ welfare = deadweight\ loss - reduction\ of\ fixed\ costs$$

The consumer welfare standard is indifferent to both producer surplus and fixed costs, and under this standard, mergers are allowed if and only if

---

219 Formally, consumer surplus is the sum over all units sold of the difference between willingness to pay (as measured by the demand curve) and price.

220 For a constant marginal cost firm that charges a fixed price, producer surplus equals $(P - MC) * Q$. More generally, producer surplus is the sum of the variable margin over all units sold.

consumer surplus increases.[221] In contrast, total welfare increases if and only if fixed costs decrease by more than deadweight loss.[222] Any such merger would be allowed under a total welfare standard.

This Section illustrates the concepts discussed above in Figure 2 as follows: Suppose a firm charges a price of P_1 while selling quantity Q_1. The left panel of Figure 2 reveals that consumer surplus is equal to the area between the firm's demand curve (representing the most consumers would be willing to pay for various quantities) and the price, while producer surplus (representing firm profit gross of fixed costs) is equal to the area between price and marginal cost. If the firm increases its price to P_2 (as in the right panel), consumer surplus decreases. Some of the decrease is transferred to producers (signified by the hashed area in the figure), and some is lost (signified by the lightly shaded area). Producer surplus increases by the amount transferred from consumers and decreases by an amount equal to the darkly shaded area, which represents lost sales.[223] Total deadweight loss is then the sum of the two shaded areas. Total welfare increases if the reduction in fixed costs due to the merger exceeds the size of the deadweight loss.

As prices adjust following a merger, both merging and nonmerging firms will produce different levels of consumer and producer surplus.[224] For merging firms, the result obtains because the merger creates upward pricing pressure by internalizing the effect of price changes on a firm's former rival; the higher prices decrease consumer surplus and increase producer surplus.[225] Higher prices set by merging firms divert customers to nonmerging firms; the increased demand raises total surplus at nonmerging firms but also causes these firms to increase prices, lowering total surplus. Indeed, a merger may trigger changes in surplus up and down a supply chain. For example, a merger of intermediate good producers may decrease surplus accruing to purchasers of the intermediate good, which may, in turn, lower consumer surplus for the final good. Further, fixed cost savings may affect employee welfare or the welfare of other input sellers.

---

221 *See* discussion *supra* notes 17–19.

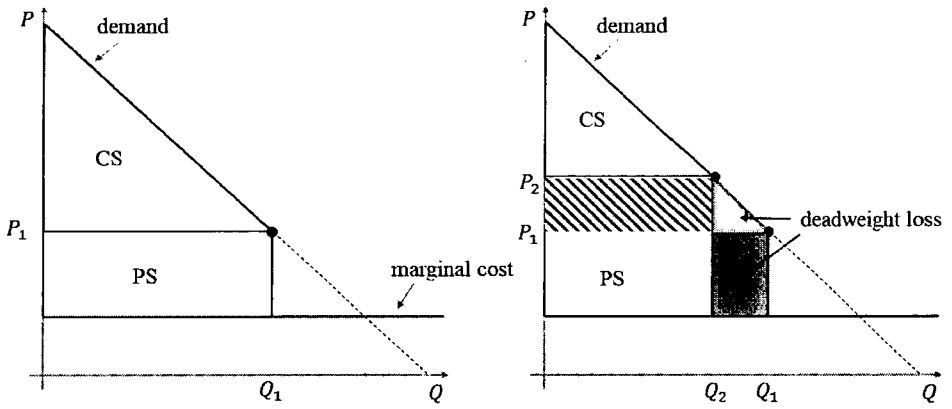
222 *See supra* Part IV.

223 If the price increase were the result of a merger, the firm's demand curve would also shift out, as its former rival increases its price. We do not show this shift, for simplicity, but we do account for it in subsequent sections.

224 For an overview of the effects of a merger involving differentiated products, see generally Gregory J. Werden & Luke M. Froeb, *The Effects of Mergers in Differentiated Products Industries: Logit Demand and Merger Policy*, 10 J.L. ECON. & ORG. 407 (1994).

225 For a discussion of the calculation of consumer surplus, see *supra* Figure 1 and accompanying text.

[Figure 2:] Illustration of consumer and producer surplus before and after a price increase, with resulting deadweight loss. Neither surplus nor deadweight loss accounts for fixed costs.



In applied settings, an important practical issue is how to account for changes in surplus that indirectly result from a merger (e.g., at competing firms, or firms up and down the supply chain). For example, if two beer producers increase price following a merger, should courts account for the effect of this price increase on total surplus at all other beer producers? Would it be appropriate to consider the effect of a beer merger on total welfare from sales of wine and spirits?[226] What about other, more distant substitutes (e.g., ice cream)? What about the effect on labor or capital markets if the beer producers reduce costs?

The sources of changing surplus relevant to a particular matter would likely be context dependent. In some cases, agencies or courts may wish to credit merging firms for increased surplus resulting from sales of nonmerging firms (such as nonmerging beer producers, whose demand would increase if the merging firms increased price). This credit would almost certainly have limits. For example, a court may be unlikely to credit merging firms for increased surplus from the sale of distant substitutes (such as ice cream, again following a beer merger). One possibility (which we do not necessarily endorse) is that these limits would coincide with those of market definition. In this case, only firms that produce particularly close substitutes for the merging firms' products would be considered.

Section A.2 develops an estimate for the deadweight loss of a merger that accounts only for changes in surplus generated by the merging firms. This approach is premised on four rationales. First, expected merger price effects imply that merging firms producing differentiated products, by

226 A merger causes deadweight loss because consumers buy less of a good following a price increase. To the extent that consumers simply buy something else they like almost as much, deadweight loss will be minimal, which suggests that mergers with even modest fixed cost savings would likely increase total welfare.

themselves, comprise a relevant antitrust market under the hypothetical monopolist test. Second, we intend our estimate to be illustrative, and variants that account for changes in surplus at nonmerging firms readily suggest themselves. Third, ignoring changes in surplus at nonmerging firms is conservative, in that nonmerging firms tend to generate more surplus postmerger as their demand shifts out. Thus, if fixed cost savings exceed the deadweight loss generated by the merging firms alone, it will also exceed that generated by the merging firms and their closest competitors together. Fourth, the data needed for estimating the merging firms' deadweight loss is likely obtainable during merger review. On the other hand, measuring changes in surplus generated by nonmerging firms would require information on these firms' margins, prices, and quantities, as well as diversions between merging and nonmerging firms, and this information may be harder for agencies and courts to obtain.

2. Measuring Total Welfare

Section A.2 demonstrates how to measure the deadweight loss of a merger and provides results about how deadweight loss depends on demand curvature, using a dataset of 10,000 randomly generated industries. Then, Section A.3 uses the results from this Section to develop and test an approximation for deadweight loss that depends only on the type of premerger information generally available to antitrust enforcement agencies.

We generated a dataset of 10,000 randomly drawn industries, each consisting of four separately owned firms with constant marginal cost and an outside good which captures out-of-market substitution. Each firm has a randomly drawn share and margin, and diversions between the firms is proportional to share.[227] We then fit each industry to three demand systems, which coincide in levels and slopes at the (premerger) outcome: linear (least curvature), logit, or Almost Ideal Demand System ("AIDS") (most curvature). Doing so allows us to determine merger outcomes, should two of the firms merge, under varying demand curvature. Since curvature is typically unknown to antitrust practitioners, the exercise helps establish a range of possible merger outcomes, such as deadweight loss, that depend on curvature. This range can then be compared to predictions for merger outcomes that depend only on premerger information, such as upward pricing pressure, or the deadweight loss predictor proposed in the following Section.

To facilitate comparison of merger outcomes across demand systems of different curvature, we normalize all premerger prices to one and set all randomly drawn industries to have equivalent size, with size normalized to

---

227 The procedure for generating the random industries is adapted from Nathan H. Miller et al., *Upward Pricing Pressure as a Predictor of Merger Price Effects*, 52 INT'L J. INDUS. ORG. 216, 238 (2017).

100.[228] We then simulated mergers in each industry between firms 1 and 2. To focus on the question at hand, we assumed that no merger produces marginal cost savings, meaning mergers in all 10,000 industries would be subject to challenge under the consumer welfare standard.[229] Following these mergers, outcomes such as price and welfare differed across the three demand systems, so we separately calculated prices, quantities, and changes in consumer and producer surplus for each of the three demand systems and for each of the 10,000 industries.[230] Postmerger price and quantity were calculated by merger simulation; that is, we separately calibrated linear, logit, and AIDS demand systems to premerger data and then calculate postmerger prices based on those demand systems.

Table 3 summarizes pre and postmerger outcomes under each of the three demand systems, averaged across the 10,000 industries. Table 3 demonstrates that both merger price effects and changes in welfare depend on demand curvature, with more curved demand resulting in greater price increases and welfare losses. It also shows that a merger affects consumer and producer surplus of the nonmerging firms (firms 3 and 4), in addition to the merging firms (firms 1 and 2). The sum of producer and consumer surplus increases at the nonmerging firms and decreases at the merging firms. Table 3 measures the deadweight loss of the merger as the changes in consumer and producer surplus for the merging firms, and strikes through the changes for firms 3 and 4.[231] The measured deadweight loss listed in the bottom row

---

228 These normalizations are innocuous. Any set of prices can be set to $1.00 by dividing each firm's demand equation by its price. Doing so changes the unit of measurement for the item so that its price is $1.00. For example, if the price of gasoline is $3.00 per gallon, dividing its demand function by 3 would change the unit of measurement to 1/3 gallon, with gasoline selling for $1.00 per unit. Similarly, the foundation for demand systems used in antitrust is a discrete choice utility model, in which market share is determined by the probability that a representative consumer gets his highest utility from that item. Quantities then equal share multiplied by a market size; we simply set this market size to 100. The market size of 100 includes the share of the outside good, and so quantities in Table 2 sum to less than 100.

229 *See infra* Section V.A.4 (discussing extending our analysis to the case of mergers that generate reductions in both fixed and variable costs).

230 A firm's ΔPS equals postmerger margin times quantity minus premerger margin times quantity (recall firms are assumed to have constant marginal cost). We calculate ΔCS following Willig's approach as the integral of demand from pre to postmerger price, varying only one price at a time (so that ΔCS_1 is calculated holding other prices at premerger levels, ΔCS_2 is calculated with P_1 at its postmerger level but P_2 and P_3 at premerger levels, and so on). *See* Robert D. Willig, *Consumer's Surplus Without Apology*, 66 AM. ECON. REV. 589, 591 (1976). Calculating consumers' compensating variation using formulas such as those found in Taragin and Sandfort yields an identical metric. *See generally* Charles Taragin & Michael Sandfort, The Antitrust Package (June 18, 2019) (unpublished manuscript), https://cran.r-project.org/web/packages/antitrust/vignettes/manual.pdf. The equivalence of compensating variation and change in consumer surplus is a consequence of the fact that the demand functions we use do not have income effects.

231 As discussed *supra* Section V.A.1, any measurement of deadweight loss requires consideration of which firms to include in the calculation. To demonstrate the primacy of this choice to welfare analysis, we note that the total change to consumer and producer surplus across firms 1–4 is *positive* for 3.7% of the industries under linear demand, 4.5% under logit demand, and 2.4% under AIDS demand. These

of Table 3 equals the loss in consumer surplus at firms 1 and 2, minus the gain in producer surplus at those same firms. The linear and logit demand systems produce similar deadweight loss, while AIDS demand produces higher average deadweight loss.

To interpret ΔCS, ΔPS, and deadweight loss, note that all three measures are in dollars. ΔCS is equal in magnitude to the dollar figure, which if distributed to consumers would leave them just as well off as they had been before the merger changed prices.[232] ΔPS is the additional incremental profit (gross of fixed costs) accruing to firms following a merger. Deadweight loss, as the sum of ΔCS and ΔPS, is the net effect in dollars of the merger before fixed cost savings.

[Table 3:] Average pre and postmerger price, quantity, and welfare effects under each of three demand systems, from a merger of firms 1 and 2, using 10,000 randomly generated industries.

	Premerger		Postmerger, linear (least curvature)			
	Quantity	Price	Quantity	Price	ΔCS	ΔPS
Firm 1	21.13	$1.00	18.98	$1.09	-1.71	0.79
Firm 2	19.23	$1.00	16.99	$1.10	-1.99	0.71
Firm 3	19.46	$1.00	20.52	$1.03	~~-0.54~~	~~0.99~~
Firm 4	19.79	$1.00	20.84	$1.03	~~-0.55~~	~~0.99~~
			Merging firms' deadweight loss:			2.21

	Postmerger, logit				Postmerger, AIDS (most curvature)			
	Quantity	Price	ΔCS	ΔPS	Quantity	Price	ΔCS	ΔPS
Firm 1	18.70	$1.10	-1.70	0.52	16.82	$1.35	-4.31	2.30
Firm 2	16.61	$1.11	-1.85	0.46	14.80	$1.35	-6.24	2.19
Firm 3	20.94	$1.01	~~-0.24~~	~~0.89~~	21.84	$1.08	~~-2.30~~	~~3.28~~
Firm 4	21.26	$1.01	~~-0.21~~	~~0.89~~	22.13	$1.08	~~-2.50~~	~~3.28~~
	Merging firms' deadweight loss:			2.58	Merging firms' deadweight loss:			6.06

industries are characterized by low diversions out of market (and thus high inside shares, or total quantities for firms 1–4 near 100), relatively high margins for nonmerging firms, and relatively low margins for merging firms. For these industries, a merger largely relocates customers from low margin (1 and 2) to high margin (3 and 4) firms, with comparatively little change in aggregate quantity, thus increasing total surplus. The industries with negative deadweight loss are unique because there is little diversion to the outside goods. The same effect can be achieved, however, by broadening the market.

[232] For the equivalence of change in consumer surplus and compensating variation, see *supra* note 230.

Given the arbitrary choice of market size, we further describe the data by comparing welfare measures to the size of merging firm revenues; doing so extends the analysis to markets of any size. For example, from Table 3, when demand is linear, on average, ΔCS_1 equals 8.09% of firm 1's premerger revenue (1.71 divided by 21.13), while ΔPS_1 is, on average, 3.74% of firm 1's premerger revenue (.79 divided by 21.13). Under linear demand, the merging firms' deadweight loss averages 5.47% of the merging firm's premerger revenue (2.21 divided by 21.13 + 19.23). Table 4 lists deadweight loss as a percentage of combined premerger revenue for the merging parties (firms 1 and 2), under the three demand systems studied. Thus, Table 4 provides the average reduction in fixed costs, as a percentage of premerger revenue, necessary for a merger of firms 1 and 2 to increase total welfare.

[Table 4:] The average deadweight loss from Table 3, as a percentage of premerger revenue for merging firms.

	linear	logit	AIDS
Deadweight loss as percentage of premerger revenue for firms 1 and 2	5.47%	6.39%	15.01%

From Table 4, if demand is linear, on average, a merger in the dataset would need to produce fixed cost efficiencies equal to 5.47% of the merging firms' premerger revenue for total welfare to increase. The number is similar for logit demand (6.39% of premerger revenue) and much higher (15.01%) for AIDS. Note that we included Table 4 to demonstrate a methodology for calculating deadweight loss, and not to establish general results on the sizes of the thresholds. Even small changes to how the random industries are generated (e.g., by reducing the average margin) would change the numbers in Table 4, but the methodology for calculating them would not.

Finally, values listed in Tables 3 and 4 are averages across many industries. Some of the 10,000 industries will experience greater merger price effects or deadweight loss while others will see milder effects. Section A.3 relates premerger observables to outcomes, to predict which industries are likely to lead to a large deadweight loss (and thus would require a large fixed cost savings to increase total welfare) and which are likely to produce only a small deadweight loss postmerger.

3. Implementing Total Welfare

The analysis in the preceding Section relied on full knowledge of the underlying demand curve to calculate deadweight loss for each industry under various demand assumptions. We now estimate the deadweight loss of a merger using only premerger information likely to be available to an antitrust authority while conducting merger review. This information typically does not include estimates of demand curvature, meaning that any approximation

must ignore demand curvature. In part to circumvent this difficulty, the method is conservative, meaning it tends to overestimate deadweight loss when demand is actually linear or logit, while it is close to deadweight loss under AIDS. Hence, if fixed cost savings exceed estimated deadweight loss, it is likely that total welfare has increased, even without knowledge of demand curvature. Cases where fixed cost savings are reasonably close to, but do not exceed, estimated deadweight loss may require additional analysis, such as examining prior mergers or supply shifters (e.g., a cost increase) for evidence on demand curvature.

Suppose that an economist observes margins, quantities, and prices for the merging firms and has some ability to estimate diversions between the merging parties. Further, suppose that the economist lacks other relevant information, such as estimates of margin, quantity, or price for any nonmerging firm or of diversions between merging and nonmerging firms. This setting approximates actual merger review, so it is appropriate to assume this information (but no more) in constructing the estimated deadweight loss.

Suppose firms 1 and 2 merge. Given knowledge of these firms' margins, quantities, prices, and diversions between them, we estimate deadweight loss via the following five steps, with details left to footnotes:

(1) Use upward pricing pressure to approximate price effects for firms 1 and 2.[233]

(2) Use the Lerner condition, margin, price, and quantity to measure the slope of each merging firm's demand prior to merging.[234]

(3) Use estimated price effects, demand slope, and an assumption that demand is linear to approximate the reduction in quantity for the merging firms.[235]

---

233 That is, $UPP = D_{12} * (P_2 - c_2)$, where D_{12} is diversions from firm 1 to firm 2, and c_2 is firm 2's marginal cost.

234 The Lerner condition, which follows from profit maximization, implies that a firm's margin is equal to the negative of one divided by its price elasticity of demand, at the profit-maximizing (premerger) price and quantity. If $\epsilon = \frac{\partial Q}{\partial P} * \frac{P}{Q}$ denotes demand elasticity, then $\frac{\partial Q}{\partial P} = \epsilon \frac{Q}{P}$ equals the slope of the demand curve. Substituting the Lerner condition that $m = -\frac{1}{\epsilon}$, and noting that margin m is given by $m = \frac{P-c}{P}$, then $\frac{\partial Q}{\partial P} = -\frac{Q}{P-c}$ is the slope of the demand curve, where Q and P are premerger quantity and price.

235 The assumption that demand is linear implies a constant slope of demand. From the previous step, $\frac{\partial Q}{\partial P} = -\frac{Q}{P-c}$ at the premerger profit-maximizing price and quantity, meaning that any price increase is met with a proportionate quantity decrease, so that, if P increases by UPP, Q decreases by $UPP * \frac{Q}{P-c}$.

By a similar calculation, if P_2 increases, Q_1 increases by $-D_{21} * \frac{\partial Q_2}{\partial P_2} = D_{21} \frac{Q_2}{P_2 - c_2}$, where D_{21} is the diversion ratio from firm 2 to firm 1, or the percentage of firm 2's marginal customers that would divert to firm 1 if they left firm 2. This follows from the definition of diversion, $D_{21} = -\frac{\partial Q_1}{\partial P_2} \Big/ \frac{\partial Q_2}{\partial P_2}$.

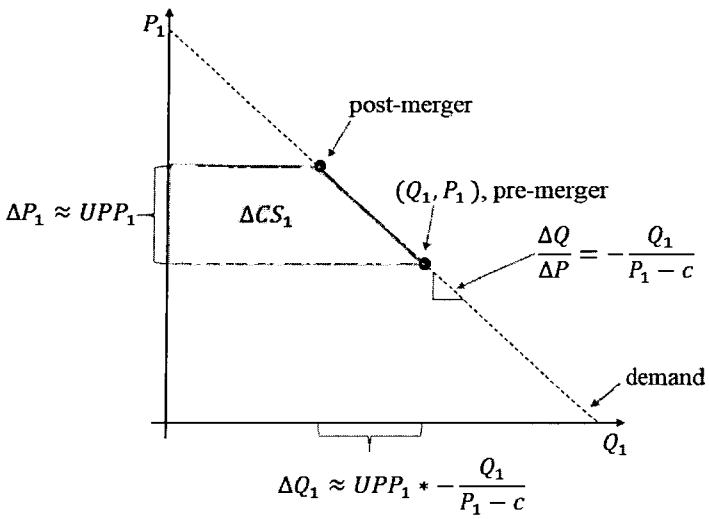
(4) Apply estimates of price and quantity changes to simple geometric calculations of ΔCS and ΔPS.[236]

(5) $Estimated\ deadweight\ loss = -(\Delta CS_1 + \Delta CS_2 + \Delta PS_1 + \Delta PS_2)$.

Figure 5 illustrates steps 1–4 above, applied to the calculation of ΔCS_1, the reduction in consumer surplus at firm 1. Beginning at the premerger point, (Q_1, P_1), we use firm 1's margin and diversions between firms 1 and 2 to calculate upward pricing pressure, their estimate of ΔP_1. The slope of firm 1's demand curve is inferred from its margin,[237] and this slope and firm 1's upward pricing pressure imply the decrease in firm 1's quantity, ΔQ_1. The change in consumer surplus, by definition, is the area between the vertical axis and the demand curve as price increases from its premerger level by ΔP_1. As Figure 5 shows, this area is a trapezoid, meaning that ΔCS_1 is equal to the area of the trapezoid, or the average length of its parallel sides times its height. Thus, the following expression describes ΔCS_1:

$$\Delta CS_1 = UPP_1 * \left(\frac{1}{2}Q_1 + \frac{1}{2}\left(Q_1 - UPP_1 \frac{Q_1}{P_1 - c_1}\right)\right)$$

[Figure 5:] The change in firm 1's consumer surplus caused by a merger of firms 1 and 2 is estimated as the area of a trapezoid. Calculation of ΔCS_2 is analogous.



236 $\Delta PS_1 = \Delta[(P_1 - c_1) * Q_1]$, meaning the value of $(P - c) * Q$ following the merger minus that from before the merger. ΔCS is equal to the area of a trapezoid.

237 *See supra* note 234.

The calculation for ΔCS_1 holds firm 2's price fixed at its premerger level. To calculate ΔCS_2, we perform an identical calculation but hold firm 1's price fixed at its postmerger level of $P_1 + UPP_1$.[238]

$$\Delta \mathrm{CS}_2 = \mathrm{UPP}_2 * \left(\frac{1}{2}\mathrm{Q}_2 + \frac{1}{2}\left(\mathrm{Q}_2 - \mathrm{UPP}_2 \frac{\mathrm{Q}_2}{\mathrm{P}_2 - \mathrm{c}_2}\right) + \mathrm{D}_{12} \frac{\mathrm{Q}_1}{\mathrm{P}_1 - \mathrm{c}_1} \mathrm{UPP}_1\right)$$

The change in producer surplus is given by the change in $(P_1 - c_1) * Q_1$ for firm 1 and in $(P_2 - c_2) * Q_2$ for firm 2. For this calculation, we allow both firms to adjust price and quantity simultaneously. Table 6 summarizes pre and postmerger values for P_1, P_2, Q_1, and Q_2.[239]

[Table 6:] ΔPS is the estimated change in variable margin, $(P - c) * Q$ from the merger. Given constant marginal cost, ΔPS is estimated based on premerger observables.

	Premerger		Postmerger	
	Price	Quantity	Price	Quantity
Firm 1	P_1	Q_1	$P_1 + UPP_1$	$Q_1 - UPP_1 \frac{Q_1}{P_1 - c_1} + D_{21} \frac{Q_2}{P_2 - c_2} UPP_2$
Firm 2	P_2	Q_2	$P_2 + UPP_2$	$Q_2 - UPP_2 \frac{Q_2}{P_2 - c_2} + D_{12} \frac{Q_1}{P_1 - c_1} UPP_1$

Combining expressions for ΔCS_1, ΔCS_2, ΔPS_1, and ΔPS_2 above yields an estimate for deadweight loss that depends only on premerger prices, quantities, margins, and diversions for the merging firms. From the discussion above, estimated deadweight loss is given by $-(\Delta CS_1 + \Delta CS_2 + \Delta PS_1 + \Delta PS_2)$, with a full expression in a footnote.[240]

While tractable, this approach to estimating deadweight loss is subject to several sources of error. First, as upward pricing pressure is zero for nonmerging firms, our method predicts that nonmerging firms will not change price. In fact, nonmerging firms do increase price in response to the

---

238 *See supra* note 230 and accompanying text.

239 *See supra* note 235 and accompanying text (providing a derivation of postmerger quantities when both prices increase).

240 Specifically, $\textit{estimated deadweight loss} = -UPP_1 * \left(Q_1 - \frac{1}{2} UPP_1 \frac{Q_1}{P_1 - c_1}\right) - UPP_2 * \left(Q_2 - \frac{1}{2} UPP_2 \frac{Q_2}{P_2 - c_2} + D_{12} \frac{Q_1}{P_1 - c_1} UPP_1\right) - (P_1 + UPP_1 - c_1) * \left(Q_1 - UPP_1 \frac{Q_1}{P_1 - c_1} + D_{21} \frac{Q_2}{P_2 - c_2} UPP_2\right) - (P_2 + UPP_2 - c_2) * \left(Q_2 - UPP_2 \frac{Q_2}{P_2 - c_2} + D_{12} \frac{Q_1}{P_1 - c_1} UPP_1\right) + (P_1 - c_1)Q_1 + (P_2 - c_2)Q_2$.

diversions of customers to nonmerging firms from merging firms, so our method necessarily underestimates price effects for nonmerging firms.[241] Second, the increase in price at nonmerging firms causes some customers who would have switched from the merging firms to remain with those firms. Consequently, our method overestimates the quantity effect for merging firms. Third, demand may not actually be linear, and curvier demand may result in greater deadweight loss. For most industries, the total effect of these errors is to somewhat overestimate deadweight loss if demand is linear or logit, and to somewhat underestimate deadweight loss if demand is AIDS.

We empirically investigated the magnitude of error from estimated deadweight loss using the dataset of 10,000 randomly drawn industries. For each industry, we measured estimated deadweight loss and true deadweight loss if demand is linear, logit, or AIDS. Table 7 lists the mean, median, and standard deviation of each of these four metrics across the 10,000 industries. Table 7 shows that estimated deadweight loss is on average larger than true deadweight loss if demand is linear or logit. While mean estimated deadweight loss is less than mean true deadweight loss under AIDS, at the median of the dataset, estimated deadweight loss is very close to deadweight loss under AIDS. Indeed, estimated deadweight loss exceeds AIDS deadweight loss in 43.1% of the 10,000 industries at issue, meaning that the mean deadweight loss under AIDS is high because of a few industries with very large merger effects. Estimated deadweight loss exceeds true deadweight loss in 99.16% of industries when demand is linear, and in 99.84% of industries when demand is logit.

[Table 7:] Mean, median, and standard deviation of the estimated deadweight loss, as well as actual deadweight loss if demand is linear, logit, or AIDS.

	Mean	Median	Standard Deviation
Estimated deadweight loss	3.50	2.58	3.11
Deadweight loss, linear	2.21	1.46	2.33
Deadweight loss, logit	2.58	1.89	2.33
Deadweight loss, AIDS	6.06	2.80	8.93

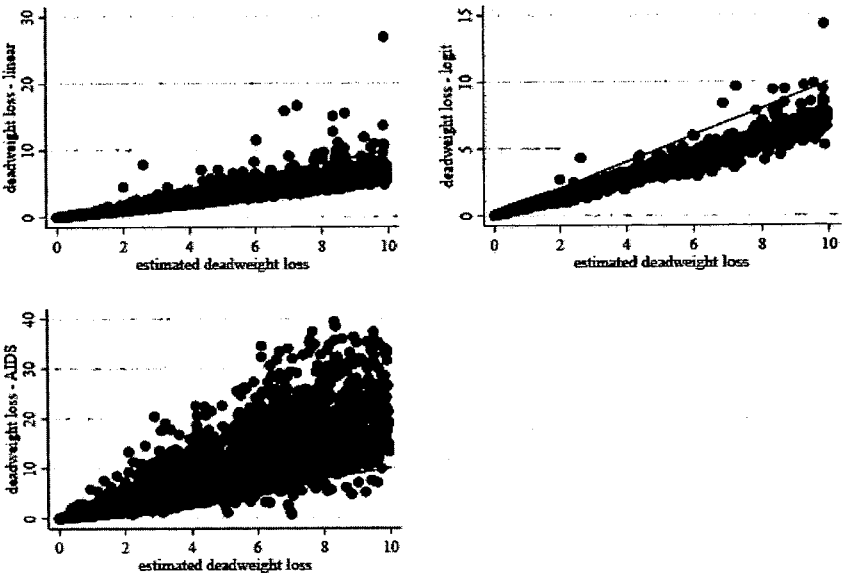
It is particularly important that estimated deadweight loss be correlated with actual deadweight loss, regardless of demand curvature. Absent such correlation, a higher value of estimated deadweight loss would not imply a

241 Upward pricing pressure is not a prediction of merger price effects; it is a measure of the change in incentive brought about by a merger, and it is analogous to an increase in marginal costs. Accurately translating this change in incentive into changes in prices requires knowledge of passthrough terms, which capture how firms respond to changes in their own and rivals' costs. Since passthrough depends on demand curvature, in practice, antitrust practitioners use approximations, such as a passthrough of one for their firms' own cost increases and zero for rivals' cost increases. *See* Miller et al., *supra* note 227, at 217.

higher true deadweight loss, regardless of closeness of the mean or median of each measure. To understand this, note that a broken clock has an average error of zero over the course of the day (it is late for half the day and early for half the day), while a clock that is consistently five minutes slow has an average error of five minutes. As the latter clock is correlated with the actual time, while the broken clock is uncorrelated, the latter would be much more useful for telling time, despite its greater average error.

We test for this correlation across the 10,000 random industries in two ways: graphical analysis and regression. First, Figure 8 plots the value of estimated deadweight loss versus true deadweight loss, separately for linear, logit, and AIDS demand. Recall that true deadweight loss is calculable only with full knowledge of the demand system.[242] Thus, Figure 8 checks how well the estimated deadweight loss performs using only premerger information on margins, quantities, and diversions of the merging firms. We also include a forty-five-degree line in each of the three graphs in Figure 8; for any industry on this line, estimated deadweight loss is exactly equal to true deadweight loss, with no error. Estimated deadweight loss overpredicts deadweight loss for any industry below the forty-five-degree line, and underpredicts deadweight loss for any industry above the forty-five-degree line.

[Figure 8:] Scatter plot of estimated deadweight loss (horizontal axis) against true deadweight loss under linear, logit, and AIDS demand. Under perfect estimation, all 10,000 industries would lie on the forty-five-degree line.



242 *See supra* Section V.A.2.

Figure 8 shows that the measure of approximate deadweight loss appears to be strongly correlated with true deadweight loss, regardless of demand curvature. Under all three demand systems, higher values of estimated deadweight loss imply a higher average value of true deadweight loss, meaning that there is confidence that a higher estimated deadweight loss requires greater fixed cost savings for a merger to increase total welfare, regardless of demand curvature.

To formalize the discussion above, we performed linear regressions of true deadweight loss on estimated deadweight loss for each of three demand systems. Each regression fits a line to the scatterplots in Figure 8 that minimizes the sum of squared errors between the line and the 10,000 data points. This regression line represents the line of best fit through the data points described in Figure 8, and it should be interpreted as the average relationship between estimated and true deadweight loss. Table 9 displays the regression results.

[Table 9:] Three regressions of true deadweight loss on estimated deadweight loss, for linear, logit, and AIDS demand. All t-statistics are above 100, and so are omitted.

	Linear deadweight loss	Logit deadweight loss	AIDS deadweight loss
Coefficient on estimated deadweight loss	.71	.75	2.43
R squared	.907	.986	.717

Table 9 demonstrates that a single variable, our estimated deadweight loss, explains between 71.7% (for AIDS) and 98.6% (for logit) of variation in true deadweight loss across the dataset of 10,000 random industries. Table 9 also offers further confirmation that estimated deadweight loss is correlated with true deadweight loss, regardless of demand curvature. A one-dollar increase in estimated deadweight loss is associated with, on average, an increase in true deadweight loss of $0.71 (linear), $0.75 (logit), and $2.43 (AIDS) across the three demand types studied. Thus, both the graphical and regression evidence support the conclusion that estimated deadweight loss is highly correlated with true deadweight loss, regardless of demand curvature.

4. Alternative Implementations with Differentiated Goods

We conclude this Section by briefly discussing three extensions. First, consistent with our discussion of efficiencies under the total welfare

standard, an antitrust agency may wish to credit merging firms for the resulting increase in total surplus at competing firms in the same antitrust market. Taking into account this credit would require estimates of diversions from merging to nonmerging firms; with this information, an antitrust agency could estimate price and quantity effects at nonmerging firms, as well as more precisely estimate price and quantity effects at merging firms. In practice, this analysis would likely amount to performing a full merger simulation, with concomitant informational requirements and stronger assumptions. If all four firms comprise an antitrust market in each industry in the randomly generated dataset, total deadweight loss (including nonmerging firms) continues to be highly correlated with the estimated deadweight loss, even though an increase in surplus at nonmerging firms partially offsets the deadweight loss generated by merging firms. As noted in Subsection 1, there is no clear reason to account for increased surplus only at nonmerging firms in the same antitrust market and not at out-of-market firms. However, accounting for economy-wide substitution patterns quickly becomes unworkable. In contrast, the estimated deadweight loss approach proposed here strikes an appropriate balance between applicability and completeness.

Second, if a merger were expected to produce marginal cost savings that would partially offset a price increase caused by diminished competition, an antitrust agency would need to make two straightforward changes to the approach described. First, it would need to modify its predicted price increase to reflect marginal cost savings passed through to consumers (e.g., from UPP to $UPP - marginal\ cost\ savings$). Second, it would need to account for the lower marginal cost in calculating the change in producer surplus generated by the merger, to reflect the greater surplus generated by each sale.[243]

Finally, an agency may wish to account for dynamic efficiencies likely to result from a merger. For example, nonmerging firms may benefit from the fixed cost savings that merging firms enjoy if nonmerging firms also obtain these efficiencies. These spillovers are especially likely to arise if the efficiencies are the result of increased knowledge or technology at the merging firms, as such knowledge diffuses through an industry, either formally (e.g., patent licensing) or informally (e.g., reverse engineering or employee cross-pollination). While the importance of spillover efficiencies is likely dependent on the facts of each merger, if warranted, an antitrust agency could credit merging firms for the effect of spillover efficiencies. Under a total

---

243 The resulting formula for deadweight loss, corresponding to that in footnote 232, is as follows: Suppose the merging firms' marginal costs decrease by Δc_1 and Δc_2, respectively, and that, consistent with footnote 232, expected merger price increases are given by $UPP_1 - \Delta c_1$ and $UPP_2 - \Delta c_2$. Then, the $estimated\ deadweight\ loss = -(UPP_1 - \Delta c_1) * \left(Q_1 - \frac{1}{2}(UPP_1 - \Delta c_1)\frac{Q_1}{P_1 - c_1}\right) - (UPP_2 - \Delta c_2) * \left(Q_2 - \frac{1}{2}(UPP_2 - \Delta c_2)\frac{Q_2}{P_2 - c_2} + D_{12}\frac{Q_1}{P_1 - c_1}(UPP_1 - \Delta c_1)\right) - (P_1 + (UPP_1 - \Delta c_1) - (c_1 - \Delta c_1)) * \left(Q_1 - (UPP_1 - \Delta c_1)\frac{Q_1}{P_1 - c_1} + D_{21}\frac{Q_2}{P_2 - c_2}(UPP_2 - \Delta c_2)\right) - (P_2 + (UPP_2 - \Delta c_2) - (c_2 - \Delta c_2)) * \left(Q_2 - (UPP_2 - \Delta c_2)\frac{Q_2}{P_2 - c_2} + D_{12}\frac{Q_1}{P_1 - c_1}(UPP_1 - \Delta c_1)\right) + (P_1 - c_1)Q_1 + (P_2 - c_2)Q_2$. Of course, a passthrough matrix, other than the identity matrix that Miller et al. suggested, will generate a different price increase and thus a different estimated deadweight loss. *See* Miller et al., *supra* note 227, at 221.

welfare standard, this calculation would take the form of increasing the measured reduction in fixed costs by an amount equal to expected reductions at the nonmerging firms.[244]

B. *Markets for Homogenous Goods*

Next, this Section turns to markets for homogenous goods, such as chemicals. These markets are commonly analyzed using the Cournot model, in which different firms' products are perfect substitutes for one another.[245] An analysis of markets for homogenous goods is relevant because at least three Canadian mergers involving homogenous goods have been allowed after Canadian courts or the Competition Bureau concluded that the merging parties' cost savings would more than offset the deadweight loss of the merger.[246] Since the Canadian welfare standard appears to be similar to the total welfare standard studied in this article,[247] Section C discusses issues that have arisen in Canada's application of its total welfare standard and that would likely arise if the standard were implemented in the United States.

When different firms produce identical products, consumers are indifferent as to the identity of the producer of the product they purchase (for example, consumers are unlikely to know or care which refinery produced the gasoline used to fill up their cars). To analyze mergers in these markets, antitrust enforcement agencies are likely to use the Cournot model, which supposes a market demand curve relating consumers' willingness to pay to the total quantity that all firms produce together. In this environment, mergers increase price and reduce quantity, because the merged firm internalizes the

---

244 *See generally* Bian & McFetridge, *supra* note 218, at 301 (providing a formal treatment of merger effects with spillover efficiencies).

245 *See generally* Joseph Farrell & Carl Shapiro, *Horizontal Mergers: An Equilibrium Analysis*, 80 AM. ECON. REV. 107 (1990) (providing an overview of the study of mergers using the Cournot model).

246 *See* Tervita Corp. v. Canada (Commissioner of Competition), [2015] S.C.R. 161, para. 155 (Can.); Canada (Commissioner of Competition) v. Superior Propane Inc., [2003] F.C. 529, para. 68 (Can.); *Competition Bureau Statement Regarding Superior's Proposed Acquisition of Canexus*, COMPETITION BUREAU (June 28, 2016), https://www.competitionbureau.gc.ca/cic/site/cb-bc.nsf/eng/04111.html. We are unaware of a Canadian matter involving differentiated products in which the efficiencies defense has been pivotal.

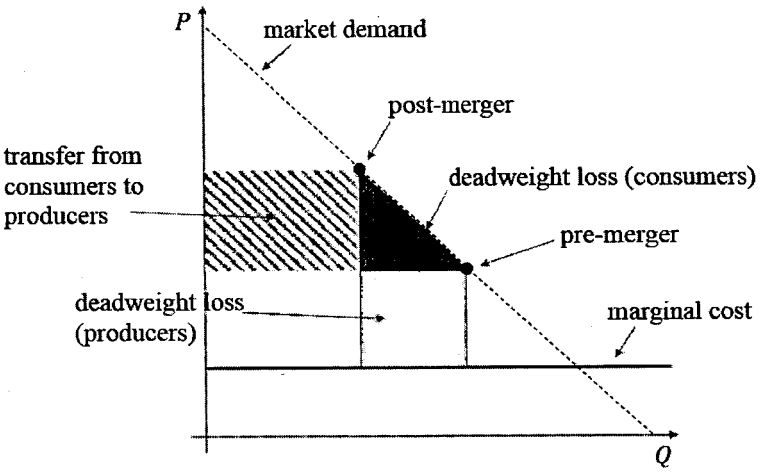
247 Section 96 of Canada's Competition Act allows any merger that "has brought about or is likely to bring about gains in efficiency that will be greater than, and will offset, the effects of any prevention or lessening of competition that will result or is likely to result from the merger." Competition Act, R.S.C. 1985, c C-34. The *Superior Propane* series of cases established that a transfer from consumers to producers is not an "effect" that needs to be offset. *See Tervita*, [2015] S.C.R. at paras. 121–22. As the Competition Bureau recognizes (albeit in a draft document), marginal cost efficiencies may be accounted for in competitive effects analysis (and should not be double counted in calculating efficiencies), it follows that under section 96, a merger is allowed if fixed cost savings exceed the deadweight loss of the merger, as we propose in Section V.A. *See A Practical Guide to Efficiencies Analysis in Merger Review*, COMPETITION BUREAU, § 4.1 (Mar. 20, 2018), https://www.competitionbureau.gc.ca/cic/site/cb-bc.nsf/eng/04350.html.

effect of its quantity produced on the price received by its former rival. Unlike with differentiated goods, consumer surplus cannot be attributed to individual firms. Instead, one price, applicable to all firms, clears the market by setting quantity demanded equal to total quantity supplied.

Because of this difference, when analyzing mergers of homogenous goods under the total welfare standard, it seems appropriate to account for the total change in consumer and producer surplus across all producers of the homogenous good (in contrast to the approach of accounting for only the merging firms in Section V.A). As with differentiated products, it seems appropriate to ignore other effects, such as employee welfare or welfare of firms up and down the supply chain, for the reasons discussed in Section V.A.1.

Figure 10 depicts a market demand curve, a marginal cost curve,[248] and pre and postmerger values of price and quantity. Because the merger reduces quantity, sales corresponding to these areas do not take place following the merger, which produces deadweight loss equal to the two shaded areas. The darker area is equal to lost consumer surplus, and the lighter area is equal to lost producer surplus. In contrast, the hashed area represents a transfer from consumers (premerger) to producers (postmerger); this area is irrelevant to the calculation of deadweight loss.

[Figure 10:] With homogenous products, deadweight loss is the sum of the dark shaded triangle and the lightly shaded rectangle, or the area under the market demand curve and above a representative marginal cost curve, over the range that quantity decreases following a merger.



248 A well-known implication of the Cournot model is that a firm's margin is directly proportional to its share. Thus, although each firm receives the same price, the model implies that firms have different marginal costs, to the extent that shares differ. Differing marginal costs change the calculation of deadweight loss, in that quantity reductions at high-margin firms result in greater deadweight loss than comparable quantity reductions at low-margin firms. In practice, it is simple to account for heterogeneous marginal costs when calculating deadweight loss, so we abstract from this issue in Figure 10, both for simplicity and to conform with the Canadian approach.

Approximating deadweight loss requires only three inputs: the market demand elasticity,[249] the price increase expected from the merger, and the firms' margins. Then, the quantity decrease from the merger is approximately equal to the price increase multiplied by market demand elasticity,[250] and deadweight loss is equal to the area of the shaded triangle (consumers' share of deadweight loss) and the shaded rectangle (producers' share). Following Professor Ralph Winter's approach, total deadweight loss, as a percentage of industry revenue, is approximately equal to the expression below.[251] The first term pertains to the share of deadweight loss that comes from consumers, and the second term pertains to that which comes from producers.[252]

$$\frac{1}{2} * \text{elasticity} * (\%\Delta\text{price})^2 + \text{margin} * \text{elasticity} * \%\Delta\text{price}$$

We adapted Table 11 from a table in the expert report of Professor Michael Ward, submitted on behalf of the Canadian Competition Bureau in connection with the proposed merger between Superior Propane and ICG Propane.[253] Professor Ward considered three possibilities for the value of market elasticity (1.5, 2.0, and 2.5), and he calculated the price increase implied by each demand elasticity for residential, industrial, and automotive propane. He then calculated the deadweight loss that would result from the Superior–ICG merger, as a percentage of total revenue for all sellers of Canadian propane prior to the merger.[254] For example, if demand is not very elastic (1.5), Ward predicted industrial propane would increase in price by 8.9% postmerger, and that the deadweight loss would then be 5.0% of premerger propane revenue. Thus, for an efficiencies defense to apply under Section 96 of Canada's Competition Act, cost savings would need to be in excess of 5.0% of premerger revenue in this case.[255]

---

249 Market demand elasticity equals the ratio of the percentage change in quantity demanded to the percentage change in price. For example, a market demand elasticity of -0.5 implies that, for every percentage increase in price, quantity will decrease by half as much.

250 This is an approximation because demand elasticity measures the rate at which quantity demanded decreases as price increases (i.e., the reduction in quantity for a small price increase). For a large price increase, demand elasticity could change as price increases.

251 *See* Winter, *supra* note 218, at 145–47.

252 *See id.*

253 A version of the table is reproduced in Section IX of *Commissioner of Competition v. Superior Propane Inc.*, [2002] F.C. 16, paras. 396–97 (Can.).

254 Following Matthewson and Winter's approach, we revise Ward's table to account for both the producer and consumer share of deadweight loss. Per Matthewson and Winter, we use a margin of 33% for Canadian propane firms. *See* Frank Mathewson & Ralph Winter, *The Analysis of Efficiencies in* Superior Propane*: Correct Criterion Incorrectly Applied*, 20 CAN. COMPETITION REC. 88, 90–92 (2000).

255 *See supra* note 247.

[Table 11:] Predicted price increases and consequent deadweight loss (as a percentage of premerger Canadian propane revenue) in the Superior Propane–ICG Propane merger. Predicted price increases differ across the residential, industrial, and automotive segments because of differences in competitive conditions.

	Propane demand elasticity		
	1.5	2.0	2.5
Residential price increase	8.0%	4.1%	2.1%
Deadweight loss	4.4%	2.9%	1.8%
Industrial price increase	8.9%	5.4%	3.3%
Deadweight loss	5.0%	3.9%	2.9%
Automotive price increase	7.7%	4.5%	2.7%
Deadweight loss	4.3%	3.2%	2.3%

C. *Observations About the Canadian Application of a Total Welfare Standard*

This Section discusses two issues Canada has encountered in the application of its standard, with the expectation that both may arise if the total surplus standard were adopted in the United States.

First, a total welfare standard may be likely to prioritize quantitative over qualitative evidence. The Supreme Court of Canada's 2015 *Tervita Corp. v. Canada*[256] decision appears to dismiss qualitative evidence that a merger involving potential competitors would result in deadweight loss, saying that "the absence of price elasticity information means that the possible range of deadweight loss resulting from the merger is unknown" and that it was appropriate to "assign[] 'undetermined' quantitative effects a weight of zero."[257] Under this approach, even small fixed cost efficiencies will offset projected anticompetitive effects. Consequently, the court dismissed the Competition Bureau's attempt to block the merger.[258]

Winter argued that the decision "create[d] a hierarchy of quantitative evidence over qualitative evidence" and "fail[ed] to recognize the potential limitations of this class of evidence. Meaningful estimation of parameters that are quantifiable in principle may be impossible, even where data are

256 [2015] S.C.R. 161 (Can.).
257 *Id.* ¶¶ 139–40.
258 *Id.* ¶ 168.

plentiful."[259] While both quantitative and qualitative evidence are valuable to merger review, a downgrading of qualitative evidence may be inevitable in contexts in which antitrust enforcement agencies must balance offsetting effects.[260] That is, under a consumer welfare standard, an antitrust agency must determine if a price will go up following a merger, whereas under a total welfare standard the agency must determine by how much the price will increase, and, separately, by how much fixed costs will decrease. The need to compare the outcomes of these two calculations will likely cause antitrust practitioners to prioritize quantitative evidence, even when it is of relatively low quality.

Second, it remains unclear how Canada would treat cost savings if one or both merging firms were foreign-owned, or if the merged entity had significant operations in other countries. As Professor Stephen F. Ross argues, in "a continental market . . . the economic harm may occur in Canada while the offsetting economic benefits will often occur in the United States,"[261] while a "Canadian welfare model would require an enormously complex case-by-case assessment of the national identity of consumers and shareholders."[262] Further, former Director of Economics at the Competition Bureau, Margaret Sanderson, envisions "the prohibition of an anticompetitive merger between two Canadian subsidiaries of US-headquartered, publicly traded, multinational corporations while an equivalent merger involving two Canadian companies is allowed to proceed in light of the efficiency gains."[263] She further suggests such a prohibition may violate Canada's trade agreements, including NAFTA, which prohibits discrimination against foreign firms.[264]

The Competition Bureau appears to have considered this criticism, as its 2011 *Merger Enforcement Guidelines* ("MEGs") explicitly exclude "gains that are achieved outside Canada," such as "efficiency gains arising from the rationalization of the parties' facilities located outside Canada that do not benefit the Canadian economy."[265] The MEGs go on to state that "[t]he issue is whether the efficiency gains will benefit the Canadian economy rather than

---

259 *See* Winter, *supra* note 218, at 135.

260 US agencies perform this balancing under the consumer welfare standard in vertical mergers. Review of vertical mergers necessarily involves a quantitative weighing of the merged firm's incentive to raise its rivals' costs with its incentive to lower its own price due to the elimination of double marginalization. *See* Steven C. Salop & Daniel P. Culley, Potential Competitive Effects of Vertical Mergers: A How-To Guide for Practitioners 33 (Dec. 8, 2014) (unpublished manuscript), https://scholarship.law.georgetown.edu/facpub/1392/. We note that qualitative evidence (e.g., rivals' expectations that their input price will increase) is difficult to interpret in this setting.

261 Stephen F. Ross, *Afterword—Did the Canadian Parliament Really Permit Mergers That Exploit Canadian Consumers So the World Can Be More Efficient?*, 65 ANTITRUST L.J. 641, 643 (1997).

262 *Id.* at 644–45.

263 Margaret Sanderson, *Efficiency Analysis in Canadian Merger Cases*, 65 ANTITRUST L.J. 623, 627 (1997).

264 *See id.*

265 *See* COMPETITION BUREAU, MERGER ENFORCEMENT GUIDELINES 42–43 (2011), https://www.competitionbureau.gc.ca/eic/site/cb-bc.nsf/vwapj/cb-meg-2011-e.pdf/$FILE/cb-meg-2011-e.pdf.

the nationality of ownership of the company."[266] This issue has not yet been litigated in Canada, and it seems certain to be a difficult problem for the Competition Bureau and Canadian courts to tackle.

If a total welfare standard were adopted in the United States, one possibility is that the US antitrust enforcement agencies would adopt broad language like that in Canada's MEGs, stating that the benefit of fixed cost savings must accrue to the United States economy to be cognizable. US antitrust enforcement agencies and courts could then apply the standard on a case-by-case basis, developing standards for discounting cost savings accruing outside of the United States in the process.

CONCLUSION

Critics of modern antitrust enforcement rightly recognize that more aggressive antitrust enforcement can only be obtained by replacing the consumer welfare standard with a different enforcement paradigm. To achieve this goal, these critics employ flawed critiques of the consumer welfare standard and, in its stead, advance calls for new standards that fail to meet key criteria for predictability, administrability, and credibility. In addition, critics omit from the debate a discussion of the total welfare standard. In an attempt to recalibrate the discussion, this Article analyzed the total welfare standard under these same criteria. And, in an attempt to demonstrate the administrability of the standard, this Article offered a methodology for its application in merger review. These contributions are made in a humble attempt to enhance the dialogue regarding selection of the appropriate welfare standard by creating a complete picture of the options available to antitrust enforcers.

266 *Id.* at 43 n.66.