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## Reframing the (False?) Choice Between Purchaser Welfare and Total Welfare

Alan J. Meese

*William and Mary Law School*

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## REFRAMING THE (FALSE?) CHOICE BETWEEN PURCHASER WELFARE AND TOTAL WELFARE

Alan J. Meese\*

*This Article critiques the role that the partial equilibrium trade-off paradigm plays in the debate over the definition of “consumer welfare” that courts should employ when developing and applying antitrust doctrine. The Article contends that common reliance on the paradigm distorts the debate between those who would equate “consumer welfare” with “total welfare” and those who equate consumer welfare with “purchaser welfare.” In particular, the model excludes, by fiat, the fact that new efficiencies free up resources that flow to other markets, increasing output and thus the welfare of purchasers in those markets. Moreover, the model also assumes that both the positive and negative impacts of a transaction are permanent and occur immediately and simultaneously. As a result, the model excludes the (very real) possibility that subsequent entry will undermine or mitigate any market power, leaving only efficiencies that benefit purchasers in the original market.*

*Removal of these unrealistic assumptions requires the antitrust community to reframe the debate about the appropriate welfare standard for antitrust and could require adjustment of the standards applied to practices that both raise prices and create efficiencies in the relevant market. For instance, recognition that efficiencies generated in one market cause resource flows to other markets and higher output in such markets undermines claims that producers “pocket” efficiencies whenever a practice results in higher prices. Thus, instead of involving a conflict between “producers” and “purchasers” in a single market, transactions that both raise prices and create efficiencies require antitrust policy to resolve a conflict between purchasers in the original market, on the one hand, and those in other markets, on the other. In the same way, the realization that the trade-off model ignores the passage of time requires antitrust policy to resolve a conflict between current and future purchasers in the original market.*

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\* Ball Professor of Law, William and Mary Law School. The author is grateful to Sarah Stafford for enlightening discussions about the project.

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## INTRODUCTION

Rational implementation of the antitrust laws requires courts and the enforcement agencies to identify, articulate, and apply some organizing principle when developing doctrine that governs antitrust disputes. For instance, application of the Sherman Act's "Rule of Reason" requires courts and enforcers to ascertain the distinction between "reasonable" and "unreasonable" restraints. Moreover, the Clayton Act's ban on mergers or exclusive agreements that "substantially lessen competition" requires courts to articulate and enforce a preferred version of "competition." Finally, courts enforcing section 2 of the Sherman Act, which bans "monopolization" and not merely "monopoly," must determine what sort of economic effect distinguishes old-fashioned rivalry from "unlawful exclusion" necessary to a finding of monopolization.

Most scholars, judges, and enforcement officials have endorsed "consumer welfare" as this organizing principle. Under a "consumer welfare" standard, courts would fashion antitrust doctrine governing restraints, mergers, or unilateral conduct so as to ban only those practices that reduce such welfare, while leaving those that do not unscathed. Such an approach roughly tracks that announced in *Standard Oil Co. of New Jersey v. United States*,<sup>1</sup> where the Court held that the sections 1 and 2 of the Sherman Act ban all agreements or unilateral practices that produce "monopoly or its consequences," which the Court equated with increased prices, reduced quality, or reduced output. All other practices, the Court said, were "normal" or "usual" practices that forwarded, increased, or fructified trade and thus did not violate the Sherman Act.

At the same time, "consumer welfare" (or, for that matter, "the consequences of monopoly") means different things to different people. In particular, some equate "consumer welfare" with the welfare of all

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1. 221 U.S. 1 (1911).

consumers in society, while others equate “consumer welfare” with the welfare of purchasers in the relevant market governed by the challenged restraint, merger, or unilateral practice. The first definition of “consumer welfare” is really a “total welfare” standard, while the second definition is best described as a “purchaser welfare” standard. That is, the first treats the only harmful consequence of monopoly as output reduction and resulting misallocation of resources and deadweight loss, while the second treats all reductions in purchaser welfare, including price increases, as harmful. Under the first definition, courts would only ban those restraints that reduce society’s overall welfare or, more technically, are “inefficient” in a Kaldor-Hicks sense. Under the second definition, by contrast, courts would ban any restraint that reduces the “consumer surplus” of purchasers in the relevant market, even if the restraint increases the welfare of producers by a greater amount.

The choice between these two standards often will not matter for antitrust doctrine. After all, most commercial conduct increases welfare according to either definition, or at least does not reduce it. Moreover, some conduct *reduces* welfare under *both* definitions. At the same time, there is a subset of conduct that a “purchaser welfare” standard would condemn, but that a “total welfare” approach would leave unscathed and even applaud. In particular, some conduct will both increase prices and also create efficiencies that outweigh any deadweight losses, thereby increasing overall welfare but reducing the welfare of purchasers in the relevant market. Moreover, the choice between enforcement regimes, as well as the amount invested in enforcement, necessarily turns on the regime’s account of “antitrust harm,” which, in turn, depends upon one’s choice between competing definitions of “consumer welfare.”

The choice between competing definitions of “consumer welfare” is ultimately a normative one; economic theory cannot make the choice for us. At the same time, such theory can inform or frame the debate in a way that might influence the normative outcome. This Article argues that economic theory has done exactly that, namely, framed the choice between these two standards in a manner that creates a misleading or at least incomplete debate. In particular, the Article examines the influence of Oliver Williamson’s partial equilibrium trade-off model, first developed to examine the welfare consequences of mergers and other practices that both increase prices and create efficiencies that reduce costs.

Ironically, both consumer welfare schools invoke Williamson’s model when articulating their competing approaches. Thus, the total welfare camp invokes the model to illustrate how practices that create market power and higher prices can nonetheless increase overall welfare by producing efficiencies that counteract the deadweight allocative losses resulting from enhanced market power. Where the welfare impact of efficiencies exceeds that of deadweight losses, they contend, courts should validate the practice, even if it raises prices. At the same time, the purchaser welfare school employs the partial equilibrium model to illustrate the concept of consumer

surplus, which this school of thought treats as the appropriate maximand for antitrust. This school of thought also invokes this model to frame the normative choice as involving a trade-off between the welfare of producers, on the one hand, and consumers, on the other. In so doing, both camps implicitly or explicitly invoke various assumptions of the trade-off model, including, for instance, the assumption that the studied transaction has no impact beyond the relevant market.

This Article offers a critique of the role of the partial equilibrium paradigm in antitrust's normative debate. More precisely, the Article contends that common reliance on the partial equilibrium paradigm distorts the normative debate over appropriate welfare standards. As shown, the partial equilibrium trade-off model excludes, by fiat, the impact of the transaction or practice under scrutiny upon other markets. In particular, the model intentionally ignores the fact that realization of efficiencies frees up resources that necessarily flow to other markets, increasing output and thus increasing the welfare of purchasers in those markets. Moreover, the model also assumes that both the positive and negative impacts of a transaction are permanent and occur immediately and simultaneously. As a result, the model excludes the (very real) possibility that subsequent entry will undermine or mitigate any market power, leaving only efficiencies that benefit purchasers in the original market.

Removal of these unrealistic assumptions requires the antitrust community to reframe the debate about the appropriate welfare standard for antitrust and could require adjustment of the standards applied to such restraints. For instance, recognition that efficiencies generated in one market result in resource flows to other markets and higher output in such markets undermines any argument based on a claim that producers "pocket" efficiencies whenever an efficiency-creating transaction results in higher prices. Thus, instead of involving a conflict between "producers" and "purchasers" in a single market, transactions that both raise prices and create efficiencies require antitrust law and policy to resolve a conflict between purchasers in the original market, on the one hand, and those in other markets, on the other. In the same way, the realization that the partial equilibrium model ignores the passage of time requires antitrust law and policy to resolve a conflict between current purchasers in the original market and those individuals who might purchase in that market in the future. This more nuanced and complete understanding of "what is at stake" where such transactions are concerned may help explain courts' seemingly ambiguous attitude toward the choice between the two competing definitions of "consumer welfare."

Part I of this Article reviews the two competing definitions of "consumer welfare" articulated by the academic community and examines which version(s), if any, courts have adopted. Part II explains how both the "purchaser welfare" and "total welfare" camps embrace the partial equilibrium trade-off model, along with its various restrictive assumptions, employing the model to frame their respective positions. Part III outlines

the trade-off model. Part IV examines the shortcomings of the model as applied to efficient conduct that also increases prices. Part V explains how these shortcomings require the antitrust community to reframe the debate between the purchaser welfare and total welfare schools of thought. This part also offers suggestions for changes in the standards governing efficient but price-raising conduct.

#### I. THE COMPETING DEFINITIONS OF CONSUMER WELFARE: TOTAL WELFARE OR PURCHASER WELFARE

For more than three decades, most scholars, judges, and enforcement officials have endorsed “consumer welfare” as antitrust law’s organizing principle.<sup>2</sup> Under this approach, courts would fashion antitrust doctrine so as to ban only those practices that reduce such welfare, leaving all other conduct unscathed and subject to market discipline and regulation by other bodies of law.<sup>3</sup> Implementation of this goal roughly tracks the normative content of the Rule of Reason, announced in *Standard Oil v. United States*.<sup>4</sup> According to *Standard Oil*, the Sherman Act bans those agreements, and only those agreements, that restrain trade “unduly” by producing monopoly or “the consequences of monopoly.”<sup>5</sup> Moreover, the decision defined such consequences as entailing higher prices, reduced quality, or reduced output.<sup>6</sup>

At the same time, there is substantial disagreement about the meaning of “consumer welfare” and thus the relevance to antitrust analysis of various

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2. See ROBERT H. BORK, *THE ANTITRUST PARADOX* 81–89 (1978); HERBERT HOVENKAMP, *FEDERAL ANTITRUST POLICY: THE LAW OF COMPETITION AND ITS PRACTICE* 83–86 (4th ed. 2011); Robert H. Bork, *Legislative Intent and the Policy of the Sherman Act*, 9 J.L. & ECON. 7 (1966) (contending that Congress intended maximization of “consumer welfare” or “consumer want satisfaction” to serve as the principle guiding development of Sherman Act doctrine); Robert Lande, *Wealth Transfers As the Original and Primary Concern of Antitrust: The Efficiency Interpretation Challenged*, 34 HASTINGS L.J. 65 (1982); Barak Y. Orbach, *The Antitrust Consumer Welfare Paradox*, 7 J. COMP. L. & ECON. 133, 133–34 (2010) (“All antitrust lawyers and economists know that the stated instrumental goal of antitrust laws is ‘consumer welfare,’ which is a defined term in economics.”); Robert Pitofsky, *Past, Present and Future of Antitrust Enforcement at the Federal Trade Commission*, 72 U. CHI. L. REV. 209, 217 (2005) (contending that the welfare of consumers should drive enforcement priorities); Steven C. Salop, *Exclusionary Conduct, Effect on Consumers, and the Flawed Profit Sacrifice Standard*, 73 ANTITRUST L.J. 311, 329–33 (2006) (endorsing a so-called “consumer welfare effect standard” whereby courts determine whether a restraint, on balance, injures purchasers in the relevant market); see also *Reiter v. Sonotone Corp.*, 442 U.S. 330, 343 (1979) (“[The debates in Congress] suggest that Congress designed the Sherman Act as a ‘consumer welfare prescription.’” (citing BORK, *supra*, at 66)); *Chicago Prof. Sports Ltd. v. NBA*, 961 F.2d 667 (7th Cir. 1992) (Sherman Act only bans restraints that reduce “consumer welfare”).

3. See, e.g., BORK, *supra* note at 2, at 81–89, 107–15.

4. 221 U.S. 1 (1911).

5. See *id.* at 55–57.

6. *Id.* at 52 (listing these three evils of monopoly, which led to condemnation at common law).

possible impacts of conduct subject to antitrust scrutiny.<sup>7</sup> Not surprisingly, some scholars would (quite naturally) equate consumer welfare with the welfare of purchasers and potential purchasers in the particular market potentially impacted by the challenged restraint—a conception that emphasizes the distributional effects of challenged restraints.<sup>8</sup> These scholars contend that courts should ban any practice that reduces the welfare of such purchasers, even if the practice results in a more efficient allocation of resources and thus increases the total welfare of society. Put more technically, these scholars would equate “consumer welfare” with the “consumer surplus” generated in the particular market governed by a restraint, thereby ignoring the welfare of that same market’s producers.<sup>9</sup>

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7. See HOVENKAMP, *supra* note 2, at 83–86; (discussing two different conceptions of “consumer welfare” potentially relevant to antitrust analysis); Orbach, *supra* note 2, at 137–38 (“[T]oday, there are two major groups of thoughts [about how to define consumer welfare]: one argues that the term should mean ‘consumer surplus,’ and the other asserts that the appropriate meaning is ‘total surplus’ or ‘aggregate welfare.’”).

8. See Joseph F. Brodley, *The Economic Goals of Antitrust: Efficiency, Consumer Welfare, and Technological Progress*, 62 N.Y.U. L. REV. 1020, 1020 (1987); Aaron S. Edlin, *Predatory Pricing*, in RESEARCH HANDBOOK ON ECONOMICS OF ANTITRUST LAW 144 (Edward Elgar ed., 4th ed. 2012) (embracing such a purchaser-centric definition of “consumer welfare”); John B. Kirkwood & Robert H. Lande, *The Fundamental Goal of Antitrust: Protecting Consumers, Not Increasing Efficiency*, 84 NOTRE DAME L. REV. 191 (2008) (same); Pitofsky, *supra* note 2, at 217 (endorsing a comparison of efficiency effects with adverse impacts on consumers in the market served by the monopolist); Salop, *supra* note 2, at 329–33 (endorsing the so-called “consumer welfare effect standard,” whereby courts determine whether a restraint, on balance, injures purchasers in the relevant market); see also HOVENKAMP, *supra* note 2, at 85–86 (apparently endorsing this definition of consumer welfare). But see Herbert Hovenkamp, *Exclusion and the Sherman Act*, 72 U. CHI. L. REV. 147, 148 (2005) (advocating a test whereby the court weighs the harm to purchasers against the benefits of the challenged practice and bans the practice when harms are disproportionate to the benefits). One scholar has suggested a compromise of sorts between these two approaches. See generally Jonathan B. Baker, *Competition Policy As a Political Bargain*, 73 ANTITRUST L.J. 483 (2006) (contending that antitrust law should ban all practices that injure consumers in the relevant market unless doing so would sacrifice very large efficiencies in a particular case).

9. See HOVENKAMP, *supra* note 2, at 85 n.17 (explaining how this version of “consumer welfare” focuses on the maximization of consumer surplus in a particular market and thus ignores the impact of a practice on the welfare of producers); Brodley, *supra* note 8, at 1033 (“However, if consumer welfare is to serve as an operational principle of antitrust law, it must refer to the direct and explicit economic benefits received by the consumers of a particular product as measured by its price and quality. Using the more precise language of economics, consumer welfare can be defined as consumer surplus, which is that part of the total surplus that accrues to consumers.”). As Barak Orbach has explained, a “consumer surplus” approach to antitrust depends upon the identification of a relevant market and subsequent assessment of the welfare of consumers in that market. See Orbach, *supra* note 2, at 138–39. Presumably the “relevant market” for this purpose consists of the market treated as “relevant” for purposes of the appropriate antitrust analysis of the challenged restraint (e.g., the “market” that a defendant has allegedly monopolized in violation of section 2 of the Sherman Act or the market where a merger allegedly substantially lessens competition). See 15 U.S.C. § 2 (2006) (forbidding monopolization, attempted monopolization, and conspiracy to monopolize “any part of the trade or commerce among the several States”); *id.* § 18 (forbidding mergers that tend substantially to lessen competition or create a monopoly in any “line of commerce or in any activity affecting commerce in any section of the country”). Of

For these scholars, antitrust law should ban all practices that reduce consumer surplus and should thus be agnostic about the efficient allocation of resources. In fact, such an approach is downright hostile to such efficiency if the realization of efficiency requires reduction of consumer surplus.<sup>10</sup>

At the same time, some other advocates expressly employ the term to refer to the welfare of *all* individuals in society, without regard to whether an individual actually “consumes” the product whose price, output, or quality the challenged practice affects.<sup>11</sup> Indeed, members of this camp go so far as to include as “consumers” the shareholders of firms that have adopted a challenged practice or transaction. Supporters of this approach note that “shareholders are people too” and that there is no reason to ignore their welfare when evaluating a restraint or crafting antitrust doctrine, even if any increase in their welfare includes supracompetitive profits that result

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course, in some instances, no overt market definition is necessary; the prime example is horizontal price fixing, where the law assumes that the agreement itself defines the extent of the market. *See* *FTC v. Super. Ct. Trial Lawyers Ass’n*, 493 U.S. 411, 435 n.18 (1990) (“Very few firms that lack power to affect market prices will be sufficiently foolish to enter into conspiracies to fix prices. Thus, the fact of agreement defines the market.” (quoting *BORK*, *supra* note 2, at 269)). It is less clear how one would determine the relevant universe of consumers if courts accept recent proposals to dispense with market definition in certain merger cases. In some cases, however, the choice of such a relevant market will necessarily be arbitrary. Consider, for instance, a merger between two firms that produce automobiles for a national market. Assume further that the merger produces significant efficiencies that manifest themselves as lower unit costs of producing the new firm’s product. Finally, assume that the new firm cannot exercise market power in the national market but can, via price discrimination, exercise such power in a narrow submarket. *See* U.S. DEP’T OF JUSTICE & FTC, HORIZONTAL MERGER GUIDELINES § 10 (2010) [hereinafter 2010 HORIZONTAL MERGER GUIDELINES]. The transaction will reduce prices in one market (the overall national market), while increasing prices in the price discrimination market(s) (unless the efficiencies are extremely large). Thus, allowing the transaction will injure consumers in one (narrow) market, while banning the transaction will injure consumers in the larger market. As far as the author is aware, proponents of the “purchaser welfare” version of “consumer welfare” have not offered a principle that would reveal which consumers the law should prefer in these circumstances.

10. *See, e.g.*, Robert H. Lande, *The Rise and (Coming) Fall of Efficiency As the Ruler of Antitrust*, 33 ANTITRUST BULL. 429 (1988) (contending that purchaser welfare, and not efficiency (total welfare), is the appropriate organizing principle of antitrust law).

11. *BORK*, *supra* note 2, at 107–12 (equating “consumer welfare” with the welfare of all individuals in society, whether or not they are actual or potential purchasers in the market affected by the challenged restraint); *see also* Frank H. Easterbrook, *Correspondence, Workable Antitrust Policy*, 84 MICH. L. REV. 1696, 1702–03 (1986) [hereinafter Easterbrook, *Workable Antitrust Policy*] (“Members of Congress did not see themselves choosing between ‘efficiency’ and some other goal. . . . However you slice the legislative history, the dominant theme is the protection of consumers from overcharges. This turns out to be the same program as one based on ‘efficiency.’”); Frank H. Easterbrook, *When Is It Worthwhile To Use Courts To Search for Exclusionary Conduct*, COLUM. BUS. L. REV. 345, 347 (2003) [hereinafter Easterbrook, *Exclusionary Conduct*] (stating that concern for “consumers’ welfare” is a “shorthand for the allocative efficiency costs of monopoly” and endorsing this approach). The assumption, of course, is that every individual is also a consumer, thereby justifying the equation of the welfare of individuals with the welfare of “consumers.”



from an exercise of market power to the detriment of purchasers in the relevant market.<sup>12</sup>

As others have explained, this version of “consumer welfare” really just seeks to maximize society’s total or aggregate welfare.<sup>13</sup> This total welfare approach implies that courts should ignore any purely distributional effects of a challenged practice, given that pure redistribution is a zero-sum game with no net impact on society’s economic welfare, and instead only ban those practices that reduce the total value of society’s output by inducing a less efficient allocation of resources than existed before the restraint.<sup>14</sup> Put more technically, this school of thought would have courts apply the Kaldor-Hicks efficiency criterion to challenged practices, thereby banning those practices—and only those practices—that result in a less efficient allocation of the society’s given resources, and thus reduce society’s overall stock of wealth, without regard to the distribution of such wealth.<sup>15</sup>

Many attribute this equation of “consumer welfare” with “total welfare” to Robert Bork, who defined consumer welfare in this way during the 1960s.<sup>16</sup> However, Bork was not the first to define consumer welfare in this manner. Instead, more than a decade before Bork’s major work on the subject, Arnold Harberger, an economist at the University of Chicago, employed the term in this manner in his seminal work.<sup>17</sup> In particular,

12. See BORK, *supra* note 2, at 110 (treating owners of a monopoly as consumers whose welfare is part of the overall consumer welfare calculus); see also HOVENKAMP, *supra* note 2, at 85 (“[T]he consumer welfare principle [articulated by Bork and others] is predicated on the observation that *everyone* is a consumer.” (emphasis in the original)).

13. See HOVENKAMP, *supra* note 2, at 85–86; Orbach, *supra* note 2, at 144; see also Robert H. Bork, *Antitrust and Monopoly: The Goals of Antitrust Policy*, 57 AM. ECON. REV. 242, 245 (1967) (apparently equating “consumer welfare” with “national wealth”); Bork, *supra* note 2, at 7 (courts should interpret the Sherman Act so as to maximize “consumer welfare” or the “wealth or consumer want satisfaction”).

14. See BORK, *supra* note 2, at 110–12 (contending that courts should ignore considerations of income distribution between consumers and producers when fashioning antitrust doctrine); HOVENKAMP, *supra* note 2, at 85–86 (describing this total welfare conception of “consumer welfare”); RICHARD A. POSNER, *ANTITRUST LAW* 9 (2d ed. 2001) (stating that promotion of “[allocative] efficiency” is the only proper objective of the antitrust laws); Easterbrook, *Exclusionary Conduct*, *supra* note 11, at 347 (stating that concern for “consumers’ welfare” is “shorthand for the allocative efficiency costs of monopoly”).

15. See HOVENKAMP, *supra* note 2, at 84 (equating this account of “consumer welfare” with a “potential Pareto” optimality standard, which is a Kaldor-Hicks standard); see also POSNER, *supra* note 14, at 2 (equating the “efficiency” relevant to antitrust laws with Kaldor-Hicks efficiency); Guido Calabresi, *Transaction Costs, Resource Allocation and Liability Rules—A Comment*, 11 J.L. & ECON. 67, 69–71 (1968) (arguing that antitrust regulation can be explained as an effort to replicate allocation of resources that would occur in absence of bargaining costs, thereby maximizing total welfare); Alan J. Meese, *Debunking The Purchaser Welfare Account of Section 2 of the Sherman Act: How Harvard Brought Us a Total Welfare Standard and Why We Should Keep It*, 85 N.Y.U. L. REV. 659, 701–02 (2010). It should be noted that Calabresi did not necessarily embrace this explanation as the sole possible rationale for antitrust regulation. See Calabresi, *supra*, at 69–71.

16. See, e.g., Lande, *supra* note 2, at 83–84.

17. See Arnold C. Harberger, *Monopoly and Resource Allocation*, 44 AM. ECON. REV. 77 (1954).

Harberger set out to determine the overall impact of monopoly (both unilateral and shared) on resource allocation and resulting total economic welfare. The resulting 1954 article employed the term “consumer welfare” seven times, each time in a manner that clearly equates the term with total welfare.<sup>18</sup> While Bork never cited this or any other work by Harberger, he employed the same definition of “consumer welfare.”

Several other proponents have endorsed such a “total welfare” standard in the antitrust context without attempting to equate such welfare with “consumer welfare.”<sup>19</sup> Under such a “total welfare” approach, proof that a challenged practice exercises market power, distorts the allocation of resources, and injures consumers in a relevant market is only a necessary

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18. See, e.g., *id.* at 84 (“Elimination of resource misallocations in American manufacturing in the late twenties would bring with it an improvement in consumer welfare of just a little more than a tenth of a per cent. In present values, this welfare gain would amount to about \$2.00 per capita.”); *id.* (characterizing this same loss as a “total welfare loss”); *id.* at 78 fig.1 (displaying the so-called “welfare loss triangle”); *id.* (stating that column 4 “measures the amount by which consumer ‘welfare’ fell short of the level it would have attained if resources had been so allocated as to give each industry an equal return on capital. It assumes that the elasticity of demand for the products of each industry is unity and approximates the area designated as the ‘welfare loss’ in Figure 1.”).

19. See CARL KAYSEN & DONALD TURNER, *ANTITRUST POLICY: AN ECONOMIC AND LEGAL ANALYSIS* (1959) (contending that antitrust law should adopt a “Pigouvian” approach that bans all practices that enhance market power without producing significant efficiencies); POSNER, *supra* note 14, at 9 (stating that promotion of “[allocative] efficiency” is the only proper objective of the antitrust laws); J.M. Clark, *Toward a Concept of Workable Competition*, 30 AM. ECON. REV. 241 (1940); Ken Heyer, *Welfare Standards and Merger Analysis: Why Not the Best?*, 2 COMPETITION POL’Y INT’L 29 (2006) (describing the difference between a “total welfare” and a so-called “consumer welfare” test as applied to mergers and advocating the adoption of the former); Edward S. Mason, *Monopoly in Law and Economics*, 47 YALE L.J. 34 (1938); Donald F. Turner, *The Scope of Antitrust and Other Economic Regulatory Policies*, 82 HARV. L. REV. 1207, 1208–09 (1969) (assuming the appropriate goal of economic policy is to “maximize aggregate economic wealth” and endorsing the view that economies of scale should justify high concentration); Oliver E. Williamson, *Allocative Efficiency and the Limits of Antitrust*, 59 AM. ECON. REV. 105, 108–09 (1969) (advocating the “allocative efficiency” approach on the grounds that such an approach will maximize society’s total welfare); see also *United States v. Microsoft Corp.*, 253 F.3d 34, 58 (D.C. Cir. 2001) (en banc) (per curiam) (antitrust should seek to maximize social welfare); Meese, *supra* note 15, at 668–69 (describing the contending definitions of “consumer welfare” and contending that Bork’s version is properly dubbed a “total welfare” standard); *id.* at 690–715 (contending that section 2 case law exemplifies a “total welfare” approach and that courts should retain such a standard). Several other scholars have, over the years, embraced a “total welfare” approach when tackling antitrust problems, without recognizing the existence of an alternative standard. It should be noted here that those who equate allocative improvements with improvements in total welfare necessarily assume that the marginal value of an additional dollar of wealth is equal across all members of society, or at least all those impacted by challenged conduct. See Williamson, *supra*, at 108 (“Necessarily, for every allocative efficiency judgment which has distributional consequences, there exists an implicit, if not an explicit, distributional weighting. Typically the benefits and costs are weighted equally, ‘to whomsoever they may accrue.’”); see also POSNER, *supra* note 14, at 23 (stating that the equation of allocative efficiency with total welfare rests upon the heroic “assumption that a dollar is worth the same to [everybody],” an assumption that allows for the equation of wealth maximization via allocative efficiency with utility and this welfare maximization).

attribute of antitrust harm, given that some practices that result in such misallocation and injury to market consumers might also create productive efficiencies. The creation of such efficiencies is itself an improvement in the allocation of resources—an improvement that might exceed the allocative harm resulting from an exercise of market power.<sup>20</sup> Given this possibility, the total welfare standard will only condemn those practices that reduce overall efficiency, that is, result in an allocation of resources that, on net, diverts resources to lowered-valued uses and thus reduces wealth and economic welfare.<sup>21</sup> Consequently, unlike a purchaser welfare approach, the total welfare version of consumer welfare takes into account the well-being of all members of society, including producers in the relevant market.

The choice between these two definitions of “consumer welfare” is not always dispositive when analyzing challenged restraints. After all, much conduct potentially subject to antitrust regulation—even conduct that eliminates rivalry between competitors—has no apparent impact on consumer welfare, however defined, or may even improve such welfare under either definition. For instance, when two former rivals form a partnership, they reduce competition between themselves. However, unless the reduction in rivalry confers market power on the parties, the reduction can neither raise prices nor cause a misallocation of resources and thus cannot reduce “consumer welfare” under either definition.<sup>22</sup> In the same way, a merger or joint venture between two independent firms will certainly reduce rivalry but may not confer market power. Indeed, like the formation of a partnership, a merger or joint venture may result in productive efficiencies and thus enhance the allocation of resources, increase market output, and reduce prices, thereby *increasing* consumer welfare under either definition.<sup>23</sup>

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20. See, e.g., BORK, *supra* note 2, at 110–12. It should be noted that Williamson obscured this point by his choice of terminology. See Oliver E. Williamson, *Economies As an Antitrust Defense: The Welfare Tradeoffs*, 59 AMER. ECON. REV. 18, 22 n.4 (1968) (“My use of dead-weight loss is somewhat restrictive. Inefficiency is also a dead-weight loss. For convenience of exposition, however, I refer to the Marshallian triangle as the dead-weight loss and compare this to the cost saving (efficiency) aspects of a merger.”). In other contexts, economists regularly treat productive inefficiency as a misallocation of resources producing a deadweight loss. See *infra* notes 153–54, 218–21 and accompanying text.

21. See BORK, *supra* note 2, at 107–10; Williamson, *supra* note 19, at 107 (“The allocative efficiency consequences of any merger that increases both efficiency and market power can be evaluated only by estimating net effects.”); see also POSNER, *supra* note 14, at 9 (articulating the view that “the economic theory of monopoly provides the only sound basis for antitrust policy”); *id.* at 27 (concluding that the “[total welfare] approach emerges as the natural, the feasible, and the legitimate guide to interpreting the antitrust statutes”).

22. See Robert H. Bork, *The Rule of Reason and the Per Se Concept: Price Fixing and Market Division*, 75 YALE L.J. 373 (1966); see also *Broad. Music, Inc. v. Columbia Broad. Sys.*, 441 U.S. 1, 9 (1979) (“When two partners set the price of their goods or services, they are literally ‘price fixing,’ but they are not *per se* in violation of the Sherman Act.”).

23. See generally, e.g., *United States v. Addyston Pipe & Steel Co.*, 85 F. 271 (6th Cir. 1898) (explaining how the common law encouraged the formation of partnerships and accompanying agreements even though the result was reduced competition between the partners); see also *Broad. Music, Inc.*, 441 U.S. at 23 (“Mergers among competitors

On the other hand, some conduct reduces consumer welfare under either definition. Naked horizontal price fixing, for instance, can exercise market power, increase consumer prices, and distort the allocation of resources, thereby reducing both total welfare *and* consumer surplus and thus the welfare of purchasers in the relevant market.<sup>24</sup> Not surprisingly, then, proponents of both schools of thought condemn such conduct.<sup>25</sup> In the same way, a merger can enhance market concentration and thereby facilitate the unilateral or concerted exercise of market power, reducing the welfare of purchasers in the relevant market and distorting the allocation of resources. Here again, and not surprisingly, both schools of thought condemn such transactions.<sup>26</sup> Finally, conduct can exclude rivals on a basis other than efficiency and raise prices and distort the allocation of resources, here again reducing both total and purchaser welfare and eliciting the condemnation of both camps.<sup>27</sup>

Not all conduct potentially subject to antitrust regulation is as unambiguously harmful or beneficial as the categories of conduct described above. Instead, some conduct enhances producers' market power while

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eliminate competition, including price competition, but they are not *per se* illegal, and many of them withstand attack under any existing antitrust standard.”); BORK, *supra* note 2, at 221 (contending that the vast majority of mergers should be lawful because they lead to no market power and thus no allocative loss).

24. See BORK, *supra* note 2, at 263 (stating that the *per se* ban on price fixing has resulted in “contributions to consumer welfare over the decades [that] have been enormous”). To be sure, price fixing by small market participants may produce no harm whatsoever, at least in theory. However, as the Supreme Court has explained, the fact that cartel participants expend resources creating, enforcing, and defending a price fixing agreement thereby signals members’ belief that they constitute a “relevant market” for antitrust purposes and thus have the power to exercise market power and impose harm. See *FTC v. Super. Ct. Trial Lawyers Ass’n*, 493 U.S. 411, 435 n.18 (1990) (“‘Very few firms that lack power to affect market prices will be sufficiently foolish to enter into conspiracies to fix prices. Thus, the fact of agreement defines the market.’” (quoting BORK, *supra* note 2, at 269)).

25. See BORK, *supra* note 2, at 267–69 (contending that cartel pricing should be unlawful *per se*); Robert H. Lande & Howard P. Marvel, *Three Types of Collusion: Fixing Prices, Rivals, and Rules*, 2000 WIS. L. REV. 941, 944–46 (same).

26. See generally BORK, *supra* note 2, at 220–22 (condemning mergers that lead to high enough market concentration to confer market power and thus produce allocative losses); Alan A. Fisher & Robert H. Lande, *Efficiency Considerations in Merger Enforcement*, 71 CALIF. L. REV. 1580 (1983); Williamson, *supra* note 19, at 106–09 (advocating so-called “allocative efficiency criterion” that would ban any transaction that results in a net allocative loss, including mergers that raise prices without producing efficiencies). Of course, Bork opined that courts should not engage in a case-by-case comparison of the allocative losses resulting from market power with the allocative gains resulting from productive efficiencies. See BORK, *supra* note 2, at 122–29. He did so because he believed that such balancing was beyond the capacity of the courts and not because he believed that such efficiencies were irrelevant as a normative matter.

27. See BORK, *supra* note 2, at 160 (approving a ban on “improper exclusion,” that is, conduct that excludes rivals on some basis other than efficiency and thus protects monopoly without offsetting benefits); Salop, *supra* note 2, at 317 (approving a ban on conduct that excludes rivals without producing any benefits).

simultaneously creating significant productive efficiencies.<sup>28</sup> Where such “mixed” or “ambiguous” conduct is concerned, the choice between “total welfare” and “purchaser welfare” standards and their respective accounts of antitrust harm will usually (but not always) be dispositive. Thus, the choice between a “purchaser welfare” and “total welfare” definition of “consumer welfare” can have significant consequences for antitrust doctrine.<sup>29</sup>

Take merger law. While most mergers are either unambiguously harmful, beneficial, or benign, some are a “mixed bag,” enhancing market power and creating productive efficiencies.<sup>30</sup> Under a “purchaser welfare approach,” a merger that both enhances the market power of the newly created firm while simultaneously creating efficiencies is invalid, except in those rare cases in which the transaction creates efficiencies so large that they compel the new firm to “pass on” such efficiencies to purchasers in the relevant market, by charging prices lower than or equal to those charged before the transaction and thereby protecting purchasers in the relevant market from overcharges.<sup>31</sup> Thus, it is said, courts and agencies should ignore those efficiencies that only manifest themselves as profits for shareholders of the merging parties and thus increase producer surplus even if those efficiencies produce allocative gains that outweigh the harm resulting from the market-power induced misallocation of resources and result in an increase in total welfare.<sup>32</sup>

By contrast, under a total welfare approach, price is beside the point when analyzing such a transaction; a merger that creates market power and results in higher prices will nonetheless survive scrutiny whenever it creates productive, and thus allocative, efficiencies that outweigh the relatively small deadweight loss resulting from the misallocation of resources associated with market power.<sup>33</sup> Such a transaction should survive scrutiny, it is said, even if the shareholders of the merging firms capture all

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28. See Williamson, *supra* note 19, at 106–07 (describing so-called “mixed cases” whereby challenged conduct both enhances market power and results in productive efficiency—both impacts which have offsetting allocative consequences).

29. But see Easterbrook, *Workable Antitrust Policy*, *supra* note 11, at 1703 (“There are differences at the margins [between a policy based on ‘purchaser welfare’ and one based on ‘total welfare’] such as what if anything to do about price discrimination . . . but the differences are not very important.”).

30. See Williamson, *supra* note 19, at 106–07.

31. Fisher & Lande, *supra* note 26, at 1589 (contending that section 7 of the Clayton Act forbids any merger that results in higher prices, without regard to the overall impact upon total welfare); *id.* at 1592 (“In short, Congress’ primary concern was to prevent the formation of market power that would unfairly transfer wealth from consumers to monopolists; efficiency was only of small concern. Congress’ goal was competitive pricing, which it defined primarily in distributive rather than in efficiency terms.”).

32. See *id.* at 1632–33 (contending that the courts should treat “wealth transfer effects” and the resulting increase in producer surplus as consumer harm when evaluating a merger that creates both efficiencies and market power).

33. See BORK, *supra* note 2, at 107–10 (employing this example to illustrate implications of the total welfare approach); Williamson, *supra* note 19, at 108 (“The emphasis throughout is on mergers, but much of the argument generalizes easily.”).

of the welfare gains attributable to the transaction, because it results in a net improvement in the allocation of society's resources and thus improves society's total economic welfare.<sup>34</sup> Indeed, more than four decades ago, Oliver Williamson, applying a "naïve" partial equilibrium trade-off model, demonstrated that a reduction in production costs of 2 percent would almost always produce efficiencies that offset the reduction in welfare resulting from a misallocation of resources caused by enhanced market power.<sup>35</sup>

The choice between competing welfare standards can have similar consequences in other contexts where transactions simultaneously produce market power and productive efficiencies and thus have offsetting allocative effects. For instance, section 1's Rule of Reason requires courts to "weigh" or "balance" a restraint's harms against any benefits it produces to determine the restraint's overall impact on consumer welfare.<sup>36</sup> The exact nature of such balancing will, not surprisingly, depend upon the tribunal's choice between a "purchaser welfare" and a "total welfare" standard.<sup>37</sup> Under a purchaser welfare standard, courts will focus on the impact of the challenged restraint on price in the relevant market, asking whether the benefits of the restraint offset the negative impact on consumers resulting from any exercise of market power.<sup>38</sup> Under a total welfare standard, by contrast, courts will balance the quantum of efficiencies produced by the restraint against the harm resulting from the misallocation of resources caused by any market power.<sup>39</sup> As a result, and as with mergers, application of a total welfare standard will leave unscathed numerous restraints that a purchaser welfare standard would condemn.<sup>40</sup> Moreover, courts applying section 2's ban on "monopolization" must evaluate conduct that either led to or preserved a monopoly and, thus, perhaps resulted in prices higher than would have occurred without such

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34. See Williamson, *supra* note 19, at 106–09.

35. See Williamson, *supra* note 20, at 21–23.

36. See Alan J. Meese, *Price Theory, Competition and the Rule of Reason*, 2003 U. ILL. L. REV. 77, 98–99. For a classic statement, see *Law v. NCAA*, 134 F.3d 1010, 1019 (10th Cir. 1998) ("[T]he harms and benefits must be weighed against each other in order to judge whether the challenged behavior is, on balance, reasonable." (citing PHILLIP E. AREEDA, *ANTITRUST LAW* ¶ 1502 (1986))).

37. See Roger D. Blair & D. Daniel Sokol, *The Rule of Reason and the Goals of Antitrust: An Economic Approach*, 78 ANTITRUST L.J. 471 (2012).

38. See *NCAA v. Bd. of Regents of the Univ. of Okla.*, 468 U.S. 85 (1985) (condemning a challenged restraint despite the claim that it produced efficiencies given the trial court's findings that the restraint resulted in higher prices and reduced output in the relevant market).

39. See generally Blair & Sokol, *supra* note 37; see also Frank H. Easterbrook, *The Limits of Antitrust*, 63 TEX. L. REV. 1, 15–16 (1984) (resting an argument for relatively permissive antitrust rules on the unelaborated assumption that the misallocation of resources is the only harm from monopoly pricing and that false positives deter cost-reducing conduct and increase the cost of producing the market's entire output).

40. But see Michael A. Carrier, *The Rule of Reason: An Empirical Update for the 21st Century*, 16 GEO. MASON L. REV. 827, 827 (2009) (finding that over 95 percent of Rule of Reason cases fail for lack of proof of harm under either standard).

conduct.<sup>41</sup> Some such conduct simply excludes rivals and creates or preserves monopoly without producing any offsetting virtues and is thus subject to condemnation under any standard.<sup>42</sup> Other conduct, however, both excludes rivals *and* produces nontrivial benefits. The classic example, akin to the efficiency-creating merger, entails the expansion of output and realization of efficiencies, a form of “competition on the merits” that allows a putative monopolist to underprice smaller firms, thereby driving rivals from the market and deterring entry by others.<sup>43</sup> After taking over the market, the firm could raise prices above the preexisting level, while continuing to realize efficiencies whose positive impact outweighs any allocative losses.<sup>44</sup> Here again, the choice between competing definitions of “consumer welfare” will determine whether courts and agencies condemn such conduct.<sup>45</sup>

Finally, separate and apart from any impact on substantive doctrine, the choice between these two definitions of consumer welfare will have important implications for public and private enforcement, particularly when viewed through the lens of the optimal deterrence model.<sup>46</sup> This model posits an inverse relationship between investments in various forms of law enforcement (e.g., detection, prosecution, and sanctions), on the one hand, and the activity producing social harm (e.g., cartels), on the other. Such “investments,” of course, include the cost of so-called “false positives,” that is, the (forgone) benefits of conduct that an imperfect

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41. See *Eastman Kodak Co. v. Image Technical Servs., Inc.*, 504 U.S. 451, 480–81 (1992) (noting that a successful monopolization claim requires proof that monopolist used monopoly power to acquire or maintain the monopoly); *United States v. Grinnell Corp.*, 384 U.S. 563, 570–71 (1966) (same).

42. See *supra* note 28 and accompanying text.

43. See *Eastman Kodak*, 504 U.S. at 482–83 (explaining how maintenance of monopoly by means of efficiency is lawful *per se*); *United States v. United Shoe Mach. Co.*, 110 F. Supp. 295, 345 (D. Mass. 1953), *aff'd*, 347 U.S. 521 (1954) (competition “based on pure merit,” including realization of efficiencies, is unlawful *per se*); see also Meese, *supra* note 15, at 690–715 (explaining how “competition on the merits” has been lawful *per se* since the 1950s).

44. See HOVENKAMP, *supra* note 2, at 29–31 (describing a natural monopoly achieved because of economies of scale); see also DENNIS W. CARLTON & JEFFREY M. PERLOFF, *MODERN INDUSTRIAL ORGANIZATION* 151–52 (2d ed. 1994) (same); *id.* at 139–41 (discussing other possible efficiency sources of monopoly).

45. Compare Meese, *supra* note 15, at 671–72 (explaining how the application of a total welfare standard will validate such conduct, without regard to the resulting price), with Edlin, *supra* note 8 (contending that courts should adopt rules governing predatory pricing that encourage entry of inefficient rivals when necessary to reduce purchaser prices). See also CARL KAYSER, *UNITED STATES V. UNITED SHOE MACHINERY: AN ECONOMIC ANALYSIS OF AN ANTITRUST CASE* 16–19 (1956) (arguing that monopoly maintained by means of economies of scale is unobjectionable); KAYNES & TURNER, *supra* note 19, at 22, 268; Oliver E. Williamson, *Dominant Firms and the Monopoly Problem: Market Failure Considerations*, 85 HARV. L. REV. 1512 (1972).

46. See generally Gary S. Becker, *Crime and Punishment: An Economic Approach*, 76 J. POL. ECON. 169 (1968); William M. Landes, *Optimal Sanctions for Antitrust Violations*, 50 U. CHI. L. REV. 652 (1983) (applying Becker’s model in the antitrust context).

enforcement regime will ban.<sup>47</sup> The model also posits that investments in enforcement are characterized by diminishing returns. Thus, while each incremental dollar spent on law enforcement will further reduce the targeted social harm, such reductions may at some point be so small that additional investments in law enforcement will *reduce* overall welfare. If this is the case, then a wealth-maximizing society will tolerate a certain amount of harm-creating conduct.<sup>48</sup> As a result, the optimal deterrence model implies that society should invest resources in law enforcement until the last dollar invested reduces the targeted harm by the same amount. Such a strategy will thus minimize the overall social cost of the activity in question, defined as the sum of enforcement costs plus the cost of any remaining social harm.<sup>49</sup> If so, then wealth maximization requires that mix and level of investments that minimize the sum of such investments and resulting social harm.

Of course, application of this model requires courts and agencies to identify the relevant “social harm” that investments in law enforcement are supposed to reduce. Obviously, different definitions of “consumer welfare” imply different definitions of “social harm” relevant to this calculus. Under the “total welfare” view, the only relevant harm is any net reduction in total welfare resulting from an overall inefficient allocation of resources.<sup>50</sup> Under this view, even a naked cartel might produce relatively modest actual harm.<sup>51</sup> Under the “purchaser welfare” view, by contrast, any reduction in consumer surplus in the relevant market constitutes harm, even if the transaction actually increases total welfare.<sup>52</sup> As a result, the “payoffs” from particular investments in enforcement of the antitrust laws will vary significantly between the two regimes, even with respect to those restraints, like naked cartels, that both schools of thought would condemn, as will the optimal structure of enforcement institutions and penalties.<sup>53</sup> Roughly

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47. See Frank H. Easterbrook, *Allocating Antitrust Decisionmaking Tasks*, 76 GEO. L.J. 305, 307–09 (1987).

48. See Landes, *supra* note 46, at 652–53 (“[Becker] showed that when the costs of enforcement are positive, it is generally not optimal to reduce the number of violations to zero.”).

49. See *id.*

50. See *id.* at 653 (adopting the total welfare standard when applying an optimal deterrence model to determine antitrust sanctions); Easterbrook, *supra* note 39, at 15–16 (treating the misallocation of resources as the only pertinent harm when deriving optimal antitrust rules).

51. Cf. Harberger, *supra* note 17, at 84 (finding that the total reduction in GNP resulting from monopolistic misallocations amounted to about \$2.00 per consumer).

52. See *supra* notes 9–11 and accompanying text.

53. Of course, any assessment of the relevant “costs” of enforcement would have to include the costs of “false positives,” that is, instances in which courts condemn a restraint, transaction, or practice that in fact produces benefits. As I have explained elsewhere, what counts as a “false positive” will depend significantly upon the definition of “harm” that courts posit. See Meese, *supra* note 15, at 661–62. Thus, to the extent that different institutional arrangements—private enforcement in Article III courts, public enforcement in Article III Courts, and/or administrative enforcement before the Federal Trade Commission—result in different sorts of errors, the choice between two definitions of



speaking, it seems clear that a “purchaser welfare” conception of antitrust harm will warrant more robust investments in enforcing the various antitrust laws than a total welfare approach.<sup>54</sup> For one thing, the latter approach would leave completely unscathed some practices that the purchaser welfare standard would condemn. Moreover, while both standards would condemn a naked cartel, for instance, the purchaser welfare standard would attribute far more harm to such price fixing than a total welfare approach.<sup>55</sup> As a result, investments in law enforcement that might pay off handsomely under a purchaser welfare standard may actually reduce welfare under a total welfare standard.

It bears repeating that a preference for a purchaser welfare standard over a total welfare standard will destroy wealth as economists and others conventionally define it.<sup>56</sup> Indeed, in some cases, application of the purchaser welfare standard will eliminate wealth that exceeds preserved consumer surplus several times over. Assume, for instance, that a merger to monopoly produces both market power and large efficiencies. Assume further that the efficiencies are so large, perhaps a 25 percent cost reduction, that they would almost (but not quite) prevent the new firm from pricing above the premerger level (e.g., that a postmerger price increase would not exceed 5 percent).<sup>57</sup> While banning such a transaction would preserve the value of premerger consumer surplus, by preventing a modest price increase, it would do so only by preventing the realization of efficiencies

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consumer welfare may influence the appropriate mix and jurisdiction of institutions chosen to enforce the antitrust laws.

54. Indeed, application of the optimal deterrence model may suggest that the “purchaser welfare standard” proves too much and thus cannot be applied consistently and to its logical conclusion. After all, given its hostility toward efficiency “as such,” the purchaser welfare standard would require any additional investment (e.g., large public expenditures, many false positives, and reduced efficiencies), so long as the incremental investment would slightly improve purchaser welfare. *But cf.* Baker, *supra* note 8 (contending that antitrust law should ban all practices that injure consumers in the relevant market unless doing so would sacrifice very large efficiencies in a particular case).

55. *See, e.g.,* Williamson, *supra* note 20, at 21 (graphically demonstrating both deadweight efficiency loss and significantly larger transfer of income from purchasers to producers resulting from merger-created market power).

56. *See* Fisher & Lande, *supra* note 26, at 1631 (noting that most economists employ a “total welfare” metric for measuring the impact of transactions that create both market power and efficiencies). *See also generally* Richard A. Posner, *Wealth Maximization Revisited*, 2 NOTRE DAME J.L. ETHICS & PUB. POL’Y 85 (1985).

57. *See* Alan A. Fisher, Robert H. Lande & Walter Vandaele, *Afterword: Could a Merger Lead to Both Monopoly and a Lower Price*, 71 CALIF. L. REV. 1697 (1983) (finding that merger to monopoly will often lead to higher prices despite large efficiencies); *id.* at 1702 (“A merger would have to produce extraordinarily large cost savings to permit the same or lower prices from monopoly than from a premerger competitive situation.”); *id.* (concluding that, where the elasticity of demand in the premerger market was four, cost reduction of 25 percent would be necessary to counteract the resulting exercise of monopoly power, while an even larger cost reduction would be necessary if elasticity were smaller); *see also* F.M. SCHERER & DAVID ROSS, *INDUSTRIAL MARKET STRUCTURE AND ECONOMIC PERFORMANCE* 22 (3d ed. 1990) (illustrating how a very efficient monopoly could charge profit-maximizing prices below what would prevail in a competitive market).

that exceed this preserved surplus by almost a factor of five.<sup>58</sup> Such considerations may explain why some scholars, otherwise sympathetic to the purchaser welfare approach, contend that courts should recognize an exception for those instances in which a challenged practice or transaction produces efficiencies that greatly outweigh the reduction in consumer surplus.<sup>59</sup> They may also explain why some contend that a total welfare approach will actually enhance the welfare of purchasers in the long run.<sup>60</sup>

The choice between “total welfare” and “purchaser welfare” as the governing standard is a normative one, and there are various possible ways to answer this normative question. The chief proponents of the “purchaser welfare” and “total welfare” schools of thought have taken a legal approach to discerning the appropriate normative standard in this context, with each claiming that its preferred approach is consistent with the original meaning of the Sherman Act.<sup>61</sup> Both also derive that meaning by means of the now out-of-fashion method of scrutinizing the legislative history of the Act to determine its authors’ “original intent,” which, each camp claims, supports its preferred interpretation.<sup>62</sup> In particular, the “total welfare” camp

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58. “Almost” a factor of five because banning the transaction would also protect those marginal consumers who would suffer a loss in surplus as a result of the output reduction that would have resulted from the merger. *See generally* Williamson, *supra* note 20, at 21–23.

59. *See* Baker, *supra* note 8 (contending that antitrust law should ban all practices that injure consumers in the relevant market unless doing so would sacrifice very large efficiencies in a particular case).

60. *See* Easterbrook, *supra* note 11, at 1703 (“In the long run consumers gain the most from a policy that emphasizes allocative and productive efficiency.”). *See also* HOVENKAMP, *supra* note 2, at 86 (“most efficiencies have a way of trickling through the economy so that they benefit everyone.”).

61. Some take a different approach. For instance, eschewing conventional legal analysis, Professor Baker has sought to determine which approach would obtain and enjoy stable political support by consumers and producers. *See* Baker, *supra* note 8. Moreover, Richard Posner concedes that the legislative history contains many references to the “non-economic” approach (in which he includes the distributional, purchaser welfare approach as well as concerns for small business and the like). *See* POSNER, *supra* note 14, at 26–27. However, he also contends that the statutory language invites (but does not compel), a total welfare approach and that any other approach would be unworkable. *See id.* Indeed, Bork himself contended that departure from a “total welfare” approach would require courts to make value choices and trade-offs that are beyond the legitimate authority of courts, absent an express delegation from Congress. *See* Robert H. Bork, *Antitrust and Monopoly: The Goals of Antitrust Policy*, 57 AM. ECON. REV. 242 (1967). While both men may be correct that an antitrust policy based upon a concern for the autonomy of small business as one or several values is unworkable, neither explains why a policy based upon “purchaser welfare,” a single, clear objective, would be unworkable. Judge Bork’s failure to address this objection is understandable, however, insofar as his writings on the topic predated Professor Lande’s contention, based on a detailed examination of the legislative history, that Congress meant to ban all restraints that reduce consumer surplus, without regard to overall efficiency consequences. *See, e.g.,* Lande, *supra* note 2, *passim*.

62. That is, both camps engage in what one might properly call “first generation originalism,” which sought to discern the “original intent” of those who drafted the text in question by consulting legislative history and other evidence of such subjective meaning. As others have explained, modern originalism has jettisoned this search for subjective intent,

invokes evidence that Senator Sherman and others wanted to ban combinations that reduced output and increased consumer prices without interfering with combinations or other practices that generated productive efficiencies, even if such efficiencies hampered rivals.<sup>63</sup> By contrast, the “purchaser welfare” camp contends that Congress could not have understood that the exercise of market power results in a deadweight loss, and thus allocative (in)efficiency, with the result that Congress must have had in mind some other sort of “harm” that justified regulation.<sup>64</sup> As a result, this camp focuses on statements suggesting that members of Congress believed that consumers were “entitled” to prices set by a competitive market, and that practices that increased prices above the competitive level abridged this entitlement.<sup>65</sup> These proponents concede, as they must, that Senator Sherman and others recognized that combinations between rivals could create significant productive efficiencies.<sup>66</sup> At the

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changing the focus to the “original public meaning” of the text under consideration. *See* KEITH E. WHITTINGTON, *CONSTITUTIONAL INTERPRETATION* (1999); Randy E. Barnett, *Scalia’s Infidelity: A Critique of “Fainthearted Originalism,”* 75 U. CIN. L. REV. 7, 9 (2006) (describing the shift, during the 1990s, from originalism focused on “subjective intent” of the drafters to an effort to ascertain the “original public meaning” of a document); *see also*, e.g., ANTONIN SCALIA, *A MATTER OF INTERPRETATION* (1997). To his credit, Professor Lande has, in an article prepared for this conference, essayed to offer a textualist argument in support of his preferred “purchaser welfare” interpretation of the Sherman Act. 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 (2013).

63. *See* Bork, *supra* note 2, at 14–21 (discussing various policy statements in the legislative history of the Sherman Act); *id.* at 26–31 (discussing the consequences of proposed rules of law for possible interpretations of the Act). Thus Bork, for instance, emphasizes that members of Congress contemplated an across-the-board ban on price fixing, without regard to distributional consequences. *See id.* at 21–25.

64. *See* Lande, *supra* note 2, at 88 (“It is extremely unlikely that the legislators’ distaste for monopoly pricing could have been based upon its impact on allocative efficiency: the concept of allocative efficiency was, at best, on the verge of discovery by leading economic theorists when the Sherman Act was passed.”); *see also* Herbert Hovenkamp, *Antitrust’s Protected Classes*, 88 MICH. L. REV. 1, 21 n.55 (1989); Louis Kaplow, *Antitrust, Law & Economics, and the Courts*, 50 L. & CONTEMP. PROBS. 181, 207–08 (1987) (“[I]t is virtually impossible that the Sherman Act could have been crafted with only economic efficiency in mind. . . . [T]he most straight-forward efficiency argument against cartels and monopoly—the one the Chicago or [total welfare] school has in mind—refers not to efficiency in production but rather to allocative efficiency, which designates the welfare loss due to the misallocation of resources resulting from purchase decisions that are based upon super-competitive prices. Yet, at the time of the Sherman Act’s passage, this aspect of efficiency was making only its first appearance in economics literature, and it was not until decades later that economists generally came to understand and apply the concept.”). *But cf.* Meese, *supra* note 36, at 86 n.42 (quoting Adam Smith’s *The Wealth of Nations* for the proposition that monopolies “derange . . . natural distribution in the stock of the society” and that “every derangement of the natural distribution of stock is necessarily hurtful to the society in which it takes place”); E.G. West, *The Burdens of Monopoly: Classical Versus Neoclassical*, 44 S. ECON. J. 829, 836–37 (1978) (arguing that Adam Smith understood allocative inefficiency as one burden of monopoly).

65. *See*, e.g., Lande, *supra* note 2, at 93–96.

66. *See id.* at 90–91.

same time, these proponents emphasize statements by Senator Sherman and others that combinations “pocket” such efficiencies instead of passing them along to consumers, thus increasing their profits at the expense of purchasers.<sup>67</sup> Thus, it is said, Sherman and others meant to ban combinations that resulted in higher purchaser prices, without regard to whether such combinations produced efficiencies, the allocative effects of which outweighed any deadweight losses.<sup>68</sup> Therefore, these proponents say, Sherman and others rejected any suggestion that significant efficiencies could validate a transaction that resulted in higher prices for purchasers in the relevant market. These same proponents have reached similar conclusions about the legislative history of section 7 of the Clayton Act.<sup>69</sup>

Most of the dispute over the appropriate definition of “consumer welfare” has taken place within the academy, with scholars in the respective camps staking out and supporting clear positions. By contrast, judges have declined to embrace either approach wholesale. For instance, courts implementing section 2 of the Sherman Act have, for six decades, embraced a total welfare approach, albeit implicitly.<sup>70</sup> That is, courts, including the Supreme Court, have repeatedly held that so-called “competition on the merits” is lawful per se, without regard to whether such conduct results in higher prices and thus reduces consumers’ surplus.<sup>71</sup> The classic example of such “competition on the merits,” of course, is the realization of economies of scale or other productive efficiencies that allow a firm to underprice its less-efficient rivals, exclude them from the market, and thus maintain monopoly and associated prices.<sup>72</sup> Such conduct, courts have

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67. *See id.* (“But congressional endorsement of trusts’ efficient operations stopped when consumer prices rose, and the legislature withheld approval from combinations that, while yielding more efficient methods of competition, also produced higher consumer prices. The trusts were condemned despite their efficiency in large part because they kept the fruits of such efficiency. As Senator Sherman pointed out in qualification of his praise for efficiency, ‘[i]t is sometimes said of these combinations that they reduce prices to the consumer by better methods of production, but all experience shows that this *saving of cost goes to the pockets of the producer.*’ Congressional condemnation of monopolistic extractions of wealth was so strong that it is even unlikely that Congress meant to provide an exception for a monopoly based solely upon superior efficiency.”).

68. *See id.* at 91–92.

69. *See* Fisher & Lande, *supra* note 26, at 1588–93 (reviewing section 7’s legislative history and concluding that Congress meant to ban any transaction that resulted in higher prices without regard to efficiency impact). *But cf.* Timothy J. Muris, *The Efficiency Defense Under Section 7 of the Clayton Act*, 30 CASE W. RES. L. REV. 381, 393–402 (1980) (reviewing legislative history and concluding that Congress anticipated that the realization of productive efficiencies would militate in favor of a merger).

70. *See* Meese, *supra* note 15.

71. *See id.* at 692–703, 708–15; (collecting and discussing numerous authorities); *see also, e.g.*, *Eastman Kodak Co. v. Image Technical Servs.*, 504 U.S. 451, 481–83 (1992) (conduct supported by “valid business reasons” cannot violate section 2); *United States v. United Shoe Mach. Corp.*, 110 F. Supp. 295, 343 (D. Mass. 1953), *aff’d*, 347 U.S. 521 (1954) (*per curiam*).

72. *See, e.g.*, Phillip Areeda & Donald F. Turner, *Predatory Pricing and Related Practices Under Section 2 of the Sherman Act*, 88 HARV. L. REV. 697, 705–06 (1975) (explaining how so-called “limit pricing” by a firm operating at a more efficient scale than

said, is lawful per se, even if it helps a monopolist protect its dominant position.<sup>73</sup> As many have recognized, this rule implements and reflects a “total welfare” goal for antitrust.<sup>74</sup>

By contrast, case law implementing section 1 of the Sherman Act is more ambiguous.<sup>75</sup> On the one hand, the Supreme Court has, in a section 1 case, quoted Robert Bork’s *The Antitrust Paradox* for the proposition that Congress embraced “consumer welfare” as the exclusive goal of antitrust, thereby embracing, it seems, a “total welfare” standard.<sup>76</sup> In other contexts, however, the Court has articulated doctrine in a way that seems to reflect a “purchaser welfare” standard. As noted earlier, both the “purchaser welfare” and “total welfare” standards condemn naked horizontal price fixing as unlawful per se.<sup>77</sup> Most conduct, however, is analyzed under section 1’s “Rule of Reason,” under which courts “weigh” or “balance” a restraint’s anticompetitive harms against any procompetitive virtues.<sup>78</sup> Within this context, the Supreme Court at least has implied that, for purposes of section 1 analysis, proof that a restraint results in prices higher than the status quo ante dooms any claim that efficiencies exceed harms.<sup>79</sup> Such a result, with its dispositive focus on price, can only make sense, if at

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possible entrants can exclude the latter from the market and thus maintain monopoly). *But cf.* Edlin, *supra* note 8, at 144 (explaining how courts applying a purchaser welfare standard would ban such a practice).

73. *Brooke Grp., Ltd. v. Brown & Williamson Tobacco Corp.*, 509 U.S. 209, 223 (1993) (holding that section 2 does not forbid aggressive above-cost pricing that preserves a monopolist’s dominant position); *Berkey Photo, Inc. v. Eastman Kodak Co.*, 603 F.2d 263, 274 (2d Cir. 1979) (“A firm that has lawfully acquired a monopoly position is not barred from taking advantage of scale economies by constructing, for example, a large and efficient factory. These benefits are a consequence of size and not an exercise of power over the market.”).

74. *See* Frank H. Easterbrook, *Predatory Strategies and Counterstrategies*, 48 U. CHI. L. REV. 263, 297–304 (1981) (rejecting liability based upon above-cost “limit pricing” because such a standard would encourage entry by less efficient rivals and thus deprive society of benefits that would exceed gains from reducing market power); Meese, *supra* note 15, at 671–72; Turner, *supra* note 19, at 1208–09 (endorsing the total welfare standard to govern antitrust regulation); *id.* at 1220–21 (advocating ban on persistent monopolies unless resulting from economies of scale, regardless of prices).

75. *See generally* Blair & Sokol, *supra* note 37 (concluding that section 1 case law is ambiguous on this point).

76. *Reiter v. Sonotone Corp.*, 442 U.S. 330, 343 (1979) (“Congress designed the Sherman Act as a ‘consumer welfare prescription.’” (quoting ROBERT H. BORK, *THE ANTITRUST PARADOX* 66 (1978))). To be sure, in 1979, Professor Lande had not yet articulated his competing definition of “consumer welfare.” However, there was no doubt at the time that Bork and other members of the Chicago school equated “consumer welfare” with total welfare.

77. *See supra* notes 24–25 and accompanying text.

78. *See supra* notes 36–37 and accompanying text.

79. *See NCAA v. Bd. of Regents of the Univ. of Okla.*, 468 U.S. 85, 114 (1984) (holding that benefits purportedly produced by a restraint did not counterbalance the harms for purposes of section 1 rule-of-reason analysis given the factual finding that restraint resulted in prices higher than they otherwise would have been.).

all, under a purchaser welfare standard.<sup>80</sup> Indeed, the Court has even opined that an asserted benefit is not cognizable in the first place if the assertion depends upon the assumption that the challenged restraint will result in prices that are higher than the status quo ante.<sup>81</sup> At the same time, in the very same decision announcing this “rule,” the Court held that agreements limiting price and output on their face survive per se condemnation because, in some instances, unbridled competition might interfere with a well-functioning market and thus hamper interbrand competition.<sup>82</sup> In short, section 1 jurisprudence leans toward a purchaser welfare approach, in contrast to section 2’s clear total welfare approach.

It may seem surprising that courts have not yet settled upon a definitive choice between “purchaser welfare” and total welfare in the section 1 context. At the same time, this choice is rarely, if ever, outcome determinative, at least in litigated cases. For instance, the vast majority of section 1 cases—over 96 percent—fail because the plaintiffs cannot establish a prima facie case that the challenged restraint produces prices above the prerestraint level or that output is below it.<sup>83</sup> Such proof, of course, is a necessary condition for establishing antitrust harm under either normative standard.<sup>84</sup> Moreover, courts “balance” harms against benefits in just over 2 percent of the cases, and the defendant prevailed in nearly all such cases (four out of five).<sup>85</sup> Moreover, it does not appear that the results in these cases turned, at least consciously, on a choice of competing standards. Indeed, in several such cases, courts did not mention “price” at all, choosing instead to focus on the purported magnitude of benefits without linking those benefits to purchaser welfare.<sup>86</sup> Put another way,

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80. It should be noted that price cannot always be dispositive in the section 1 context. For instance, some intrabrand restraints, whether horizontal or vertical, survive per se condemnation because they can help overcome failures in the distribution market, thereby inducing dealers to invest more in promoting the product governed by the restraint. *See* Meese, *supra* note 36, at 141–44 (discussing the evolution of the case law identifying such benefits as cognizable); *see also* *NCAA*, 468 U.S. at 99–103 (holding that prevention of a market failure is a cognizable benefit, even when challenged restraints limit price and output). The result may be increased costs of distribution, enhanced demand for the product in question and thus higher prices. *See also* Meese, *supra* note 36, at 145–61. However, as the Supreme Court has recognized, such cost-based price increases do not constitute the sort of anticompetitive harm that the Sherman Act condemns. *See generally* *Leegin Creative Leather Prods., Inc. v. PSKS, Inc.*, 551 U.S. 877 (2007).

81. *See generally* *Nat’l Soc’y of Prof’l Eng’rs v. United States*, 435 U.S. 679 (1978).

82. *See NCAA*, 468 U.S. at 99–103.

83. *See Carrier*, *supra* note 40, at 829 (finding that over 96 percent of Rule of Reason cases fail for lack of proof of harm under either standard).

84. *See supra* notes 8–15 and accompanying text.

85. *See Carrier*, *supra* note 40, at 829 (reporting the number of cases that entailed balancing); *id.* at 831–33 (describing the results and rationales of such cases).

86. For instance, in *Reifert v. South. Central Wisconsin MLS Corp.*, 450 F.3d 312 (7th Cir. 2006). The court’s entire discussion of balancing consisted of the following three sentences:

The balance between pro- and anti-competitive effects weighs heavily in favor of Article 16. Even in ‘open’ MLS areas such as Massachusetts and Alaska, where

these decisions seem to recognize or assume that such efficiencies are important in and of themselves, separate and apart from any propensity to reduce prices in the relevant market. If the Supreme Court believes that price is the sole relevant variable in Rule of Reason analysis, some lower courts have not gotten the word.

Finally, courts and agencies applying section 7 of the Clayton Act to mergers seem to have adopted a purchaser welfare standard. Thus, efficiencies will only save a transaction that creates significant market power if such efficiencies prevent price increases or result in lower prices.<sup>87</sup> Even here, however, there is a bit of a caveat. Both the Department of Justice and the Federal Trade Commission have opined that a merger creating significant efficiencies may be lawful, even if price rises temporarily, so long as there is a prospect that prices will fall in the long run.<sup>88</sup>

Taken together, Antitrust Law reflects an ambiguous attitude toward the appropriate definition of consumer welfare. On the one hand, there is some support in the section 1 case law for a price-based standard, although the question is not free from doubt. However, section 2 case law bends over backward to accommodate efficiencies, validating any and all cost-reducing conduct by monopolists, even when such conduct results in *higher* purchaser prices. Put another way, section 2 law apparently treats efficiency as an end in itself, the realization of which trumps the welfare of purchasers, or at least those purchasers in the relevant market. On the other side of the spectrum, the law governing mergers generally embraces a price-based standard, but even here there is a caveat.

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individuals who have not joined a Realtors Association may access an MLS service, users must agree not to solicit the exclusive listings of other MLS users during the term of the listing. If agents were reluctant to post their listings, for fear that other agents would steal their clients, the market would become less transparent and less efficient. Article 16 aids competition and fulfills the purposes of the Sherman Act by providing a more transparent marketplace.

*Id.* The court made no effort to quantify the benefits that it identified or explain why they exceeded the harms.

87. See *FTC v. Univ. Health, Inc.*, 938 F.2d 1206, 1223 (11th Cir. 1991) (“[W]e hold that a defendant who seeks to overcome a presumption that a proposed acquisition would substantially lessen competition must demonstrate that the intended acquisition would result in significant economies and that these economies ultimately would benefit competition and, hence, consumers.”); 2010 HORIZONTAL MERGER GUIDELINES, *supra* note 9, § 10 (“[T]he Agencies consider whether cognizable efficiencies likely would be sufficient to reverse the merger’s potential to harm customers in the relevant market, e.g., by preventing price increases in that market.”).

88. See 2010 HORIZONTAL MERGER GUIDELINES, *supra* note 9, § 10 n.15 (“Efficiencies relating to costs that are fixed in the short term are unlikely to benefit customers in the short term, but can benefit customers in the longer run, e.g., if they make new product introduction less expensive.”).

## II. BOTH CAMPS EMBRACE THE PARTIAL EQUILIBRIUM TRADE-OFF MODEL

Despite their vehement “legal” disagreements, both camps employ the same basic economic tools to illustrate and frame their arguments. In particular, both camps invoke the so-called “partial equilibrium trade-off model” to illustrate and bolster their arguments.<sup>89</sup> First developed by Oliver Williamson in the late 1960s, the model built upon the partial equilibrium framework previously developed to ascertain the welfare consequences, including the impact on consumer surplus, of departures from perfect competition (e.g., monopoly and monopolistic competition).<sup>90</sup> These earlier models had focused on the welfare impact of an exercise of market power and the resulting reduction in output, concluding that this reduction resulted in a misallocation of resources and reduced consumer surplus.<sup>91</sup> Williamson reformulated the model to recognize and incorporate the impact of productive efficiencies. To be precise, Williamson developed a tool for ascertaining the impact upon total welfare of a merger that both confers market power on the resulting firm and results in productive efficiencies.<sup>92</sup> In so doing, Williamson expanded the focus of the analysis to include a consideration of a transaction’s impact on both producer surplus *and* consumer surplus, which, when combined, constituted total economic surplus.<sup>93</sup> While first developed to analyze mergers, the model can have broader application as well, as Williamson himself noted.<sup>94</sup>

Proponents of a total welfare approach, including Williamson himself, have invoked the partial equilibrium model to illustrate their preferred “total welfare” standard. Indeed, Robert Bork, the leading proponent of the total welfare approach, expressly employed the trade-off model to illustrate the application of this standard, famously stating that one can employ the trade-off model to illustrate all antitrust problems.<sup>95</sup> According to Bork, producer welfare, as defined by the model, should count in the antitrust calculus, with

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89. See Williamson, *supra* note 20.

90. See, e.g., Harberger, *supra* note 17 (relying upon this model to illustrate deadweight loss that occurs because of monopoly pricing).

91. See generally J.R. Hicks, *The Rehabilitation of Consumers’ Surplus*, 8 REV. ECON. STUD. 108 (1941) (explaining how monopolistic output reduction distorts the allocation of resources and thus reduces consumer surplus and overall economic welfare).

92. See Williamson, *supra* note 20, at 20–21 (articulating this objective of the model); see also Oliver E. Williamson, *Economics and Antitrust Enforcement: Transition Years*, 17 ANTITRUST 61, 64 (2003) (describing the development of the partial equilibrium trade-off model, at the behest of Donald Turner, as a means of evaluating welfare consequences of mergers that produce efficiencies and market power).

93. See Williamson, *supra* note 20, at 21–23.

94. See, e.g., William J. Kolasky & Andrew R. Dick, *The Merger Guidelines and the Integration of Efficiencies into Antitrust Review of Horizontal Mergers*, 71 ANTITRUST L.J. 207 (2003) (describing the role of Williamson’s trade-off model in merger enforcement policy); Muris, *supra* note 69.

95. See BORK, *supra* note 2, at 108 (“This [Williamsonian] diagram can be used to illustrate all antitrust problems, since it shows the relationship of the only two factors involved, allocative efficiency and productive efficiency.”).



the result that high prices are not a harm absent some additional reduction in allocative efficiency.<sup>96</sup> Others, including Williamson himself, have invoked the partial equilibrium paradigm in support of this normative approach.<sup>97</sup>

Moreover, Robert Lande, the original and still chief proponent of the purchaser welfare approach, employs partial equilibrium tools to frame his claim that Congress implicitly rejected a total welfare approach and meant to ban any transactions that reduce purchaser welfare, which Lande equates

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96. *See id.* at 110–12.

97. *See, e.g.*, DENNIS W. CARLTON & JEFFREY M. PERLOFF, MODERN INDUSTRIAL ORGANIZATION 798–99 (2d ed. 1994) (relying upon the Williamson model to illustrate efficiency-based antitrust policy); W. KIP VISCUSI, JOHN M. VERNON & JOSEPH E. HARRINGTON, ECONOMICS OF REGULATION AND ANTITRUST 126–27 (3d ed. 2000) (reproducing the same graph and agreeing with Bork that the graph can be used to illustrate antitrust problems); Thomas C. Arthur, *The Costly Quest for Perfect Competition: Kodak and Nonstructural Market Power*, 69 N.Y.U. L. REV. 1, 15–18 (1994) (invoking Williamson’s model to illustrate the trade-off between market power and efficiencies when analyzing trade restraints); Ken Heyer, *Welfare Standards and Merger Analysis: Why Not the Best*, 2 COMPETITION POL’Y INT’L 29 (2006); Wesley J. Liebler, *Intrabrand “Cartels” Under GTE Sylvania*, 30 UCLA L. REV. 1, 15–16 (1982) (employing the model to illustrate a “consumer welfare” standard applicable to all antitrust problems); Williamson, *supra* note 19, at 105 (“The emphasis throughout [this article] is on mergers, but much of the argument generalizes easily.”).

Indeed, reliance on the partial equilibrium model and its implicit total welfare premise to inform the normative content of antitrust policy predates Williamson’s explicit articulation of the trade-off paradigm. For instance, even before Robert Bork contended that antitrust law should maximize “consumer welfare” as he defined it, Professors Turner, Mason, and Kaysen embraced an efficiency-based approach to the antitrust laws indistinguishable from Bork’s. That is, according to these scholars, antitrust law should only ban those practices, such as cartel pricing, that create or exercise market power without creating offsetting efficiency benefits. *See, e.g.*, KAYSEN & TURNER, *supra* note 19, at 44–45 (describing the primary goal of antitrust policy as eliminating “undue market power to the extent consistent with maintaining desirable levels of economic performance”); *id.* at 77–79 (describing the elimination of “unreasonable market power” as the authors’ primary goal); *id.* at 78 (“Market power resting on certain bases we consider ‘reasonable,’ because we think it either undesirable or impossible to eliminate them. . . . [Market power resulting from economies of scale] could be reduced only at the cost of producing at higher costs in inefficiently small units; this price we do not desire to pay.”); *id.* at 133–34 (noting that a merger that creates market power should be lawful if it is necessary to create productive efficiencies). Moreover, Turner employed the same approach shortly after Williamson published his results, albeit without mentioning Williamson. *See* Turner, *supra* note 19, at 1208–09 (assuming that the appropriate goal of economic policy is to “maximize aggregate economic wealth” and endorsing the view that economies of scale should justify high concentration). Thus, these authors apparently anticipated, or at least accidentally applied, Williamson’s conclusion that the realization of nontrivial efficiencies would likely produce efficiencies that exceeded allocative losses. *See supra* note 35 and accompanying text (explaining Williamson’s conclusion in this regard). *But cf.* Williamson, *supra* note 20, at 64 (contending that Turner was surprised by Williamson’s conclusion that small efficiencies would outweigh allocative losses from a merger to monopoly). Moreover, like Williamson (and Bork), these scholars all implicitly followed the approach taken by Arnold Harberger in 1954, that is, treated the distributional impact of market power as irrelevant for welfare purposes and focused only on the deadweight loss resulting from reduced output as a source of harm. *See* Harberger, *supra* note 17 (equating “consumer welfare” with total welfare and ignoring the distributional impact of market power).

with the partial equilibrium model's concept of consumer surplus.<sup>98</sup> In particular, Lande employs Williamson's model to identify and frame the question scholars should ask ("did the drafters of the Sherman Act believe that producer surplus should count in the antitrust calculus?") when examining the Act's legislative history.<sup>99</sup> Moreover, Lande emphasizes that members of Congress assumed that large combinations could create significant productive efficiencies of the sort recognized by Williamson's partial equilibrium paradigm but concludes that such combinations would "pocket" these efficiencies, thereby depriving consumers of such benefits.<sup>100</sup> Thus, Lande concludes that the drafters of the Sherman Act implicitly rejected the relevance of producer surplus for antitrust analysis and thus rejected the "total welfare" definition of consumer welfare. He also invokes the same model to illustrate his preferred normative standard (purchaser welfare=consumer surplus). Other proponents of the "purchaser welfare/consumer surplus" approach, all of whom invoke Lande's work, necessarily do the same.<sup>101</sup>

Both camps would also make descriptive or technocratic use of the model as well. For instance, Lande contends that courts and enforcement agencies can employ the model, at least conceptually, to discern the impact of challenged practices on purchaser prices and thus consumer surplus and purchaser welfare.<sup>102</sup> Moreover, Bork too asserts that the model defines the terms of an inquiry into the impact of a restraint.<sup>103</sup> Thus, as a descriptive

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98. See, e.g., Lande, *supra* note 2, at 71–80 (discussing the "Economic Effects of Monopoly Power," including "allocative inefficiency," "reduction in consumer surplus," and possible "productive efficiencies"); *id.* at 74–77 (discussing the "transfer of 'Consumers' Surplus' from Consumers to Monopolists"); *id.* at 75 (quoting Williamson for the proposition that ordinary welfare analysis treats the transfer of consumer surplus to producers as a wash).

99. See *id.* at 142–47 (employing Williamson's partial equilibrium trade-off model to illustrate distinction between the total welfare and the purchaser welfare standard in the context of evaluating a merger).

100. See *id.* at 90–91 ("The trusts were condemned despite their efficiency in large part because they kept the fruits of such efficiency.").

101. 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 (2010). For other examples employing this model to illustrate the distinction between total welfare and purchaser welfare standards, see, for example, Sokol & Blair, *supra* note 37.

102. See, e.g., BORK, *supra* note 2, at 220 ("The relative sizes of the dead-weight loss and the efficiency gain, in those cases where both exist, depend upon how one draws the diagram, and how one should draw the diagram depends entirely upon what economic analysis suggests about the reality the curves should reflect."); Fisher, Lande & Vandaele, *supra* note 57 (employing partial equilibrium methodology to determine conditions under which efficiencies result in reduced prices despite merger to monopoly); Fisher & Lande, *supra* note 26, at 1631 (explaining how antitrust enforcers can employ the Williamsonian trade-off model while incorporating Congressional concerns over wealth transfers); *id.* at 1631 n.181 (contending that one can incorporate concerns about wealth distribution within the Williamsonian trade-off model by assigning weights to the competing effects of a transaction).

103. BORK, *supra* note 2, at 220 ("The relative sizes of the deadweight loss and the efficiency gain, in cases where both exist, depends upon how one draws the diagram, and

economic matter, both Lande and Bork necessarily embrace the partial equilibrium trade-off model's various purely economic/modeling assumptions, not all of which are entirely realistic.

This universal embrace of the partial equilibrium trade-off model is not surprising. Such models only achieve their dominant status by solving various problems that a scientific community deems important.<sup>104</sup> Moreover, such paradigms reflect significant investments in training and repeated application, attributes that solidify a scientific community's commitment to the framework.<sup>105</sup> Because of these two factors—social utility and a community's significant investment—scientific paradigms are sticky and hard to displace.<sup>106</sup> The partial equilibrium trade off paradigm is no exception to these principles. Economists have employed the paradigm with success in a variety of contexts, and the community trains its practitioners to embrace and apply it widely.

The trade-off tool that both schools of thought embrace does not purport to generate a completely accurate description of economic reality. For one thing, it is costly to gather the information necessary to conduct a true partial equilibrium trade-off analysis.<sup>107</sup> Moreover, even if a decision maker *could* gather all of the information called for, the model could still produce inaccurate results. It is, after all, a *model* and thus by definition only a proxy for reality.<sup>108</sup> Indeed, Williamson himself referred to the model as “naïve” and, later, “simple.”<sup>109</sup> Finally, as I have shown

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how one draws the diagram depends entirely upon what economic analysis suggests about the reality the curves should reflect.”).

104. See THOMAS S. KUHN, *THE STRUCTURE OF SCIENTIFIC REVOLUTIONS* 24 (4th ed. 2012) (“Paradigms gain their status because they are more successful than their competitors in solving a few problems that a group of practitioners has come to recognize as acute.”).

105. See Thomas S. Kuhn, *The Essential Tension: Tradition and Invention in Scientific Research*, in *THE ESSENTIAL TENSION: STUDIES IN SCIENTIFIC TRADITION AND CHANGE* 229 (1977) (explaining how training that solidifies paradigms creates “mental sets” or “Einstellungen”); see also KUHN, *supra* note 104, at 76 (“So long as the tools a paradigm supplies continue to prove capable of solving the problems it defines, science moves fastest and penetrates most deeply through confident employment of those tools. The reason is clear. As in manufacture so in science—retooling is an extravagance to be reserved for the occasion that demands it.”).

106. See KUHN, *supra* note 104, at 77–80 (entrenched paradigms resist change); *id.* at 78 (explaining how an incumbent paradigm resists challenges by adjusting itself through “ad hoc modifications and articulations” to incorporate seemingly contradictory evidence).

107. See BORK, *supra* note 2, at 221 (“The diagram tells us nothing because there is nothing built into it that shows whether there will be any restriction of output in such cases or, if there is, what the amount will be. Without that information we have no idea of the size of the dead-weight loss, if any.”).

108. See *Barry Wright Corp. v. ITT Grinnell Corp.*, 724 F.2d 227, 234 (1st Cir. 1983) (“[W]hile technical economic discussion helps to inform the antitrust laws, those laws cannot precisely replicate the economists’ (sometimes conflicting) views. . . . Rules that seek to embody every economic complexity and qualification may well, through the vagaries of administration, prove counter-productive, undercutting the very economic ends they seek to serve.”).

109. Williamson, *supra* note 20, at 20–22 (describing the so-called “naïve” trade-off model); *id.* at 64 (reiterating that the model was naïve and “simple”). Note that many of

elsewhere, application of this paradigm has produced misleading doctrinal tests in some contexts, particularly the treatment of partial vertical integration that survives *per se* treatment because it may overcome market failure.<sup>110</sup>

This mutual embrace of the “naïve” partial equilibrium paradigm, its simplifying assumptions, the problematic results it produces, and courts’ inconsistent embrace of the “purchaser” and “total” welfare standard raises an obvious question, that is, is there some other set of economic tools that can help (re)frame the debate about the appropriate welfare criterion to be applied in the antitrust context? One obvious alternative would be the General Equilibrium Model. After all, neither the Sherman Act nor its legislative history mentions or endorses the partial equilibrium trade-off model or any of its components (e.g., consumer surplus or producer surplus), at least by name. Moreover, as other scholars have noted, members of Congress were likely unaware of Alfred Marshall’s work, which first articulated the partial equilibrium model, thereby further attenuating the possibility that they meant to embrace a “total welfare” or “consumer surplus” standard, at least as such.<sup>111</sup> In any event, the Supreme Court has repeatedly held that courts may embrace new and better economic models for evaluating challenged conduct, even to the point of overruling previous decisions that rested upon old and now discredited models.<sup>112</sup> Indeed, failure to embrace a new and better model (if there is

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these assumptions derive from perfect competition. *See infra* notes 137–39 and accompanying text (describing the influence of perfect competition on the partial equilibrium model).

110. *See* Alan J. Meese, *Reframing Antitrust in Light of Scientific Revolution: Accounting for Transaction Costs in Rule of Reason Analysis*, 62 HASTINGS L.J. 457, 503–23 (2010).

111. *See* Lande, *supra* note 2, at 88 (“It is extremely unlikely that the legislators’ distaste for monopoly pricing could have been based upon its impact on allocative efficiency: the concept of allocative efficiency was, at best, on the verge of discovery by leading economic theorists when the Sherman Act was passed.”). Some proponents of the “purchaser welfare” approach have argued that congressional ignorance of Alfred Marshall’s work rebuts the claim that the Sherman Act incorporates an “allocative efficiency” standard. *See* Kaplow, *supra* note 64, at 207–08 (explaining the date of Marshall’s contribution and contending that it is “inconceivable that members of Congress were motivated at all by such an argument”). However, if Congress *was* ignorant of Alfred Marshall’s work, then they were also ignorant of the concept of consumer surplus. *See* Miroslav Svoda, *History and Troubles of Consumer Surplus*, 2008 PRAGUE ECON. PAPERS, 230 (explaining that Marshall coined the term “consumer surplus” and popularized the concept in the English-speaking world). Ironically, no one doubts that the 1890 Congress understood the concept of productive efficiency. *See supra* notes 67–70 and accompanying text. If, as Oliver Williamson and F.M. Scherer have suggested, productive efficiency is simply one aspect of allocative efficiency, then perhaps scholars like Professor Kaplow have been too hasty in their conclusion that Congress could not have deemed allocative efficiency as the predominant goal of the Sherman Act.

112. *See, e.g.,* Leegin Creative Leather Prods., Inc. v. PSKS, Inc., 551 U.S. 877 (2007); State Oil Co. v. Khan, 522 U.S. 3 (1997); Bus. Elecs., Inc. v. Sharp Elecs., Corp., 485 U.S. 717, 732 (1988) (holding that the Sherman Act embraced the common law along with its “dynamic potential” and that courts should adjust antitrust doctrine to account for advances in economic theory).

one) would seem to contravene the Sherman Act's requirement that courts employ "reason" to determine whether a restraint produces the "consequences of monopoly" or, instead, "fructifies" and "advances" trade.<sup>113</sup> Perhaps there is a different model that can inform antitrust's assessment of challenged conduct, a model that can help reframe the debate over the appropriate normative content of antitrust, even to the point of generating a consensus between now-competing camps. Thus, some reexamination of the partial equilibrium trade-off model would seem appropriate.

### III. THE PARTIAL EQUILIBRIUM TRADE-OFF MODEL<sup>114</sup>

Every antitrust scholar and practitioner has employed and invoked the partial equilibrium trade-off model, often without even knowing it. First expressly articulated by Oliver Williamson in 1968, the model builds upon the more basic partial equilibrium framework that Alfred Marshall first developed in the late nineteenth century for evaluating the welfare consequences of perfect competition and monopoly.<sup>115</sup> The model begins by positing a particular "industry," isolated from every other industry in the economy, except to the extent that the industry must purchase inputs from other industries.<sup>116</sup> The "industry" consists of two categories of actors: firms, who manufacture products, and consumers, who, depending upon the price, purchase them. Such industries correspond (roughly) to the antitrust concept of a "relevant market," defined for the purpose of evaluating claims under sections 1 and 2 of the Sherman Act and section 7 of the Clayton Act.<sup>117</sup>

Scholars and practitioners employ a familiar graphical apparatus to represent the model. The model begins with two axes: the vertical axis represents the price of the product, and the horizontal axis represents the quantity demanded by consumers or supplied by the industry's firms, as

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113. *Standard Oil Co. of N.J. v. United States*, 221 U.S. 1, 55 (1911) (approving common law decisions that had repudiated previous doctrine because of the advent of "more accurate economic conceptions").

114. Readers may omit this part if they are familiar with the model.

115. See ALFRED MARSHALL, *PRINCIPLES OF ECONOMICS* (1890); see also Harberger, *supra* note 17, at 78 (graphically illustrating welfare loss from monopoly output reduction).

116. See generally Brian J. Loasby, *Hypothesis and Paradigm in the Theory of the Firm*, 81 *ECON. J.* 863, 876 (1971) (explaining how the pioneers of imperfect competition theory retained the concept of an "industry" implied by the partial equilibrium model). Cf. Harberger, *supra* note 17, at 84 (explaining that the assignment of firms to particular industries obscured underlying distinctions between firms' products and thus overstated the competitive overlap between such products).

117. See, e.g., *Spectrum Sports, Inc. v. McQuillan*, 506 U.S. 447, 453 (1993) (holding that an attempted monopolization claim depends upon proof that there is a "dangerous probability" that the defendant will achieve power in a properly defined relevant market); *Jefferson Parish Hosp. Dist. No. 2 v. Hyde*, 466 U.S. 2, 34-35 (1984) (determining that proof of power in a relevant market is necessary to establish a per se tying violation).

appropriate.<sup>118</sup> Beginning with these two axes, the model employs the familiar “demand schedule” to encapsulate all relevant information about actual and potential consumers who purchase or may purchase the industry’s product.<sup>119</sup> This demand curve slopes down and to the right, indicating that consumers will purchase more of the product, holding everything else constant, as its price falls.<sup>120</sup> The slope of the curve turns on just how sensitive or “elastic” demand is to changes in price, a factor that depends, among other things, upon the extent to which products manufactured in other industries nominally not incorporated in the model are close substitutes for those produced by the industry in question.<sup>121</sup>

The model also posits a supply curve, which represents how much output the industry will produce at any given price.<sup>122</sup> Just as the demand curve aggregates information about responses by individual consumers to price changes, so too does the industry supply curve incorporate and reflect aggregate responses to price changes by individual firms, not all of whom are necessarily present in the industry at a given moment in time.<sup>123</sup> As a result, the location and shape of the industry-wide supply curve will necessarily depend upon the location and shapes of individual firm-level supply curves.

Two different factors will determine the shape of these curves, namely, technology and the price of various inputs that firms might employ in the production process. The former will determine the various possible input combinations (labor, capital, and raw materials) that firms might employ to produce a given unit of output. The latter will determine which particular process and thus which input combination firms will employ given the assumption that firms will employ the least costly method of production.<sup>124</sup> Given these data, then, we can construct curves for each individual firm that represent both the marginal and average costs of producing each possible level of output, from zero units to infinity. From these curves, in turn, we can derive how much output, if any, a given firm will produce at a given price. In the long run, of course, firms will set output where price equals marginal cost, so long as that price also exceeds average total cost.<sup>125</sup>

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118. See KELVIN LANCASTER, *INTRODUCTION TO MODERN MICROECONOMICS* 20–21 (2d ed. 1974).

119. See *id.* at 14–20.

120. See *id.* at 14–20, 241–45.

121. See *id.* at 25–29; see also CARLTON & PERLOFF, *supra* note 44, at 99 (describing the concept of elasticity and how the extent of elasticity depends upon the “availability of substitute products”).

122. See LANCASTER, *supra* note 118, at 14.

123. See *id.* (explaining how the industry supply curve reflects a compilation of supply decisions by all of the industry’s individual firms).

124. See *id.* at 119 (adopting the proposition that firms will always choose the least costly method of production).

125. See N. GREGORY MANKIW, *PRINCIPLES OF ECONOMICS* 288 (6th ed. 2011) (“The competitive firm’s long-run supply curve is the portion of its marginal cost curve that lies above average total cost.”).

Very often, economists portray the cost curves of individual firms as follows: marginal cost curves slope up and to the right, while average cost curves are U-shaped.<sup>126</sup> This portrayal reflects two assumptions. First, production requires a certain “fixed” or “set up” cost, with the result that average production costs are high at low levels of output but fall steadily other things being equal as output rises. Second, the incremental cost of producing a given level of output rises along with the firm’s output, a phenomenon attributable to any number of factors.<sup>127</sup> For instance, as a firm’s output rises, its inputs may become more expensive and/or of reduced quality. Or, a firm may be unable to vary certain inputs as rapidly as others, thereby forcing the firm to rely upon a less than efficient combination of inputs.<sup>128</sup> Finally, the upward slope may simply reflect an underlying technology that exhibits decreasing returns to scale, even assuming constant input prices and complete flexibility of input use.<sup>129</sup>

Regardless of why the marginal cost curve slopes upward, it will intersect the average cost curve at its minimum point and then continually rise faster and more steeply than the average cost curve.<sup>130</sup> Thus, so long as price exceeds average total cost at this point, any firm will maximize its profits by producing where price equals marginal costs. At the same time, such a price and resulting output will not last long in a competitive market, as supranormal prices will draw additional firms into the market, thereby driving price back down to that level equal to minimum average cost and eliminating any excess profits.<sup>131</sup>

Despite the ordinary portrayal of firm-level curves as “U-shaped,” Williamson’s articulation of the trade-off model employs a horizontal average cost curve as the industry supply curve, albeit without explaining

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126. See LANCASTER, *supra* note 118, at 153–54 (explaining how and why average cost curves are often assumed to be U-shaped).

127. See *id.* at 153 (explaining that “upper limit on the availability of some input” and “a minimum outlay on some input” combine to create U-shaped cost curves).

128. See *id.* at 134–37 (describing the impact of input limitation on cost curves).

129. See *id.* at 132–33 (describing the impact of decreasing returns to scale on cost curves).

130. See *id.* (describing the impact of decreasing returns to scale on cost curves); *id.* at 134–37 (describing the impact of input limitation on cost curves). Moreover, economists often posit a distinction between “marginal” and “average” costs, with the later including “fixed” or “set up” costs, that is, costs that the firm necessarily incurs regardless of its level of output. Given this assumption, the rising marginal cost curve intersects the average total cost curve at its lowest point, and then continues rising at a steeper slope than the average total cost curve, the latter of which by definition incorporates information about the costs of all of a firm’s output, including that output produced at a relatively low cost.

131. If price is below firms’ minimum average cost, then firms will not produce any output. If price rises above minimum average cost, then incumbent firms will increase their output to where price equals marginal cost, a point at which price and this average revenue will exceed average cost. Because price exceeds average cost at this level of output, each firm will earn an above-normal return—a return that will attract new entrants. The additional output supplied by these new entrants will push price back down to the point where cost equals average total cost.

the source of such a curve.<sup>132</sup> Moreover, this portrayal applies even to monopolized industries occupied by a single firm, the result of the merger to monopoly that Williamson posits.<sup>133</sup> There are, however, two possible explanations for such a horizontal cost curve. First, if all firms (and potential firms) in the industry have access to the same technology, then an indefinite number of firms will enjoy the same minimum average cost. Moreover, if, taken together, these firms employ only a small portion of various factors of production available, then the cost of such inputs will remain constant and independent of industry output. Taken together, these two assumptions—perfectly replicable technology and constant input costs—will result in a horizontal supply curve for the industry in question, even though each individual firm enjoys fixed costs and a U-shaped cost curve.<sup>134</sup> Second, contrary to the assumption of U-shaped cost curves mentioned above, each individual firm might experience horizontal cost curves, reflecting the absence of fixed costs, constant returns to scale, and the ability to vary all inputs with impunity.<sup>135</sup> If so, then marginal cost will equal average cost for each firm in the relevant industry, and the supply curve will be flat throughout. Indeed, unlike Williamson himself, some who reproduce Williamson's diagram have labeled this cost curve as a horizontal *marginal* cost curve, thereby implying this second explanation for constant industry costs.<sup>136</sup> This second explanation, of course, must be the implicit explanation for a horizontal average cost curve for a monopolized industry. In such cases the firm's supply curve is the

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132. See Williamson, *supra* note 19, at 21–22. He also posits such a curve for a postmerger monopolist. See *id.* at 23; see also Harberger, *supra* note 17, at 77 (articulating the assumption that long run average costs are “close to constant in the relevant range” because “in the long run, resources can be allocated among our manufacturing industries in such a way as to yield roughly constant returns”).

133. See Williamson, *supra* note 19, at 21–23.

134. See CARLTON & PERLOFF, *supra* note 44, at 97 (noting that the long-run industry supply curve could be flat for this reason “as long as the industry accounts for only a small fraction of any one factor's total employment”); *id.* (explaining that the long-run industry supply curve might be upward sloping if “there are only a few firms that can produce at low costs”). Note that this result follows even if firms cannot completely vary all of their inputs in the short run. If this phenomenon results in upward sloping marginal cost curves for individual firms, then additional firms employing the same technology can produce at a scale small enough to avoid this constraint.

135. See LANCASTER, *supra* note 118, at 129–31 (describing such “unconstrained” horizontal cost curves resulting from constant returns to scale); *id.* at 141–47 (describing and illustrating cost curves with fixed costs and (eventual) constant returns to scale). Here again, the industry would have to account for a small proportion of the inputs in question, thereby ensuring a constant cost of inputs. Of course, the presence of fixed costs is consistent with a horizontal average cost curve for all levels of output above a certain quantity, whereby marginal cost equals average cost after the impact of fixed costs is exhausted. See *id.* at 146–47. Such an effect assumes that marginal cost is itself constant at all levels of output above where marginal and average cost becomes equal. See *id.*

136. See, e.g., CARLTON & PERLOFF, *supra* note 44, at 798–99; Blair & Sokol, *supra* note 37, at 483, 488, 494, 499; Heyer, *supra* note 19. Another source simply abjures both “marginal cost” and “average cost” and simply refers to “the supply curve.” See SCHERER & ROSS, *supra* note 57, at 186–87.



industry's supply curve; thus, if the individual firm experienced fixed costs, the industry curve would not be horizontal.

Of course, the intersection of the demand and supply curves describes the industry's equilibrium output and resulting market price, at least in the short run. So far we have said nothing about the implications of the model for total economic welfare or purchaser welfare. Thus far the model as described is consistent with various assumptions of perfect competition.<sup>137</sup> In a competitive market, price will equal marginal cost, and producers will earn normal profits, that is, recoup their costs plus a reasonable rate of return. Consumers, however, receive significant surplus; the downward-sloping demand curve indicates that nearly all of those who in fact purchase the industry's product were willing to pay more for it than the market price.<sup>138</sup> Thus, the area between the market price and the demand curve indicates the amount of surplus that consumers derive from the industry's output.<sup>139</sup>

The partial equilibrium paradigm can also evaluate the welfare consequences of *departures* from perfect competition, however. For instance, what about monopoly and the resulting reduction in output below the equilibrium level described above (a reduction resulting from the exercise of market power)? Other things being equal, such a reduction in output below this equilibrium level will increase prices and thus reduce consumer surplus in two distinct ways. First, fewer consumers will purchase the industry's product and thus forgo the surplus they otherwise would have received as a result of such purchases.<sup>140</sup> Second, other

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137. See, e.g., FRANK H. KNIGHT, RISK, UNCERTAINTY, AND PROFIT 76–81 (1921) (detailing various assumptions of the perfect competition model). For instance, as explained in the text, the model apparently assumes that production technology is freely available to all firms, including potential entrants, thereby justifying an industry-wide horizontal average cost curve. See F.A. HAYEK, *The Meaning of Competition*, in INDIVIDUALISM AND ECONOMIC ORDER 92, 97–98 (1948) (describing the assumption of the perfect competition model that “a large number of people are producing the same commodity and command the same objective facilities and opportunities for doing so”); KNIGHT, *supra*, at 78 (describing perfect competition’s assumption that knowledge is freely available).

138. See Hicks, *supra* note 91, at 112–13.

139. See SCHERER & ROSS, *supra* note 57, at 24–25; Hicks, *supra* note 91, at 112–13.

140. See Harberger, *supra* note 17, at 78; Hicks, *supra* note 91, at 112–13. Of course, these consumers will spend the income they would have spent on the industry's product elsewhere. However, the Marshallian model assumes that such expenditures will produce little or no surplus, with the result that the reduction in surplus in the primary market indeed represents the full reduction in overall consumer surplus. As one scholar has put it: “The [Marshallian] consumer surplus triangle DAF is constructed on the assumption that if this particular commodity was withdrawn from the market, the consumers would have to fritter away their money outlay of OHAF [the rectangle equal to output times price] in increasing their marginal purchases of other commodities from which they will obtain only a negligible amount of surplus. (If we draw consumers’ surplus diagrams for other commodities, this will be shown by small triangular increments at the margin.) This is true even when there are substitutes for the particular commodity, for in constructing the demand curve for it, Marshall had already assumed that consumers will take full account of the fact that substitutes are available at given prices. Thus (subject to the assumption of constant marginal utility of money) the triangle under the demand curve measures the consumers’

consumers will continue to purchase the product in question, albeit at a higher price, thereby deriving less surplus per purchase than they derived in a competitive market.<sup>141</sup> According to the “purchaser welfare” camp, both such reductions in consumer surplus represent a “harm” under the antitrust statutes.<sup>142</sup> By contrast, the total welfare camp would conclude that only the first (and relatively small) reduction in surplus constitutes antitrust harm, as the second reduction represents a mere transfer of income from producers to consumers and thus does not itself reduce welfare.<sup>143</sup> Still, both camps would agree that, based upon an application of the partial equilibrium model, transformation of an industry from perfect competition to monopoly and the resulting output reduction will, other things being equal, produce cognizable harm and should thus, without more, justify antitrust regulation.<sup>144</sup>

Of course, all else is not always equal; there is often “more.” One must also ask how an industry became monopolized in the first place. One possibility, of course, is predatory tactics, whereby a firm excludes rivals on some basis other than superior efficiency.<sup>145</sup> Monopoly acquired in this manner would, according to the partial equilibrium model, both reduce total welfare and purchaser welfare, albeit not by the same amounts, and thus properly be subject to condemnation.<sup>146</sup> Another possibility is that once-independent participants in an industry may merge to form a monopoly. Absent some resulting technological change, the partial equilibrium model predicts that such a merger would, like the predatory activity just described, reduce both total welfare and purchaser welfare.

There is one last possibility, namely, that transformation from competition to monopoly enables the realization of technological or other efficiencies that reduce production costs. Such a transformation can occur in two ways. First, a single firm in a once-competitive market can realize such efficiencies through “internal expansion,” whereby it realizes efficiencies and underprices its rivals, driving those rivals from the market and obtaining a monopoly.<sup>147</sup> Second, all the firms in the once-competitive

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surplus on this commodity only because the money outlay which yields a surplus in this particular use will become *marginal* expenditure elsewhere.” See HLA MYINT, THEORIES OF WELFARE ECONOMICS 162 (1965).

141. See CARLTON & PERLOFF, *supra* note 44, at 135 (distinguishing between “monopoly profits” and “deadweight loss,” both of which result from exercise of monopoly power).

142. See *supra* notes 8–10 and accompanying text.

143. See *supra* notes 11–15 and accompanying text; see also Harberger, *supra* note 17 (finding that economy-wide harm from deadweight loss resulting from monopolistic prices equaled less than 1 percent of GDP).

144. See *supra* notes 24–28 and accompanying text; see also Williamson, *supra* note 45.

145. See *Aspen Skiing Co. v. Aspen Highlands Skiing Corp.*, 472 U.S. 585, 605 (1985) (quoting 3 PHILLIP AREEDA & DONALD F. TURNER, ANTITRUST LAW ¶ 626b (1978)); see also BORK, *supra* note 2, at 160 (defining “improper exclusion,” as “exclusion not the result of superior efficiency” (cited with approval in *Aspen Skiing*, 472 U.S. at 603 n.29)).

146. See, e.g., BORK, *supra* note 2, at 160, 344–45.

147. See Williamson, *supra* note 20, at 25–26.

market can merge, creating a monopoly and thereby realizing productive efficiencies that are not available to competitive, smaller firms.<sup>148</sup>

Williamson's articulation and application of the partial equilibrium model focused on the second source of efficiencies.<sup>149</sup> That is, Williamson posited that the combination of previously separate firms could allow the newly created firm to realize efficiencies that were not available to any of the previously separate firms. In Williamson's account, the efficiencies manifested themselves as a downward shift in the horizontal average cost/supply curve and resulting reduction in the cost of producing the industry's remaining output.<sup>150</sup> While Williamson did not describe the exact source of such efficiencies, there are a few possibilities. For instance, the new firm could perhaps take advantage of production technologies that require a certain scale of output not available to smaller firms.<sup>151</sup>

Although he dubbed them "productive efficiencies," Williamson recognized that such efficiencies represented an improvement in the allocation of resources, given that the new firm could produce the same output with fewer resources.<sup>152</sup> He also recognized that this allocational improvement could offset the negative allocational consequences of market power resulting from the posited merger to monopoly.<sup>153</sup> Recognizing this tradeoff, Williamson sought to arrive at generalizations about the welfare consequences of mergers to monopoly that both reduced output in a particular industry while at the same time reducing production costs.<sup>154</sup> William conceded that such transactions could, despite efficiencies,

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148. See, e.g., CARLTON & PERLOFF, *supra* note 44, at 798–99.

149. See Williamson, *supra* note 20, at 21 ("The effects on resource allocation of a merger that yields economies but extends market power can be investigated in a partial equilibrium context."). Of course, Williamson did not claim to be the first to recognize that mergers could create such efficiencies. Indeed, nearly two decades earlier, Professors Kaysen and Turner had anticipated Williamson's general result, contending that mergers that create market power should nonetheless be lawful if they also resulted in substantial efficiencies, without regard to price effects. See, e.g., KAYSEN & TURNER, *supra* note 19, at 133–34. At the same time, as Williamson noted, Kaysen and Turner basically "fudged" the definition of "substantial," leaving Williamson to construct a framework for assessing the trade-off between market power and efficiencies. See Williamson, *supra* note 20, at 20; see also Williamson, *supra* note 20, at 64 (describing how Williamson examined the trade-off question at Turner's behest).

150. See Williamson, *supra* note 20, at 21–23.

151. See, e.g., LANCASTER, *supra* note 118, at 155–57 (describing technological indivisibilities that give rise to reduced production costs at higher levels of output); *id.* at 157 (representing such indivisibilities with a downward shift in the marginal and average cost curves).

152. See Williamson, *supra* note 20, at 22 n.4 (explaining that "[productive] inefficiency is also a dead-weight loss"); *id.* at 22 ("The net allocative effect [of a transaction] is given by the difference [between deadweight welfare loss and productive efficiency gains].").

153. See *id.* at 21–22; see also SCHERER & ROSS, *supra* note 57, at 22 (explaining that productive inefficiency resulting from failure to realize available economies of scale "represents a deadweight loss of resources that could otherwise be employed in alternative production").

154. See Williamson, *supra* note 20, at 21–22.

increase prices and thus reduce consumer surplus.<sup>155</sup> Nonetheless, he concluded that mergers to monopoly that produced significant cost savings generally increased overall welfare, despite any resulting price increase.<sup>156</sup>

#### IV. SHORTCOMINGS OF THE MODEL

As its name implies, the *partial* equilibrium trade-off model does not necessarily tell the whole story about the impact of a transaction on economic welfare. Indeed, even Williamson himself has repeatedly referred to the model as the “naïve” and “simple” trade-off model.<sup>157</sup> To be sure, the model is not as “simple” or “naïve” as perfect competition. For instance, the model assumes economies of scale (the source of productive efficiencies and thus cost reductions), barriers to entry (necessary to protect the merger-created monopoly), and transaction costs sufficient to prevent consumers from bargaining with the postmerger monopolist to induce an output increase via price discrimination.<sup>158</sup> Nonetheless, the model embraces other assumptions of perfect competition, including (at least implicitly) competition (and thus marginal cost pricing) in all other markets.<sup>159</sup> More generally, the model rests upon the identification of a “relevant market,” itself a fiction, completely isolated from other (presumed) relevant product markets.<sup>160</sup> As a result, the model

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155. See *id.* at 27–28 (recognizing that a merger that increases price will reduce consumer surplus).

156. See *id.* at 21–23.

157. See *id.* at 21.

158. See Calabresi, *supra* note 15, at 69–71 (explaining that, absent transaction costs, consumers would bargain to induce monopolists to increase output to a competitive level). Presumably Calabresi had in mind a price discrimination scheme, whereby firms expand output by charging different firms different prices. See also CARLTON & PERLOFF, *supra* note 44, at 438–39 (explaining how perfect price discrimination can result in “monopolistic” output identical to competitive output). See generally G.L.S. SHACKLE, *THE YEARS OF HIGH THEORY* 13 (1967) (explaining how the possibility of increasing returns to scale undermined perfect competition by inducing a single firm to take over the market).

159. See VISCUSI, VERNON & HARINGTON, *supra* note 97, at 75–76 (explaining how departures from perfect competition necessitate the embrace of a partial equilibrium model and the resulting limiting assumptions); see also HAYEK, *supra* note 137, at 94 (“Most [assumptions of the perfect competition model] are equally assumed in the discussion of the various ‘imperfect’ or ‘monopolistic’ markets, which throughout assume certain unrealistic ‘perfections.’”); KAYSER & TURNER, *supra* note 19, at 67 n.25 (assuming, without explanation, that “the equality of private and social costs, especially in the areas relevant to our study, is not a major problem.”); Richard N. Langlois, *Transaction Costs, Production Costs, and the Passage of Time*, in *COASEAN ECONOMICS: LAW AND ECONOMICS AND THE NEW INSTITUTIONAL ECONOMICS* 1, 2–3 (Steven G. Medema ed., 1997) (noting that pioneers of oligopoly theory invoked various assumptions of the perfect competition model).

160. See Orbach, *supra* note 2, at 138–39; see also Fisher & Lande, *supra* note 26, at 1626 n.173 (“In real-world markets, one rarely encounters situations such as a court’s model. A wide variety of firms create heterogeneous products of differing substitutability. Regardless of where a court draws the market boundaries, not every product included in the market is a perfect substitute, nor are excluded goods nonsubstitutable. Some items not included in the market may, to varying degrees, constrain the monopoly power of included firms, and therefore should be considered in any analysis of market power.”); Harberger,

intentionally ignores the impact of the transaction and its resulting impact on production costs and output upon other markets.<sup>161</sup> For instance, the model ignores the existence of any externalities, positive or negative, that the industry might impose or confer on individuals and/or firms in other markets.<sup>162</sup> This exclusion of such externalities is by fiat; it does not flow from any other assumptions of the model and is in fact inconsistent with the assumption of transaction costs.<sup>163</sup> Thus, the model would condemn a transaction that reduced output in an industry characterized by externalities, even if the correlative reduction in externalities increases welfare in other markets so much as to more than offset the welfare loss in the original market.<sup>164</sup>

Perhaps more famously, the model ignores more traditional “second best” considerations that can undermine the model’s conclusion in

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*supra* note 17, at 84 (explaining how assumed “industries” likely include “products which are only remote substitutes” for each other); George J. Stigler, *The Economist and the Problem of Monopoly*, 72 AM. ECON. REV. 1, 8–9 (1982) (“Consider the problem of defining a market, within which the existence of competition or some form of monopoly is to be determined. The typical antitrust case is an almost impudent exercise in economic gerrymandering.”).

161. See, e.g., VISCUSI, VERNON & HARINGTON, *supra* note 97, at 76 (explaining how partial equilibrium tools focus on impacts in a particular market to avoid second-best problems presented by general equilibrium analysis when some markets are characterized by monopoly, externalities, and other departures from perfect competition); Richard H. Fink, *General and Partial Equilibrium Theory in Bork’s Antitrust Analysis*, 2 CONTEMP. POL’Y ANALYSIS 12, 15 (1984) (explaining that the partial equilibrium model assumes away the impact of a market upon other markets); Arnold C. Harberger, *Three Basic Postulates for Applied Welfare Economics: An Interpretive Essay*, 9 J. ECON. LITERATURE 785, 789–91 (1971) (conceding that welfare analyses performed by economists are usually partial equilibrium in nature but also arguing that general equilibrium welfare analyses of such problems are possible); Oliver E. Williamson, *Economics As an Antitrust Defense Revisited*, 125 U. PA. L. REV. 699, 702 n.10 (1977) (“Partial equilibrium analysis involves an examination of one market while assuming that incomes, other prices, and production conditions remain unchanged. Second-order interdependencies are thus assumed to be negligible. When changes in the relevant market do affect the general economy, a general equilibrium analysis, in which prices and quantities for all markets must be determined together, is usually appropriate.”); see also LANCASTER, *supra* note 118, at 12–13 (explaining how microeconomists generally employ such “partial analysis” when examining the impact of price on demand and supply in a particular market).

162. See Williamson, *supra* note 20, at 22 n.4 (articulating the model’s assumption that the private costs of the firms in the industry equal the social costs of the activity).

163. To be sure, one could posit the existence of such costs within the market while assuming zero intermarket costs. There is, however, no indication that Williamson or other practitioners of the model employed such an assumption.

164. See CARLTON & PERLOFF, *supra* note 44, at 148 (explaining how monopolization of an industry characterized by negative externalities can improve overall economic welfare by reducing output and thus reducing harm from externalities); Daniel Crane, *Harmful Output in the Antitrust Domain: Lessons from the Tobacco Industry*, 39 GA. L. REV. 321 (2005) (contending that antitrust law should consider such externalities); see also Orbach, *supra* note 2, at 152 (discussing how conventional antitrust measures of “consumer welfare” ignore the possible negative impact of industry output on the consumers who purchase the products in question).

particular cases.<sup>165</sup> Such considerations may arise if other markets in the economy are already monopolized and thus characterized by reduced output and resulting prices significantly above cost. In such circumstances, merger-induced monopoly output reduction and the transfer of resources to previously monopolized markets may actually *improve* overall welfare by increasing output (and reducing significant distortions) in regions of such monopolists' inframarginal output characterized by significant price-cost gaps and thus large distortions.<sup>166</sup> Indeed, such an improvement can occur even if a merger produces no productive efficiencies whatsoever. Nonetheless, the partial equilibrium model excludes such considerations by fiat, thereby compelling condemnation of some practices that, while reducing welfare in a particular market, in fact result in a more efficient allocation of resources in the economy as a whole.

Proponents of the partial equilibrium model assert that the exclusion of impacts on other markets is necessary to generate definitive conclusions about the welfare consequences of studied transactions or practices.<sup>167</sup> There may, in fact, be good reasons to ignore externalities and other second best problems when evaluating the welfare consequences of a merger or other practice or transaction that might produce market power. For

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165. See, e.g., BORK, *supra* note 2, at 113–15 (contending that antitrust analysis should generally take a partial equilibrium approach that ignores possible second-best considerations); KAYSEN & TURNER, *supra* note 19, at 12 (embracing the so-called “Pigouvian assumption” that “we can apply the concept of efficiency to individual industries and firms,” even though “economy-wide efficiency is impossible to achieve” because of second-best considerations); VISCUSI, VERNON & HARINGTON, *supra* note 97, at 76 (explaining that partial equilibrium analysis obviates the need to examine second-best considerations); Williamson, *supra* note 161, at 711–12.

166. See Hicks, *supra* note 91, at 114 (explaining how output reduction in a previously competitive market could actually enhance overall welfare by transferring resources to industries characterized by market power and above-cost pricing, thereby removing significant distortions in the allocation of resources); *id.* at 114–15 (explaining how such considerations establish that output in a competitive market might be above the social optimum). Or, as Williamson himself put it: “Certain economic effects may therefore go undetected, and occasionally behavior which appears to yield net economic benefits in a partial equilibrium analysis will result in net losses when investigated in a general equilibrium context. Such a condition has been shown to exist in an economy in which monopoly exists in many sectors. Thus, whereas partial equilibrium analysis indicates that an increase in the monopoly price in any one sector invariably yields a loss, viewed more generally such an isolated price increase may actually lead to a desirable reallocation of resources.” See Williamson, *supra* note 20, at 23.

167. Thus, a leading text on antitrust and regulation explains the usefulness of the partial equilibrium trade-off model as follows: “[Outside of perfect competition] it becomes incredibly complex to deal with a general equilibrium model in which some markets are monopolies, externalities exist, imperfect information about product quality obtains, and so on. Hence, we now turn to welfare economics concepts in the context of a single market, effectively ignoring the interactions with all other markets.” VISCUSI, VERNON & HARINGTON, *supra* note 97, at 76; Loasby, *supra* note 116, at 864 (“Micro-economics, on the other hand, simply assumes away some of the interdependencies which form the subject-matter of macro-system analysis.”). *But see* Harberger, *supra* note 161, at 789–91 (decrying the tendency of economists to ignore the impact of studied practices on more than one market).

instance, it seems unlikely that antitrust law provides the optimal regulatory tool for dealing with most, if not all, externalities. For one thing, substantial bodies of private and public law deal expressly with externalities; think of the common law of nuisance as well as state and federal environmental regulation, all three of which seek to regulate externalities resulting from the unreasonable use of real property.<sup>168</sup> Given these three bodies of law, there is simply no regulatory void for antitrust to fill in many circumstances. To be sure, externalities may still exist despite these bodies of law, but the existence of such externalities does not thereby justify their consideration by antitrust courts. For one thing, not all externalities are inefficient; sometimes soot spewing from a factory onto a farmer's land is the most efficient use of the farmer's property, whether or not the factory owner pays for the use.<sup>169</sup> Moreover, the cost of eliminating even inefficient externalities will not always exceed the benefits of doing so.<sup>170</sup> Just as there is an optimal amount of crime and other forms of law violation, given the cost of deterrence, there is also an optimal level of inefficient externalities.<sup>171</sup> Indeed, Ronald Coase has opined that the ubiquity of (inefficient?) externalities raises a presumption that the cost of correcting such market failures exceeds the welfare benefits of doing so.<sup>172</sup> If Coase is correct, then the case for assigning this objective to antitrust, where more appropriate bodies of law have failed, is weak indeed.<sup>173</sup> Simply put, the continuing presence of externalities despite the presence of various regulatory regimes designed to combat them does not begin to justify the incorporation of externality concerns into antitrust analysis.

Or, consider the example of tobacco. On the one hand, the product seems plainly harmful, both to the user, who does not internalize the entire harm, but also to third parties, by means of second-hand smoke. Thus, some have argued that antitrust law should tolerate collusive arrangements among cigarette manufacturers, for instance, given that such agreements will reduce consumption of a harmful product.<sup>174</sup> However, both state and national governments already regulate tobacco quite heavily by means of warning labels, public service announcements, outright smoking bans and, most importantly, taxes justified on both revenue generation and regulatory grounds. For all we know, cigarettes and other forms of tobacco might be

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168. Cf. *Am. Elec. Power Co. v. Connecticut*, 131 S. Ct. 2527 (2011).

169. See R.H. Coase, *The Problem of Social Cost*, 3 J.L. & ECON. 1 (1960).

170. See R.H. Coase, *The Firm, the Market, and the Law*, in R.H. COASE, *THE FIRM, THE MARKET, AND THE LAW* 26, 26 (1988) (contending that the ubiquity of externalities implies that the elimination of such phenomena is not always cost-justified).

171. See generally *supra* notes 46–49 and accompanying text.

172. Coase, *supra* note 170, at 26.

173. See also BORK, *supra* note 2, at 114–15 (making an unpersuasive argument that the consideration of externalities in antitrust analysis is inappropriate because such a consideration entails questions of income distribution).

174. See Peter J. Hammer, *Antitrust Beyond Competition: Market Failures, Total Welfare, and the Challenge of Intramarket Second Best Trade-offs*, 98 MICH. L. REV. 849, 887–89 (2000).

overregulated.<sup>175</sup> Any court that sought to incorporate the reduction in such externalities as part of its evaluation of, say, a cartel of cigarette producers would take on a task worthy of the most zealous central planner. If entertaining a “reasonable price defense” sets sail on a “sea of doubt,” then allowing for an “externalities defense” to cartel agreements will surely sink the entire antitrust fleet.<sup>176</sup>

Similar considerations may well justify ignoring more traditional second-best concerns. As some have explained, recognition of such a defense would require tribunals and agencies to gather significantly more information than necessary to evaluate the industry-specific consequences of acts such as a merger or price fixing arrangement.<sup>177</sup> For instance, in addition to determining whether a transaction creates or facilitates the exercise of market power, the tribunal would have to determine the magnitude of any resulting output reduction as well as the size of the resulting deadweight loss. The tribunal would also have to determine the ultimate destination of the now-available various forms of resources (e.g., labor, energy, and raw materials) previously employed to produce the forgone output.<sup>178</sup> Such output reductions would, by definition, be “at the margin” and leave most of an industry’s output intact. Moreover, having determined this destination (or destinations), the tribunal would have to determine whether such other markets are themselves beset with market power and, if so, by how much—presumably defining relevant product and geographic markets to do so. In the end, this process could lead to a determination that the (marginal) resources in question flowed to markets that were generally competitive or nearly so, thereby confirming, at great cost, the conclusions of a partial equilibrium analysis. In the end, such a long drawn out inquiry would impose significant costs on the parties and the legal system while at the same time undermining the *per se* rule against cartel pricing, for instance, by necessitating a fact-intensive analysis about the collateral consequences of an admitted output reduction.<sup>179</sup> Indeed, if

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175. See POSNER, *supra* note 14, at 12–13 n.5 (questioning whether smoking in fact imposes net external costs and noting that, in any event, “measuring [such costs], comparing them with the social costs of merger-induced supracompetitive pricing, and evaluating the social costs and benefits of the products that consumers deflected from cigarettes by that pricing would substitute would be an unfeasible undertaking for the court in an antitrust suit.”).

176. *United States v. Addyston Pipe & Steel Co.*, 85 F. 271, 283–84 (6th Cir. 1898) (asserting that some common law courts had “set sail on a sea of doubt” when they assumed the power to ascertain whether horizontal cartels had set “reasonable” prices).

177. See BORK, *supra* note 2, at 113–14 (contending, persuasively, that antitrust courts should ignore second-best considerations).

178. Cf. Hicks, *supra* note 91, at 114.

179. See BORK, *supra* note 2, at 114 (“In order to take into account second-best’s caution in a price-fixing case, for example, the court would first have to measure the gap between price and marginal cost—in itself an all but impossible task. Next, the court would have to inquire whether there existed divergences between marginal cost and price in any industry . . . to and from resources might move if the cartel were outlawed, and whether such divergences in any such industry would probably be increased or lessened by outlawing the



one presumes that the American economy is generally competitive, partly as a result of antitrust regulation, then it stands to reason that most such second-best arguments will fail “on the merits,” because the resources freed up by anticompetitive output reductions will usually flow to competitive markets or at least markets that are more competitive than those where the challenged conduct takes place and thus not eliminate any distortions.<sup>180</sup> As then-judge Breyer reminded us in a different context, antitrust is a costly administrative system that cannot implement every nuance of an economist’s model.<sup>181</sup>

Still, the partial equilibrium paradigm embraces other simplifying assumptions, assumptions that may be less defensible. For one thing, like the perfect competition model, the model ignores the existence and passage

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price agreement. Finally, the court would have to judge whether the new equilibrium, across all affected industries, would be better or worse for consumers than the present equilibrium. The objection is not merely that every price-fixing case would take ten or fifteen years to try, but that the task itself is beyond the capacity of any court or of any other institution.”); Fisher & Lande, *supra* note 26, at 1626 n.172 (“Economists attempting to determine the relevance of “second-best” outcomes in individual cases face a very difficult, time-consuming, and expensive process. Rarely do they have sufficient data to incorporate second-best factors into any particular antitrust analysis. To require antitrust policy to consider “second-best” arguments would be burdensome and unworkable. One must treat ‘second best’ considerations as theoretical curiosities or abandon any hope of having a theoretical basis for antitrust policy.” (citations omitted)); *see also* FTC v. Super. Ct. Trial Lawyers Ass’n, 493 U.S. 411 (1990).

180. Cf. Claus Thustrup Hansen, *Second Best Antitrust in General Equilibrium: A Special Case*, 63 ECON. LETTERS 193 (1999) (concluding that antimonopoly regulation will reduce welfare if a “large fraction” of the economy is monopolistic). Indeed, the seminal study on the impact of market power on resource allocation concluded that the American economy is quite competitive, with market-power distortions reducing GDP by a mere 0.1 percent. *See* Harberger, *supra* note 17. Based on this finding, Harberger concluded that “[w]e can neglect monopoly elements and still gain a very good understanding of how our economic process works and how our resources are allocated. When we are interested in the big picture of our manufacturing economy, we need not apologize for treating it as competitive, for in fact it is awfully close to being so.” Harberger’s findings are particularly noteworthy, given that he studied the impact of monopoly during the 1920s, a period of relatively lax antitrust enforcement. Subsequent studies have generally confirmed Harberger’s conclusions that the welfare losses from exercises of market power are quite small. *See, e.g.,* Dean A. Worcester, *New Estimates of the Welfare Loss to Monopoly, United States: 1956–1969*, 40 S. ECON. J. 234 (1978).

181. *See* Barry Wright Corp. v. ITT Grinnell Corp., 724 F.2d 227, 234 (1st Cir. 1983) (“Nonetheless, while technical economic discussion helps to inform the antitrust laws, those laws cannot precisely replicate the economists’ (sometimes conflicting) views. For, unlike economics, law is an administrative system the effects of which depend upon the content of rules and precedents only as they are applied by judges and juries in courts and by lawyers advising their clients. Rules that seek to embody every economic complexity and qualification may well, through the vagaries of administration, prove counter-productive, undercutting the very economic ends they seek to serve. Thus, despite the theoretical possibility of finding instances in which horizontal price fixing, or vertical price fixing, are economically justified, the courts have held them unlawful per se, concluding that the administrative virtues of simplicity outweigh the occasional ‘economic’ loss.”); *see also* BORK, *supra* note 2, at 113 (“The theory does not address itself to the probability of the bad result, but states it merely as a possible outcome.”).

of time.<sup>182</sup> That is, the transaction examined by the model takes place in an instant, with market power and efficiencies manifesting themselves immediately and simultaneously.<sup>183</sup> Moreover, both market power and efficiencies are implicitly assumed to be permanent.<sup>184</sup> These assumptions, of course, render it unnecessary to discount either impact when comparing harms with benefits.<sup>185</sup>

Moreover, the model ignores the positive impact that efficiencies resulting from such transactions have upon the welfare of participants, including purchasers, in other markets. After all, within the trade-off model, efficiencies manifest themselves as reduced costs per unit of producing the industry's remaining output.<sup>186</sup> These efficiencies enhance the welfare of producers and consumers, with the division between them depending upon the extent to which the transaction results in market power and thus above-cost pricing.<sup>187</sup> If the merger results in higher prices, it is said, firms have not passed on such efficiencies to purchasers but have instead "pocketed" them.<sup>188</sup> But of course these cost reductions, reflected in a new cost curve, are more than just pecuniary accounting constructs that influence firm profits. Instead, these reductions reflect the fact that industry participants must now purchase and employ a smaller quantity of real resources to produce any given unit of output. Thus, as other scholars have recognized, these cost reductions will also manifest themselves as resources freed up for other possible uses.<sup>189</sup> Moreover, these resources will not sit

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182. See FRANK M. MACHOVEC, PERFECT COMPETITION AND THE TRANSFORMATION OF ECONOMICS 178–79 (1995) (describing perfect competition's instantaneous market clearing); HAYEK, *supra* note 137, at 96 (explaining that satisfaction of perfect competition's various assumptions results in instantaneous equilibrium); JOE BAIN, PRICE THEORY 14–15 (1952) (explaining that price theory focuses on ascertaining the "end result" of responses to a "fixed set of determinants" and does not generally incorporate questions regarding the passage of time and movement from one equilibrium to the next); see also KNIGHT, *supra* note 137, at 77–82 (in perfect competition, economic adjustments occur immediately after the "brief interval" during which production occurs).

183. See Williamson, *supra* note 20, at 21–23.

184. It should be noted that Williamson does consider the passage of time in one sense, namely, he considers the possibility that, but for the merger, a firm or firms would realize the same efficiencies via internal expansion and thus without merger-created market power. See *id.* at 25–26.

185. Cf. *id.* (discounting to derive the present value of future efficiencies obtained by means of future internal expansion, an alternative to immediate merger).

186. See *supra* notes 147–50 and accompanying text; see also CARLTON & PERLOFF, *supra* note 44, at 798.

187. See Fisher & Lande, *supra* note 26.

188. See *supra* notes 67–69 and accompanying text.

189. See BORK, *supra* note 2, at 108 ("Cost reductions [from a merger to monopoly that creates efficiencies] mean that the saved resources are freed up to produce elsewhere in the economy."); SCHERER, *supra* note 57, at 26 (explaining that the cost reduction resulting from a monopolist's realization of economies of scale frees up productive resources and thus increases output in other markets); Blair & Sokol, *supra* note 37, at 490 ("Cost savings that result from merger-specific productive efficiencies that do more than increase the merging parties' profits are important. Since resources are freed up, consumers benefit from lower prices in other markets."); Heyer, *supra* note 19, at 39–40 (explaining how a merger that

idle; after all, the industry had to bid them away from other industries, where firms were willing to pay a positive price for them.<sup>190</sup> As a result, such resources will presumably flow to other markets.<sup>191</sup> More technically, the newly created firm will demand fewer such inputs, thereby reducing overall demand for them and reducing the price that firms in other markets must pay for such inputs. As a result, firms in other markets will employ more such inputs, increasing their own output as a result and at least partly offsetting the reduction in output in the first market.<sup>192</sup> Indeed, at least one scholar has stated definitively that, where economies of scale lead to a monopoly whose efficiencies outweigh the deadweight loss, such monopolization will *increase* society's overall total output, despite the output reduction in the monopolized market.<sup>193</sup>

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reduces production costs frees up resources for use elsewhere in the economy); Alan J. Meese, *Section 2 Enforcement and the Great Recession: Why Less (Enforcement) Might Mean More (GDP)*, 80 FORDHAM L. REV. 1633, 1674–75 (2012) (“Whether or not the benefits of cost reductions are “passed on” to consumers in the relevant market, such efficiencies will free up productive resources that will flow to other sectors in the economy . . . . Because this resource flow will not enhance market power in other markets, output in those markets will almost invariably increase.”); *see also* HOVENKAMP, *supra* note 2, at 86 (“As a matter of sound economics, the [total] economic welfare approach is almost always preferable; most efficiencies have a way of trickling through the economy so that they benefit everyone.”); Williamson, *supra* note 19, at 112 (contending that efficient resource allocation is more important to long-run economic growth than effective macroeconomic stabilization). Of course, monopolistic output reduction also frees up resources that can be employed to increase production in other markets, but such reductions “by definition” allocate resources to uses that produce *less* value than they would produce in the monopolized market, with no offsetting improvement in productive efficiencies. *See* SCHERER & ROSS, *supra* note 57, at 18–19 (“[F]ailure to maximize the value of the output bundle and failure to maximize the sum of consumers’ plus producers’ surpluses are conceptually identical manifestations of monopolistic resource misallocation.”). The only exception, of course, is when conditions are such that the theory of second-best applies. *See supra* notes 165–66 and accompanying text.

190. *See* GEORGE J. STIGLER, *THE THEORY OF PRICE* 105 (1966) (“The cost of any productive service to user A is the maximum amount it could produce elsewhere. The foregone alternative is the cost.”); KNIGHT, *supra* note 137, at 92.

191. *See* Heyer, *supra* note 19, at 39–40; *see also* Meese, *supra* note 189, at 1675.

192. *See generally* LANCASTER, *supra* note 118, at 115–29. *Cf.* SCHERER & ROSS, *supra* note 57, at 26 (explaining how a monopolist’s realization of economies of scale frees up resources and increases output in other markets); *id.* at 23 & n.27 (explaining that such cost reductions free up resources and thereby result in output increases in other sectors of the economy).

193. *See* SCHERER & ROSS, *supra* note 57, at 26 (stating that “failure to maximize the value of the output bundle and failure to maximize the sum of consumers’ plus producers’ surplus are conceptually identical manifestations of monopolistic resource misallocation.”); *id.* at 22 (“Excess costs [due to productive inefficiency] reduce combined consumers’ plus producers’ surplus just as monopolistic resource misallocation does, and a relatively small unit cost elevation [resulting from the prohibition of monopoly that would otherwise result in productive efficiencies] might deplete the surplus even more than a monopolistic price elevation of appreciable proportions.”); *id.* at 28 (quoting Adam Smith for the proposition that an individual producer labors in a competitive economy to make the whole produce as great as possible); *see also* Williamson, *supra* note 19, at 21 (stating that the partial equilibrium trade-off model can be employed to examine “the effects on resource allocation”); *id.* at 22 n.4 (noting that the use of “dead-weight loss” to refer to monopolistic

Moreover, output increases in other markets will presumably reduce prices in such markets, thereby *increasing* the welfare of consumers in such markets.<sup>194</sup> Thus, an efficiency-generating transaction that increases prices in one market will nonetheless increase output and reduce prices in other markets. In these circumstances, application of a “purchaser welfare” standard based on the partial equilibrium model and resulting condemnation of a transaction that increases prices in one market will certainly *reduce* the (potential) welfare of consumers in some other markets and may actually *reduce* the overall welfare of purchasers throughout the economy.<sup>195</sup>

#### V. REFRAMING THE PURCHASER WELFARE V. TOTAL WELFARE DEBATE

As explained above, the partial equilibrium trade-off model provides an incomplete account of the impact of transactions or practices that both increase prices and also generate efficiencies. In particular, the model, by hypothesis, excludes consideration of the impact of such efficiencies on other markets. The model also excludes the possibility that the impact of the transaction or practice might change over time. For instance, the model excludes the possibility that a new entry might eventually dissipate any market power, thereby ensuring that purchasers in the relevant market realize the benefits of the transaction’s or practice’s efficiencies. This part offers suggestions for how to reframe antitrust analysis to account for the recognitions that (1) efficiencies generated in one market will impact other markets and (2) the balance of a transaction’s or practice’s benefits and harms in the relevant market might change over time.

##### A. Spatial Reframing

So far as the author is aware, no other scholar has examined the relevance of such resource flows for the debate over the proper definition of “consumer welfare.”<sup>196</sup> Instead, contending camps repeatedly disagree about whether tribunals should include the welfare of producers when examining the welfare consequences of transactions that produce both

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misallocation is too restrictive because productive inefficiency is also a deadweight loss). In short, Scherer agrees with Williamson that the realization of productive efficiencies will enhance allocative efficiency and also assumes that a practice that increases total surplus in one market will increase the nation’s overall economic welfare, that is, the “value of the output bundle.”

194. See Blair & Sokol, *supra* note 37, at 484–85; Meese, *supra* note 189, at 1673–76.

195. See Meese, *supra* note 189, at 1673–76.

196. But see *id.* at 1675 (“[I]n some cases, conduct that violates a consumer welfare effects standard might actually reduce the aggregate price level, by freeing up so many resources that output increases in other markets collectively lower prices that exceed the price increase in the monopolized market.”); *id.* at 1675 n.261 (“In such cases, application of the consumer welfare effects standard would actually reduce consumer welfare as a whole, even if one excluded producers from the definition of ‘consumer’ and included only those individuals who purchase products from producers. Put another way, application of a total welfare standard may in fact improve the welfare of such narrowly defined consumers more than application of a standard that purportedly seeks to maximize only their welfare.”).

market power and efficiencies.<sup>197</sup> This narrow framing of the normative question, of course, is a testament to the hold that the partial equilibrium paradigm exerts over the mind of antitrust scholars, practitioners, and regulatory economists who seek to tackle antitrust problems.<sup>198</sup>

However, the fact that such market-centric framing is understandable does not thereby justify ignoring the positive impact of a transaction on consumers in other markets. After all, the ordinary rationales for ignoring other extramarket welfare consequences may simply not apply when such consequences take the form of efficiency-driven resource flows to other markets. For instance, as mentioned earlier, antitrust generally ignores the possibility that the naked exercise of market power and output reduction in one market can actually increase overall welfare by redeploying resources, increasing output, and reducing distortions in other, previously monopolized markets.<sup>199</sup> By contrast, recognition of the impact of efficiency-induced resource flows is more straightforward and less costly.<sup>200</sup> For one thing, the extramarket impact of such resource flows is unambiguously positive, and the impact generally does not depend upon the competitive conditions in other markets.<sup>201</sup> By contrast, and as explained previously, the chance that naked output reductions in one market will actually *increase* overall welfare is only that, a chance, and not a very large chance in an economy that is generally competitive, in part because of

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197. See *supra* notes 8–15 and accompanying text.

198. See Meese, *supra* note 110, at 519–21 (describing the hold that the partial equilibrium paradigm has on antitrust scholars, judges, and practitioners).

199. See *supra* notes 165–66, 177–81 and accompanying text.

200. Note here that “recognition” of such efficiencies for the purpose of antitrust analysis does not necessarily mean case-by-case consideration of such efficiencies.

201. That is, whether or not other markets are monopolized, resource flows to such markets will result in output increases, without any corresponding output decreases in the market where efficiencies are realized in the first place. Thus, the impact of such flows will generally be positive. The only exception will be in those instances in which output increases in other markets produce negative externalities that are inefficient. In such cases, the movement of resources from the original market to other markets could reduce output. There are, however, three separate reasons that this possibility should not undermine the recognition of such extramarket efficiency effects. First, other legal regimes should minimize the extent of such inefficient negative externalities. Second, even if a legal regime does not currently address such externalities in a particular industry, an increase in the magnitude of such externalities might induce political action creating such a regime (though, of course, the cost of the resulting regulatory regime would itself qualify as an externality, though presumably one less costly than the underlying externality that the regime combats). Third, it seems at least equally likely that production in some industries will be characterized by positive externalities, the presence of which will actually magnify the benefits of resource flows from the original market to others. Thus, failure to recognize such resource flows could “throw the baby out with the bath water,” by depriving society of the benefits of output increases, including those in markets characterized by positive externalities, so as to eliminate the occasional instance in which such increases take place in markets with uncorrected inefficient externalities.

robust antitrust regulation.<sup>202</sup> Moreover, market-power induced output reductions generally occur only “at the margins,” thus freeing up only modest resources for use elsewhere. By contrast, productive efficiencies are, by their nature, inframarginal, that is, apply to every unit of output that a firm or firms continue to produce after the transaction that results in the efficiencies.<sup>203</sup> Thus, the realization of such efficiencies will have a larger (necessarily positive) impact than the (ambiguous) impact of anticompetitive output reductions.<sup>204</sup>

As a result, the benefits of recognizing the impact of efficiency-generated resource flows will be significantly greater than the benefits of recognizing traditional second best possibilities, for instance. But what about the costs? As an initial matter, the calculation of the magnitude of such efficiencies will not entail any costs over and above those that tribunals must otherwise incur if they have already recognized an efficiency defense as does, say, merger law and section 1’s Rule of Reason.<sup>205</sup> Moreover, recognition of such efficiencies would have no impact on the costs (or benefits) of administering the *per se* rule against price fixing, which, of course, assumes the absence of efficiencies.<sup>206</sup> Finally, and as explained in greater detail below, the magnitude of cost reductions itself serves as a proxy for the value that resources will produce in other markets.<sup>207</sup> In short, the cost of recognizing such extramarket impacts are relatively low, while the benefits of doing so are relatively high.

Recognition that transaction-specific productive efficiencies free up new resources for use in other markets requires a reframing of the debate between the “purchaser welfare” and “total welfare” schools of thought. For one thing, this realization undermines the supposed conflict between “producers” who realize efficiencies on the one hand, and “consumers” who purchase from these producers, on the other.<sup>208</sup> This debate, as explained earlier, rests upon an assumption common to both camps, namely, that the owners of firms who exercise monopoly power resulting in increased prices

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202. See *supra* notes 179–81 and accompanying text (explaining that, if most of the economy’s markets are competitive, anticompetitive output reduction in one market will likely reduce overall welfare).

203. See, e.g., CARLTON & PERLOFF, *supra* note 44, at 798 (“The larger the quantity [still] sold in the marketplace, the more important the efficiency gains, and the larger the area of the rectangle compared to the triangle.”); Williamson, *supra* note 20, at 21–23. Indeed, to the extent that the realization of efficiencies mitigates the extent of monopolistic output reduction, the magnitude of realized efficiencies will be that much larger, thereby further bolstering this distinction.

204. I am grateful to Sarah Stafford for this insight.

205. See *supra* notes 79–83, 88–89 and accompanying text.

206. See *supra* notes 178–82 and accompanying text (explaining how incorporation of second-best considerations into antitrust enforcement would increase the costs and reduce the benefits of the *per se* rule); see also *N. Pac. Ry. Co. v. United States*, 356 U.S. 1, 5 (1958) (conduct must always or almost always lack redeeming virtues to be unlawful *per se*).

207. See *infra* notes 218–21 and accompanying text.

208. See *supra* notes 96–102 and accompanying text (collecting various sources defining the debate in these terms).

necessarily “pocket” efficiencies that are not passed on to consumers, pocketing that is irrelevant for the total welfare school but dispositive for the purchaser welfare school.<sup>209</sup> Instead, this insight establishes that, in addition to increasing producer surplus, efficiencies realized in one market will also improve the welfare of some consumers in one or more other markets.<sup>210</sup> Thus, any claim that producers simply “pocket” the fruits of efficiencies, to the detriment of all consumers, is an economic fiction, perpetuated (intentionally) by the partial equilibrium model, a fiction that ignores the full allocational consequences of such transactions.<sup>211</sup> Therefore, while banning a transaction that increases prices but also creates efficiencies will protect purchasers in one market, such intervention will necessarily and simultaneously injure purchasers in other markets. Thus, while purporting to champion the interests of purchasers, proponents of the purchaser welfare approach are instead elevating the welfare of some purchasers over others.<sup>212</sup> At the same time, proponents of a total welfare standard have perhaps needlessly characterized producers as consumers and thereby declared producer surplus to be part of the consumer welfare calculus, adding confusion to the debate.

To be sure, the extramarket impact of any given transaction might appear to be relatively small, perhaps indiscernible, because resources freed up by the realization of productive efficiencies might in some cases be dispersed

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209. *See supra* notes 96–102 and accompanying text.

210. *See infra* notes 218–21 and accompanying text (explaining that the realization of productive efficiencies improves the allocation of resources as much as elimination of monopoly). Of course, the complete specification of this claim requires the identification of the relevant “consumers” or “purchasers” in other markets. It would be tempting to equate these purchasers with the “ultimate consumers” in other markets. However, the purchaser welfare standard does not purport to define “purchaser” or “consumer” so narrowly. Moreover, innumerable Sherman Act decisions treat business firms as “purchasers” or “consumers,” entitled to obtain treble damages resulting from cartel pricing or unlawful monopolization. *See, e.g.,* *Hanover Shoe, Inc. v. United Shoe Mach. Corp.*, 392 U.S. 481, 488–94 (1968) (holding that a firm could obtain treble damages based upon the magnitude of the monopoly overcharge resulting from unlawful exclusionary practices); *see also* *Ill. Brick Co. v. Illinois*, 431 U.S. 720 (1977) (holding that masonry firms were the only proper plaintiffs for challenging a cartel of brick manufacturers). As a result, this Article assumes that firms in other markets that purchase inputs freed up by the realization of efficiencies are “purchasers” for purposes of applying the purchaser welfare standard. If, on the other hand, only ultimate consumers count as “purchasers,” calculation of the impact of a transaction upon “purchasers” in other markets would require calculation of the extent to which firms in those other markets “pass through” cost savings to ultimate purchasers. I am grateful to Sarah Stafford for calling my attention to the pass-through question.

211. *Cf. supra* notes 68–70 and accompanying text (explaining the claim by proponents of the purchaser welfare approach that producers simply “pocket” the proceeds of efficiencies, at the expense of marketplace consumers).

212. As explained earlier, this is also true when, say, a purchaser welfare standard results in the condemnation of an efficiency-creating merger that results in lower prices for most purchasers because the defendants, via price discrimination, are able to raise prices to a small subset of consumers in an otherwise larger relevant market. *See supra* note 10 and accompanying text.

across several markets.<sup>213</sup> Though, here again, it is useful to recall that such efficiencies will be inframarginal in nature and thus be larger perhaps than initially supposed.<sup>214</sup> Moreover, while the resource effects of any given transaction may be relatively small in this sense, antitrust rules must be designed with a large class of transactions, practices, and agreements in mind. By analogy, the Sherman Act would not tolerate price fixing agreements between small firms because no single agreement would have a large impact on resource allocation. Instead, the Sherman Act bans the entire class of such agreements. Taken together, the various efficient transactions, practices, and contracts that individually offend a purchaser welfare standard may, over time, improve the overall welfare of all purchasers in the economy, viewed as a class, including those in the markets where such transactions take place. Indeed, some purchasers in the market where a challenged practice takes place may also be purchasers in markets to which resources flow and increase output; purchases in the original market may constitute only a fraction of total purchases. Because each consumer participates in several markets at once, application of a total welfare standard that validates transactions that, on balance, enhance the allocation of resources could actually increase the welfare of all purchasers over time.<sup>215</sup> If so, then a standard that validates all efficient transactions will satisfy the pareto-like quality of the purchaser welfare standard.<sup>216</sup>

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213. See generally J.R. Hicks, *The Foundations of Welfare Economics*, 49 *ECON. J.* 696, 709–10 (explaining that, under conditions of perfect competition, the elimination of a firm in one market will free up resources that “will have to be scattered about at the margins” of other uses). But see Harberger, *supra* note 161, at 791 (contending that, in some cases, extramarket effects will be concentrated in a few markets).

214. See *supra* notes 203–05 and accompanying text.

215. Cf. Easterbrook, *Workable Antitrust Policy*, *supra* note 11, at 1703 (“In the long run consumers gain the most from a policy that emphasizes allocative and productive efficiency.”). Indeed, assuming a fixed rate of economic growth, a total welfare approach could also increase aggregate purchaser welfare in the long run, as it will result in larger GDP and thus a larger base on which such a fixed rate would be applied (and compounded). Of course, some have made similar claims in support of an efficiency norm for tort law. See generally *Losee v. Buchanan*, 51 N.Y. 476, 484–91 (1873) (contending that a negligence standard for tort law, while depriving some victims of the chance to recover damages for certain injuries, will nonetheless improve such individuals’ welfare, by encouraging economic activity); WILLIAM M. LANDES & RICHARD A. POSNER, *THE ECONOMIC STRUCTURE OF TORT LAW* (1987) (contending that parties who “lose” from a particular efficient rule of tort law may nonetheless support an overall efficiency norm because such a norm would, on balance, improve their welfare). Proponents of zoning regulations have made similar claims, namely, that such interference with the manner in which one uses his property will enhance the welfare of those whose property is regulated by creating a mutual reciprocity of advantage. See *Vill. of Euclid v. Ambler Realty Co.*, 272 U.S. 365, 394–95 (1926). In the same way, allowing purchasers to challenge efficient transactions simply because they increase prices in a particular market may in fact reduce the welfare of such market participants.

216. Cf. HOVENKAMP, *supra* note 2, at 83–84 (explaining distinction between Pareto superiority and Kaldor-Hicks efficiency criteria and that the total welfare standard rests on the latter).



How is it, then, that the antitrust law might reframe current doctrine so as to recognize the impact of efficiencies on other markets? First, it seems appropriate to reiterate that, despite the tendency of antitrust experts to distinguish between them, productive efficiency and deadweight loss are two sides of the same coin.<sup>217</sup> That is, realization of productive efficiencies can “improve” the allocation of resources and thus individual “want satisfaction” just as much and in the same way as a monopolistic misallocation of resources can reduce such satisfaction.<sup>218</sup> Thus, a technological innovation that reduces the cost of producing a particular good improves the allocation of resources just as much as the elimination of a naked cartel or nonefficient monopoly.<sup>219</sup> As F.M. Scherer observed more than three decades ago, a monopoly that rests upon significant economies of scale will—if it produces efficiencies that exceed deadweight losses—result in a net increase in the value of total output produced by the economy, as the value of output increases in other markets exceeds the value destroyed by the deadweight loss in the monopolized market.<sup>220</sup>

Once we recognize that efficient conduct affects numerous markets at once and improves the economy’s net allocation of resources, we can no longer rely exclusively upon a partial equilibrium model to conduct the antitrust inquiry. Instead, we can employ the typical aggregate demand and aggregate supply model from macroeconomic theory—a general equilibrium model—to give content to F.M. Scherer’s observation.<sup>221</sup> If Scherer is correct, and there is no reason to believe he is not, then we can

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217. See *supra* notes 153–54 and accompanying text; cf. BORK, *supra* note 2, at 104–06 (distinguishing between productive and allocative efficiency).

218. See *supra* notes 153–54 and accompanying text.

219. See N. GREGORY MANKIW, *PRINCIPLES OF ECONOMICS* 519, 523–24 (1998) (explaining how technological advances can enhance productivity and thus increase a nation’s total output).

220. See *supra* note 193 and accompanying text. This conclusion, it should be noted, is consistent with the observation that a firm’s costs equal the value of the output these resources would have produced in other markets. STIGLER, *supra* note 190, at 105 (“The cost of any productive service to user A is the maximum amount it could produce elsewhere. The foregone alternative is the cost.”). Thus, the magnitude of cost reduction serves as a proxy for the value of output increases in other markets.

221. See N. GREGORY MANKIW, *MACROECONOMICS* 74 (7th ed. 2010) (explaining that the basic model of the macroeconomy is general equilibrium in nature, because it incorporates various interactions that determine the overall supply and demand for goods and services); see also Williamson, *supra* note 161, at 702 n.10 (“When changes in the relevant market do affect the general economy, a general equilibrium analysis, in which prices and quantities for all markets must be determined together, is usually appropriate.”). In other contexts, scholars have employed general equilibrium models to determine the macroeconomic impact of industry-by-industry state-imposed cartelization. See, e.g., Harold L. Cole & Lee E. Ohanian, *New Deal Policies and the Persistence of the Great Depression: A General Equilibrium Analysis*, 112 J. POL. ECON. 779, 784 (2004) (studying the impact of the National Industrial Recovery Act, which imposed industrial and labor cartels, and the National Labor Relations Act, which imposed labor cartels, upon GDP); Christina D. Romer, *Why Did Prices Rise in the 1930s?*, 59 J. ECON. HIST. 167, 187–93 (1999) (testing the impact of the National Industrial Recovery Act upon economy-wide wages and prices during the Great Depression).

model the net impact of such monopolization (or a merger that results in such monopolization), as a shift in the long run aggregate supply curve.<sup>222</sup> This “curve” is in fact vertical, and it represents the value of the output that the economy can produce when all of its resources are fully employed.<sup>223</sup> The realization of technological or other efficiencies by merger or otherwise will allow a firm or firms to employ a less resource-intensive production process.<sup>224</sup> By hypothesis, the resulting improvement in resource allocation will more than outweigh the deadweight loss and resulting misallocation due to market power.<sup>225</sup> As a result, the economy will be capable of producing more output—with the very same resources—than it was able to produce before the transaction, with the result that the aggregate supply curve will shift to right.<sup>226</sup> Such a shift is analogous to the macroeconomic impact of research and development and resulting innovation, encouraged by the prospect of obtaining a patent, for instance.<sup>227</sup> Like a merger to monopoly, such patents also result in above-cost pricing and a resulting allocative loss.<sup>228</sup> Society nonetheless tolerates such harms because it believes that the resulting improvement in potential output and economic

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222. See RUDIGER DORNBUSCH, STANLEY FISCHER & RICHARD STARTZ, *MACROECONOMICS* 101 (11th ed. 2011) (“The aggregate supply curve describes, for each given price level, the quantity of output firms are willing to supply.”).

223. See *id.* (“The classical [vertical] supply curve is based on the assumption that the labor market is in equilibrium with full employment of the labor force.”); MANKIW, *supra* note 125, at 272–73 (describing the long-run aggregate supply curve as a vertical representation of the value of output that society could produce with fully employed resources).

224. See WILLIAM BOYES & MICHAEL MELVIN, *FUNDAMENTALS OF ECONOMICS* 263 (5th ed. 2011) (explaining that technological innovation will increase potential output).

225. See *supra* notes 34–36 and accompanying text (explaining how a transaction that results in relatively minor cost savings can increase overall welfare despite resulting market power and price increases). Of course, if the impact of misallocation resulting from market power and higher prices exceeds the magnitude of productive efficiencies, then both the “total welfare” and “purchaser welfare” standards will condemn such a transaction. This Article focuses on those instances in which efficiencies are sufficiently large that the two standards will produce different results.

226. See generally MANKIW, *supra* note 219, at 519 (explaining how an improvement in the utilization of resources can enhance an economy’s overall productivity); *id.* at 692 (explaining how a technological improvement can increase an economy’s overall productivity); see also ARNOLD C. HARBERGER, USAID, *ON THE PROCESS OF GROWTH AND ECONOMIC POLICY IN DEVELOPING COUNTRIES* 3 (2005) (“It is absolutely crucial to recognize that all economic growth takes place at the level of the productive enterprise.”); *id.* at 4 (explaining that so-called “real cost reduction” is the most important driver of economic growth and results in such growth even when other components are stagnant).

227. See BOYES & MELVIN, *supra* note 224, at 263 (“Technological innovations allow businesses to increase the productivity of their existing resources. As new technology is adopted the amount of output that can be produced by each unit of input increases, moving the aggregate supply curve to the right.”); MANKIW, *supra* note 125, at 535 (explaining how the patent system encourages innovation that results in the growth of potential national output); *id.* at 692–93 (explaining how technological improvement will result in a shift in the long-run aggregate supply curve).

228. See CARLTON & PERLOFF, *supra* note 44, at 689.

growth exceeds the offsetting welfare losses.<sup>229</sup> Indeed Professors Areeda and Turner expressly analogized the use of “superior skill, foresight and industry” to obtain and protect a monopoly—what they called “competition on the merits”—to the protection of a monopoly via a valid patent, opining that antitrust law should not seek to prevent monopoly pricing that resulted from such efficiencies.<sup>230</sup> A merger or other transaction or practice that creates efficiencies that exceed deadweight allocative losses is a classic example of such “competition on the merits” and will presumably increase potential output.<sup>231</sup>

Of course, other things being equal, such a shift in the long-run aggregate supply curve will reduce the nation’s aggregate price level, which is set by the interaction of the aggregate demand and aggregate supply curves.<sup>232</sup> Moreover, such a reduction will reflect higher aggregate output and, as a result, greater aggregate consumer surplus.<sup>233</sup> It would therefore seem that a merger or other transaction that results in efficiencies that exceed the allocative losses resulting from market power will necessarily increase the aggregate welfare of the economy’s purchasers.

There are, however, two caveats to this analysis. First, it may be that everything else is not equal. For instance, nothing about the account just provided excludes the fact that the challenged practice or transaction will

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229. See MANKIW, *supra* note 125, at 535; CARLTON & PERLOFF, *supra* note 44, at 688–91 (“[A] patent causes a pricing distortion—a monopoly price—after a discovery. The government is faced with a trade-off: the longer the patent, the greater the inducement for research but the larger the cost due to more research projects and the monopoly loss.”); SCHERER & ROSS, *supra* note 57, at 450–54; see also Shuintin Yao & Lydia Gan, *Monopoly Innovation and Welfare Effects*, 4 ECON. E-JOURNAL (Oct. 4, 2010), available at <http://www.economics-ejournal.org/economics/journalarticles/2010-27>.

230. “[A] monopolist whose power was legitimately acquired by patents cannot be denied monopoly profits without subverting the purpose of the patent laws. Similarly, denying monopoly profits to those whose power was obtained by superior skill, foresight, and industry could eliminate the primary incentive to develop such competitive skill. Finally, price restrictions would have perverse effects on the efficiency and innovation aspects of a monopolist’s on-going performance by eliminating the reward.” See Areeda & Turner, *supra* note 72, at 707; *id.* at 706–07 (equating “competition on the merits” with realization of efficiencies and pricing at or above cost).

231. See BOYES & MELVIN, *supra* note 227, at 263 (explaining that technological innovation will increase potential output). As explained earlier, courts have considered the realization of efficiencies via economies of scale, for instance, as quintessential “competition on the merits,” lawful per se under section 2 of the Sherman Act, even if such conduct creates or protects a monopoly. See *supra* notes 44–45 and accompanying text. Moreover, the Supreme Court recently agreed with Professors Areeda and Turner, opining that the prospect of obtaining and enjoying a monopoly provides incentives for innovation. See *Verizon Commc’ns Inc. v. Law Offices of Curtis V. Trinko, LLP*, 540 U.S. 398, 407 (2004) (“The mere possession of monopoly power, and the concomitant charging of monopoly prices, is not only not unlawful; it is an important element of the free-market system. The opportunity to charge monopoly prices—at least for a short period—is what attracts ‘business acumen’ in the first place; it induces risk taking that produces innovation and economic growth.”).

232. See MANKIW, *supra* note 221, at 272–73 & figs.9–7.

233. *Id.*

increase prices for those purchasers *in the relevant market* where the transaction or practice takes place.<sup>234</sup> Moreover, such a price increase will itself dampen aggregate demand by reducing the value of the real balances that such consumers hold, raising interest rates, and reducing consumption and investment.<sup>235</sup> Such a concern is illusory, however, for two reasons. First, when purchasers in the relevant market pay higher prices, producers reap the benefits, increasing the value of their own real balances and thereby any price effect on aggregate demand. Indeed, to the extent that producers “pocket” any efficiencies, their real balances will rise more than any reduction in purchasers’ real balances, thus implying an *increase* in overall aggregate demand.<sup>236</sup> Second, when prices fall in other markets, purchasers in such markets will also experience higher real balances, increasing their demand for goods. These two effects account for the downward movement along the given aggregate demand curve and resulting increase in output due to the shift in aggregate supply.

But this brings us to a second possible caveat. That is, the analysis thus far, by focusing on aggregates, includes the consumer surplus that producers in the relevant market derive from additional expenditures upon newly produced goods. These expenditures, of course, come at the expense of purchasers in the relevant market, who have paid higher prices and thus been the victims of income transfers to producers.<sup>237</sup> As a result, one might argue, we cannot be certain that the resulting increase in aggregate consumer surplus will always reflect a true net increase in the welfare of those who are purchasers *simpliciter*, without accidentally including the enhanced (purchaser) welfare of producers who reap the fruits of monopoly power.

If this second caveat is valid, then we cannot simply assume that any net efficient transaction will result in a net improvement in purchaser surplus,

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234. See *supra* notes 29–36 and accompanying text (describing the disagreement between the “total welfare” and “purchaser welfare” schools about the proper treatment of conduct that both raises prices and generates efficiencies).

235. See DORNBUSCH ET AL., *supra* note 222, at 244–45; see also DON PATINKIN, MONEY, INTEREST, AND PRICES: AN INTEGRATION OF MONETARY AND VALUE THEORY 17–21 (2d abr. ed. 1989) (describing the separate so-called “real balance effect,” whereby an increase in real balances increases aggregate wealth and thus stimulates consumption for that reason alone).

236. Cf. SCHERER & ROSS, *supra* note 57, at 23 n.7 (“For the low cost monopolist, that rectangle [reflecting efficiencies] is profit rather than cost. Oversimplifying somewhat, the monopolist’s profit provides the purchasing power with which this additional output (presumably from other sectors of the economy) can be purchased for the monopolist’s stockholder’s consumption.”). There is another way to characterize these phenomena within the confines of this model. Succinctly, a transaction that creates efficiencies that exceed any allocative losses will shift the aggregate supply curve to the right, without impacting the location of the aggregate demand curve. Instead, the net increase in real balances and resulting increased demand will manifest itself as a movement *along* the aggregate demand curve, downward and to the right.

237. See *id.* (“For the low cost monopolist, . . . the monopolist’s profit provides the purchasing power with which this additional output (presumably from other sectors of the economy) can be purchased for the monopolist’s stockholder’s consumption.”).

properly defined, even though the result will be an increase in GDP. Instead, we might have to settle for a case-by-case determination of the impact of a challenged practice or transaction on the *overall* welfare of purchasers, including those in other markets.<sup>238</sup> Such an analysis would entail an examination of the relative magnitude of reductions in purchaser surplus in the original market, on the one hand, and cost reductions, on the other.<sup>239</sup> These cost reductions, in turn, would serve as proxies for cost reductions in other markets and thus increase consumer surplus in such markets.<sup>240</sup> In some cases, that surplus will exceed the reduction in purchaser surplus in the original market. In other cases, it will not. In any event, a faithful implementation of a true purchaser welfare standard would require the enforcement agencies and courts to determine and compare the relative magnitude of these two impacts on purchaser welfare. Failure to do so would bias antitrust law and policy in favor of purchasers in the relevant market and against those in other markets, while at the same time, dampening GDP and stultifying economic growth for the reasons outlined above.<sup>241</sup>

To be sure, such a case-by-case analysis will be somewhat more costly than simply determining whether a challenged practice, restraint, or transaction reduces purchaser welfare in the original market. However, the prospect of such additional costs does not necessarily undermine the argument for such an approach. After all, resulting improvements in purchaser welfare may well exceed the additional costs of making such determinations. Moreover, such an approach will validate some efficient transactions that a partial equilibrium purchaser welfare standard would otherwise condemn, thereby freeing up resources that would more than offset the additional resources expended to make this determination.<sup>242</sup> Thus, such a system would in a sense both “pay for itself” and, in addition, increase the welfare of purchasers.

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238. Cf. Harberger, *supra* note 161, at 789–91 (contending that economists should be willing to examine the impact of a proposed policy on more than one market).

239. Thus, one could imagine a transaction that creates significant efficiencies that greatly exceed any reduction in purchaser surplus in the relevant market. In such cases, it seems possible that resource flows to other markets will result in a net increase in aggregate purchaser surplus. Indeed, one scholar, otherwise supportive of a purchaser welfare standard, would not apply such a standard if “the aggregate efficiency costs of doing so would be large.” See Baker, *supra* note 8, at 522.

240. See STIGLER, *supra* note 190, at 105 (“The cost of any productive service to user A is the maximum amount it could produce elsewhere. The foregone alternative is the cost.”); See also KNIGHT, *supra* note 137, at 92–93; Fink, *supra* note 161, at 15 (explaining that cost curves in original partial equilibrium market reflect the “value of using resources in other industries”).

241. Of course, such an analysis would require a determination of the relevant purchaser for the purpose of implementing the purchaser welfare standard. See *supra* note 210 and accompanying text.

242. While additional administrative costs would be a one-time expenditure, efficiencies would be permanent, thereby justifying the presumption that such efficiencies would exceed these administrative costs.

There is, of course, another approach that could improve the welfare of purchasers even more, at least in the longer run. That is, the enforcement agencies and tribunals could simply validate all practices, restraints, and transactions that increase overall welfare (and thus GDP), without regard to whether the transaction results in a net improvement in purchaser welfare, recognizing that such transactions will necessarily increase the welfare of *some* purchasers, albeit not purchasers in the relevant market and, perhaps, not purchasers overall. In addition to generating additional wealth, such an approach could also improve overall purchaser welfare in the long run, even if some transactions allowed by this standard reduce it in particular cases. Put another way, the population of efficient transactions that offend the current purchaser welfare standard may, when viewed as a whole, increase total purchaser welfare, even if some individual transactions do not. If so, then validating all restraints, practices, or transactions that increase total welfare would also increase overall purchaser welfare. In this way, society could “have its cake and eat it too,” that is, increase its total welfare and potential output while at the same time increasing the overall welfare of purchasers, albeit not as much as a more finely honed, case-by-case inquiry into the impact of a challenged transaction, practice or restraint on purchaser welfare.<sup>243</sup>

#### *B. Temporal (Re)Framing*

As noted earlier, the partial equilibrium model assumes that market power and efficiencies arise simultaneously and that both effects continue at the same magnitude in perpetuity.<sup>244</sup> Once a monopolist, always a monopolist, the model assumes. In so doing, the model tracks the perfect competition model, which also suspends the operation of time and assumes that economic adjustments take place in an instant.<sup>245</sup>

The exclusion of time can produce misleading results, whether one adopts a “purchaser welfare” or total welfare approach to the statute. In particular, this assumption will in some cases force courts to ban transactions that will plainly improve the discounted present wealth of purchasers in the relevant market by reducing prices for all the market’s purchasers over the medium and long runs. Take, for example, a merger that results in high levels of concentration as well as efficiencies. Assume further that, while substantial, the efficiencies are not large enough to counteract the impact (upon price) of market power. Finally, assume that new entry will be “likely” and “sufficient” to combat any exercise of market power (that is, to drive prices back to pretransaction levels), but that such entry will not take place soon enough to be “timely” under governing enforcement policies and/or case law to counteract a *prima facie* case of

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243. Thus, such a standard could both generate wealth overall and enjoy wide support among purchasers.

244. See *supra* notes 184–86 and accompanying text.

245. See *supra* note 183 and accompanying text.

anticompetitive harm.<sup>246</sup> Under case law and prior agency guidelines, any entry that took more than two years was insufficiently “timely,” with some exceptions, thereby resulting in condemnation of the transaction.<sup>247</sup> More recent guidelines seem to contemplate an even smaller window. In particular, these guidelines provide that the prospect of entry will only defeat a *prima facie* case if such entry will occur rapidly enough to prevent “significant” anticompetitive harm, which the guidelines equate with increased prices.<sup>248</sup> It thus seems possible that entry, even if “likely” and “sufficient,” will not defeat a *prima facie* case even if it will take place within two years because, in the meantime, marketplace consumers may suffer higher prices, if only temporarily, for a nontrivial (“significant”) period of time.<sup>249</sup>

Yet, even if entry is not “timely” within the meaning of governing guidelines or case law, it may still occur, thereby counteracting any market power after the relevant timeliness window closes. Moreover, if such entry does occur, and if it is likely and sufficient to counteract any exercise of market power, then market prices will fall to the new, lower cost of production and thus to *below* premerger levels, thereby *increasing* the postentry welfare of purchasers compared to what their welfare would have been during the same period without the transaction. Here again, then, banning a transaction because it will reduce the immediate, short-run welfare of purchasers could reduce the overall welfare of such purchasers in the longer run.

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246. See *FTC v. Cardinal Health, Inc.*, 12 F. Supp. 2d 34, 54–58 (D.D.C. 1998) (articulating the requirement that predicted entry be timely, likely, and sufficient to rebut a *prima facie* case); *FTC v. Staples, Inc.*, 970 F. Supp. 1066, 1086–88 (D.D.C. 1997) (same); 2010 HORIZONTAL MERGER GUIDELINES, *supra* note 87, § 9 (same); DEP’T OF JUSTICE AND FED. TRADE COMM’N JOINT MERGER GUIDELINES § 3.0 (1992) [hereinafter 1992 JOINT MERGER GUIDELINES] (superceded) (same). It should be noted that whether entry is in fact likely may depend upon the source of the efficiencies in question. For instance, if such efficiencies rest upon economies of scale that new entrants cannot replicate, then entry may not occur in the short or even medium run. See TIBOR SCITOVSKY, WELFARE AND COMPETITION 332–33 (1951). Even here, however, growth in the market may eventually make room for one or more additional entrants. Or, technology might change in a way that eliminates the incumbent’s cost advantage.

247. See *Cardinal Health*, 12 F. Supp. 2d at 55–56 (articulating and applying this requirement); 1992 JOINT MERGER GUIDELINES, *supra* note 246, § 3.2 (superceded) (“The Agency generally will consider timely only those committed entry alternatives that can be achieved within two years from initial planning to significant market impact.”). The same guidelines provide that entry outside the two-year window could be considered timely if such entry “would deter or counteract the competitive effects of concern [i.e., immediate post-transaction price increases] within the two year period and subsequently.” *Id.*

248. See 2010 HORIZONTAL MERGER GUIDELINES, *supra* note 9, § 9.1 (providing that entry will only be deemed “timely” if “the impact of entrants in the relevant market [will] be rapid enough that customers are not significantly harmed by the merger, despite any anticompetitive harm that occurs prior to the entry”).

249. The new Guidelines do not indicate whether they define “significant” in relative terms (i.e., as a percentage of total sales) or in gross terms (as in a “significant dollar amount”).

This insight applies beyond the merger context, to any context in which eventual entry could induce parties to pass on once-“pocketed” efficiencies to purchasers.<sup>250</sup> Moreover, if valid, this insight could require the adjustment of standards governing entry and efficiencies so as to recognize the possible symbiosis between the two standards. In particular, where proponents of a merger or other practice show that the challenged arrangement will raise prices but also result in efficiencies, courts and agencies should entertain arguments that entry more than two years after the transaction will, because of the efficiencies in question, result in prices that are *lower than* those that existed before the transaction.<sup>251</sup>

To be sure, the analysis thus far assumes that the individuals who are purchasers at the time of the transaction will also be purchasers into the indefinite future, thereby allowing future price reductions to counteract the impact of immediate (but admittedly temporary) posttransaction price increases, thus ensuring that the transaction does not harm a single purchaser. This assumption is, of course, unrealistic. In reality, the composition of the class of purchasers will change over time. Indeed, short-run price increases will induce some purchasers to turn elsewhere, and eventual price reductions might not bring these purchasers back. Moreover, some products—think refrigerators and dishwashers—are such that the market, at least at plausible prices, consists of different purchasers each year. Finally, new purchasers might enter the market over time as, say, they become old enough to drive or to operate an iPhone. As a result, the sort of temporal reframing suggested here would necessarily contemplate some permanent injury to purchasers, so as to increase aggregate purchaser welfare. At the same time, banning efficient, price-raising practices would prefer present consumers to those who will be purchasers in the future and, in addition, reduce long-run overall purchaser welfare.

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250. See generally Meese, *supra* note 189, at 1676 (discussing similar considerations in the section 2 context). Of course, as explained earlier, such efficiencies likely already reduced prices in other markets. See *supra* notes 190–95 and accompanying text.

251. Assume, for instance, that premerger prices are \$100 per unit. Assume further that, after the merger, prices rise to \$110 per unit for two years. Finally, assume that the new entry occurs in the third year, forcing the newly merged firm to pass along efficiencies to purchasers, thereby reducing market prices to \$95 per unit in perpetuity. Given plausible discount rates, the present value of such expected price reductions would exceed the short-term harm to purchasers in the relevant market from the exercise of market power.