
ARTICLES

MARKET POWER AND ANTITRUST ENFORCEMENT

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Antitrust has returned to the national agenda. Leading Senators, progressive organizations, and many scholars are calling for stronger antitrust enforcement. One important step, overlooked in the discussion to date, is to reform how market power—an essential element in most antitrust violations—is determined. At present, the very definition of market power is unsettled. While there is widespread agreement that market power is the ability to raise price profitably above the competitive level, no consensus exists on how to determine the competitive level. Moreover, courts virtually never measure market power (or, its larger variant, monopoly power) by identifying the competitive level and comparing a defendant’s price to it. Rather, courts define a relevant market and calculate the defendant’s market share, a process that is often complex and misleading.

This Article proposes a new approach that would infer market power from the likely effects of the challenged conduct. Courts ought to identify market power by asking whether the challenged conduct is likely to enable the defendant(s) to raise price above the prevailing level or maintain price above the but for level (the level to which price would fall absent the challenged conduct). This method would not only close the definitional gap, it would simultaneously enable courts to resolve two critical elements of most antitrust offenses—market power and anticompetitive effects—while inferring the relevant market from the result. By reducing the cost and improving the accuracy of antitrust enforcement, this step would enhance its impact.

INTRODUCTION

Antitrust has returned to the national agenda. The Democratic Party has called for more vigorous antitrust enforcement,¹ leading Senators have echoed the call,²

¹ See *A Better Deal: Cracking Down on Corporate Monopolies and the Abuse of Economics and Political Power*, DEMOCRATIC LEADER NANCY PELOSI (July 25, 2017), <https://www.democraticleader.gov/wp-content/uploads/2017/07/A-Better-Deal-on-Competition-and-Costs.pdf> [<https://perma.cc/KJM9-RC9Q>] (outlining Democratic Party’s call for “[v]igorous, free, and fair competition”).

² See ELIZABETH WARREN, *THIS FIGHT IS OUR FIGHT* 94 (2017); Brian Beutler, *How Democrats Can Wage War on Monopolies—and Win*, NEW REPUBLIC (Sept. 16, 2017), <https://newrepublic.com/article/144675/democrats-elizabeth-warren-can-wage-war-monopolies-and-win> (“[M]any of the Democrats who are expected to run for president in 2020—including both establishment avatars like Senator Cory Booker and reformist icons

progressive organizations such as the American Antitrust Institute and the Open Markets Institute have reinforced the message,³ the Obama Administration's Council of Economic Advisers issued a supporting report,⁴ and scholars are expressing agreement.⁵ The reasons they cite are substantial, including that concentration has risen overall;⁶ and in important markets,⁷ corporate profits have soared,⁸ inequality has sharply increased,⁹ and studies of past mergers have

like Warren—will be . . . positioning themselves as champions of the issue.”); Chuck Schumer, *A Better Deal for American Workers*, N.Y. TIMES, July 24, 2017, at A19 (explaining proposals for stronger antitrust enforcement); see also Press Release, Senator Amy Klobuchar, In Effort to Lower Costs for Consumers, Help Even Playing Field for Bus., and Encourage Innovation—Klobuchar, Senators Introduce Legislation to Promote Competition (Sept. 14, 2017), available at <https://www.klobuchar.senate.gov/public/index.cfm/2017/9/in-effort-to-lower-costs-for-consumers-help-even-playing-field-for-business-and-encourage-innovation-klobuchar-senators-introduce-legislation-to-promote-competition> [<https://perma.cc/DLD9-FAJ2>] (describing “The Consolidation Prevention and Competition Promotion Act of 2017”).

³ See AMERICAN ANTITRUST INST., A NATIONAL COMPETITION POLICY: UNPACKING THE PROBLEM OF DECLINING COMPETITION AND SETTING PRIORITIES MOVING FORWARD 2 (2016); Carl Shapiro, *Antitrust in a Time of Populism*, INT’L J. INDUS. ORG. (forthcoming 2018) (manuscript at 6) (citing advocacy reports by Center for American Progress and Roosevelt Institute); Farhad Manjoo, *Tech’s Giants March on, Unimpeded*, N.Y. TIMES, Oct. 26, 2017, at B1, B7 (noting Open Markets Institutes’ call for radical re-envisioning of antitrust enforcement).

⁴ See COUNCIL OF ECON. ADVISERS, BENEFITS OF COMPETITION AND INDICATORS OF MARKET POWER (2016), https://obamawhitehouse.archives.gov/sites/default/files/page/files/20160414_cea_competition_issue_brief.pdf [<https://perma.cc/UJH3-S4KX>].

⁵ See JOSEPH E. STIGLITZ, THE PRICE OF INEQUALITY 270-71 (2012) (arguing that “laws governing competition” are “especially relevant”). See generally Herbert J. Hovenkamp & Carl Shapiro, *Horizontal Mergers, Market Structure, and Burdens of Proof*, 127 YALE L.J. 1996 (2018); Shapiro, *supra* note 3; *infra* note 11 and accompanying text (citing additional scholarly support).

⁶ See, e.g., Sam Peltzman, *Industrial Concentration Under the Rule of Reason*, 57 J.L. & ECON. S101 (2014); Shapiro, *supra* note 3, at 7-13 (reviewing studies and cautioning that broad industry categories do not generally correspond to relevant antitrust markets).

⁷ See Lina Khan & Sandeep Vaheesan, *Market Power and Inequality: The Antitrust Counterrevolution and Its Discontents*, 11 HARV. L. & POL’Y REV. 235, 246-65 (2017) (analyzing case studies of major industries).

⁸ See Shapiro, *supra* note 3, at 18 (noting “substantial increase in corporate profits as a share of GDP over the past thirty years”); Jason Furman & Peter Orszag, *A Firm-Level Perspective on the Role of Rents in the Rise in Inequality*, OBAMA WHITE HOUSE ARCHIVES (Oct. 16, 2015), https://obamawhitehouse.archives.gov/sites/default/files/page/files/20151016_firm_level_perspective_on_role_of_rents_in_inequality.pdf [<https://perma.cc/WND2-HZAY>].

⁹ See JACOB S. HACKER & PAUL PIERSON, WINNER-TAKE-ALL POLITICS 2-3 (2010) (outlining evidence that inequality has risen sharply over past two decades). See generally THOMAS PIKETTY, CAPITAL IN THE TWENTY-FIRST CENTURY (2014); Jonathan B. Baker &

found that the vast majority resulted in higher prices.¹⁰ Scholars are developing proposals to strengthen antitrust enforcement, generally focused on creating more powerful presumptions of anticompetitive effect and higher burdens of justification.¹¹ While these proposals may be correct, they do not exhaust the avenues of antitrust reform. Market power—the ability to raise price profitably above the competitive level¹²—lies at the core of antitrust law, and by restructuring its determination, courts could increase the efficiency and accuracy of antitrust enforcement. This Article proposes an approach to the determination of market power that would remove the uncertainty in its definition, focus the inquiry on the ultimate issue—the impact of the challenged conduct—reduce the importance of market definition, and speed up antitrust litigation. All these benefits, plus the ability to reach additional cases of parallel exclusion, would enhance antitrust enforcement.

Steven C. Salop, *Antitrust, Competition Policy, and Inequality*, 104 GEO. L.J. ONLINE 1 (2015).

¹⁰ See generally JOHN KWOKA, *MERGERS, MERGER CONTROL, AND REMEDIES* (2015); Gregory J. Werden, *Inconvenient Truths on Merger Retrospective Studies*, 3 J. ANTITRUST ENFORCEMENT 287 (2015).

¹¹ See, e.g., Peter C. Carstensen, *The Philadelphia National Bank Presumption: Merger Analysis in an Unpredictable World*, 80 ANTITRUST L.J. 219, 219-20 (2015); Hovenkamp & Shapiro, *supra* note 5, at 2; Khan & Vaheesan, *supra* note 7, at 237; Shapiro, *supra* note 3, at 26.

¹² This definition is so widely used it is canonical. See, e.g., DENNIS W. CARLTON & JEFFREY M. PERLOFF, *MODERN INDUSTRIAL ORGANIZATION* 8 (4th ed. 2005) (“The ability to price profitably above the competitive level is referred to as market power.”); see also PHILLIP E. AREEDA & HERBERT HOVENKAMP, *FUNDAMENTALS OF ANTITRUST LAW* § 5.01 (4th ed. 2017) (“Market power is the ability to raise price profitably by restricting output.”); Louis Kaplow, *Why (Ever) Define Markets?*, 124 HARV. L. REV. 437, 444 (2010) (stating that market power is most frequently defined as “the power to profitably elevate price above the competitive level”); William M. Landes & Richard A. Posner, *Market Power in Antitrust Cases*, 94 HARV. L. REV. 937, 937 (1981) (defining market power as “the ability of a firm (or a group of firms, acting jointly) to raise price above the competitive level without losing so many sales so rapidly that the price increase is unprofitable and must be rescinded”). Federal courts define market power less frequently, but when they do, they normally employ this definition. See, e.g., *Brooke Grp. Ltd. v. Brown & Williamson Tobacco Corp.*, 509 U.S. 209, 235 (1993) (referring to ability “to exert market power” by raising “prices above a competitive level”); *Nat’l Collegiate Athletic Ass’n v. Bd. of Regents*, 468 U.S. 85, 109 n.38 (1984) (“Market power is the ability to raise prices above those that would be charged in a competitive market.”); *Novell, Inc. v. Microsoft Corp.*, 731 F.3d 1064, 1070 (10th Cir. 2013) (“To prevail on a section 2 claim, a plaintiff generally must show the defendant possessed sufficient market power to raise prices substantially above a competitive level without losing so much business that the gambit becomes unprofitable.”); see also *Eastman Kodak Co. v. Image Tech. Servs., Inc.*, 504 U.S. 451, 464 (1992) (stating that market power is “the power to force a purchaser to do something that he would not do in a competitive market” (citation omitted)).

Market power's pivotal role is clear. Most antitrust violations require proof of market power or monopoly power,¹³ and monopoly power demands a substantial amount of market power.¹⁴ This concept is central to antitrust because it distinguishes firms that can harm competition and consumers from those that cannot. A firm with market power can deviate from the competitive result and force consumers to pay higher prices, frustrating the two fundamental objectives of antitrust law—maintaining competition and protecting

¹³ See 2B PHILLIP E. AREEDA, HERBERT HOVENKAMP & JOHN L. SOLOW, ANTITRUST LAW 107 (3d ed. 2007) [hereinafter AREEDA-HOVENKAMP TREATISE] (“[M]arket structure and market power are often crucial in antitrust analysis.”); Louis Kaplow, *On the Relevance of Market Power*, 130 HARV. L. REV. 1303, 1304 (2017) (“Market power is regarded to be the most important determinant of liability in competition law.”); Thomas G. Krattenmaker, Robert H. Lande & Steven C. Salop, *Monopoly Power and Market Power in Antitrust Law*, 76 GEO. L.J. 241, 242 (1987) (“Most antitrust rules require the plaintiff to show that the defendant has or is likely to obtain ‘market power’ or ‘monopoly power.’”).

¹⁴ Sixty years ago, the Supreme Court declared that “[m]onopoly power is the power to control prices or exclude competition.” *United States v. E.I. du Pont de Nemours & Co. (Cellophane)*, 351 U.S. 377, 391 (1956). Today, courts normally equate the “power to control prices” with market power. In *United States v. Microsoft*, for example, the D.C. Circuit quoted the *Cellophane* definition and immediately stated: “More precisely, a firm is a monopolist if it can profitably raise prices substantially above the competitive level.” *United States v. Microsoft Corp.*, 253 F.3d 34, 51 (D.C. Cir. 2001); see also Gregory J. Werden, *Demand Elasticities in Antitrust Analysis*, 66 ANTITRUST L.J. 363, 374 (1998) (“[C]ourts use the term ‘monopoly power’ in a manner compatible with the economic concept of ‘market power.’”).

The courts also recognize that monopoly power and market power differ in degree. After all, a seller is literally a “monopolist” only if it is the sole seller of a product. See Einer Elhauge, *Defining Better Monopolization Standards*, 56 STAN. L. REV. 253, 334 (2003). While courts do not take the term literally, they do insist that a firm with monopoly power possess a *substantial* amount of market power. See, e.g., *Microsoft Corp.*, 253 F.3d at 51 (stating that firm has monopoly power if it can “raise prices substantially above the competitive level”); *Reazin v. Blue Cross & Blue Shield of Kan., Inc.*, 899 F.2d 951, 967 (10th Cir. 1990) (“Market and monopoly power only differ in degree—monopoly power is commonly thought of as ‘substantial’ market power.”); see also *Eastman Kodak*, 504 U.S. at 481 (“Monopoly power under § 2 requires . . . something greater than market power under § 1.”). Leading articles take the same approach. See William J. Baumol & Daniel G. Swanson, *The New Economy and Ubiquitous Competitive Price Discrimination: Identifying Defensible Criteria of Market Power*, 70 ANTITRUST L.J. 661, 662 n.2 (2003) (stating that “generally, monopoly power is taken simply to mean possession of very strong market power”); Landes & Posner, *supra* note 12, at 937 (defining monopoly power as “a high degree of market power”).

consumers.¹⁵ In *Spirit Airlines, Inc. v. Northwest Airlines, Inc.*,¹⁶ for example, Northwest acquired monopoly power by driving out a new entrant and then used that power to raise fares nearly seven-fold.¹⁷

Yet, despite this critical role, market power determination remains plagued by two problems. First, a vital aspect of its definition is unclear. While there is widespread agreement that market power is the ability to raise price profitably above the competitive level, no consensus exists on the meaning of the competitive level. There are multiple possibilities, each with significant support in the case law, literature, or both. Second, courts rarely measure market power by identifying the competitive level and determining whether the defendant's price is above it. Instead, courts define a relevant market and calculate the defendant's market share, a process that is often complex, subjective, and misleading.

The two most common definitions of the competitive level illustrate the difficulties. The most frequently advanced is marginal cost.¹⁸ Its extensive

¹⁵ The most basic objective of antitrust law is preserving competition. As the Supreme Court famously stated, the antitrust laws are designed for "the protection of competition, not competitors." *Brown Shoe Co. v. United States*, 370 U.S. 294, 320 (1962) (emphasis omitted). Competition, however, is not self-defining. Consider a merger that lowers the costs of the merging firms and drives out a rival. Is the merger anticompetitive because it reduces the number of competitors or is it procompetitive because it enhances the merged firm's ability to compete? That question cannot be answered simply by saying that the purpose of antitrust law is to promote competition. One must look at the *effect* of the merger.

In recent years, it has become increasingly clear that the effect that matters is the effect on consumers. Thus, conduct is not anticompetitive unless the reduction in rivalry among firms harms consumers. Many scholars have adopted this understanding. See John B. Kirkwood, *Collusion to Control a Powerful Customer: Amazon, E-Books, and Antitrust Policy*, 69 U. MIAMI L. REV. 1, 29 n.162 (2014) (citing articles by Elhauge, Hovenkamp, Lande, and Salop). More importantly, the courts have adopted it too. While courts sometimes mention other goals, whenever they have to resolve a conflict between another goal (e.g., economic efficiency) and consumer welfare, they always choose consumer welfare. See Herbert Hovenkamp, *Implementing Antitrust's Welfare Goals*, 81 FORDHAM L. REV. 2471, 2477 (2013) (explaining how antitrust decisions in fact follow "consumer welfare approach"); John B. Kirkwood & Robert H. Lande, *The Fundamental Goal of Antitrust: Protecting Consumers, Not Increasing Efficiency*, 84 NOTRE DAME L. REV. 191, 225 (2008) (noting that efficiencies matter in merger analysis only to extent they benefit consumers). In a buy-side case, where buyers allegedly engage in anticompetitive conduct, the effect that matters is the effect on small or otherwise powerless suppliers. See John B. Kirkwood, *The Essence of Antitrust: Protecting Consumers and Small Suppliers from Anticompetitive Conduct*, 81 FORDHAM L. REV. 2425, 2429 n.11 (2013).

¹⁶ 431 F.3d 917 (6th Cir. 2005).

¹⁷ *Id.* at 935, 950-51.

¹⁸ See, e.g., Jonathan B. Baker, *Competitive Price Discrimination: The Exercise of Market Power Without Anticompetitive Effects*, 70 ANTITRUST L.J. 643, 645 (2003) (referring to "marginal cost pricing" as "the usual competitive benchmark"); Mark A. Lemley & Mark P.

appeal derives from the fact that in the economist's model of perfect competition, firms price at marginal cost.¹⁹ Marginal cost is the additional cost of producing one more unit.²⁰ In the perfectly competitive model, firms price at marginal cost because firms are too small to affect market price.²¹ As a result, they take it as given and expand output until the marginal cost of an additional unit equals the market price.²² If a firm could price above marginal cost, it would not be subject to perfect competition and would, by this measure, have market power.²³ In the real world, however, the marginal cost benchmark is problematic. In many industries, particularly those in the "new economy," marginal cost is low, or even negligible.²⁴ As a result, a firm that prices at marginal cost cannot cover its fixed costs (costs that do not vary with output), such as plant and equipment or research and development ("R&D").²⁵ Since firms must cover their fixed costs to survive and grow, marginal cost is not the competitive level in those industries if that means the level at which a competitive industry would price. There would be no industry—and no competition—if the firms were forced to price at marginal cost.²⁶

McKenna, *Is Pepsi Really a Substitute for Coke? Market Definition in Antitrust and IP*, 100 GEO. L.J. 2055, 2094-95 (2012) (stating that "competitive level" for measuring market power is "generally defined as marginal cost").

¹⁹ F.M. SCHERER & DAVID ROSS, *INDUSTRIAL MARKET STRUCTURE AND ECONOMIC PERFORMANCE* 20 (3d ed. 1990); Kaplow, *supra* note 12, at 444; Landes & Posner, *supra* note 12, at 939.

²⁰ See CARLTON & PERLOFF, *supra* note 12, at 58.

²¹ *Id.*

²² *Id.*

²³ See Benjamin Klein, *Market Power in Antitrust: Economic Analysis After Kodak*, 3 S. CT. ECON. REV. 43, 71 (1993) ("[T]he economist's definition of 'market power' [is] the absence of perfect competition."); Landes & Posner, *supra* note 12, at 939 ("[I]f a firm's price is above its marginal cost, the implication is that the firm does not face perfect competition, i.e., that it has at least some market power." (emphasis omitted)).

²⁴ See Baumol & Swanson, *supra* note 14, at 661 (stating that "new economy" industries exhibit a "special cost structure": "From software to semiconductors, digital entertainment to biotechnology, and in innovative fields more generally, the standard cost pattern entails sunk outlays that are large and must be incurred over and over again, but the marginal cost—the cost of serving an additional customer—is virtually negligible").

²⁵ See *id.* at 668 (stating that "a price equal to marginal cost covers only variable costs and makes absolutely no contribution to recovery of either fixed or sunk costs").

²⁶ See *id.* ("Such a price clearly is a recipe for insolvency."); Kenneth G. Elzinga & David E. Mills, *The Lerner Index of Monopoly Power: Origins and Uses*, 101 AM. ECON. REV. (PAPERS & PROC.) 558, 560 (2011) (noting that in such industries marginal cost is not "a competitive equilibrium that is actually attainable"). To be clear, the analysis set forth above is oversimplified. It implies that no firm that prices at marginal cost can cover its fixed costs, but that is not accurate: firms in the perfectly competitive model do cover their fixed costs, even though they price at marginal cost. The reason is that the marginal costs of perfectly competitive firms *rise* as they expand output. As a result, even though they sell the last unit

The second, arguably superior measure of the competitive level is average total cost (including the cost of capital). Average total cost is preferable to marginal cost in two key respects. Because it includes fixed costs, it is applicable to all industries, including those in which marginal cost pricing is infeasible. It is also a better gauge of consumer exploitation, because a firm that prices above full costs (including the cost of capital) earns excess or “economic” profits—more than is needed to provide its product to consumers.²⁷ This measure, however, is also objectionable because it is normally very difficult to determine whether a firm’s economic rate of return is excessive.²⁸

Because of these problems, courts never begin their analysis of market power or monopoly power by comparing the defendant’s prices to its costs. Instead, they ask whether the defendant’s share of the relevant market is large enough.²⁹ This approach—the market definition/market share approach—has long been the presumptive, if not obligatory, legal paradigm.³⁰ But it is frequently a crude

at marginal cost, this exceeds the marginal costs of earlier units. On earlier units, therefore, they earn a profit and this enables them to cover their fixed costs. By contrast, in “new economy” industries, marginal cost is not only low, it is also constant (or rises little) over the relevant range of output. When marginal cost is flat, firms that price at marginal cost never earn a profit and thus cannot finance their fixed costs.

²⁷ Both the leading antitrust treatise and the leading article on market power endorse an excess profits test whenever marginal cost pricing would not cover fixed costs. *See AREEDA-HOVENKAMP TREATISE*, *supra* note 13, at 189 (declaring that where “fixed costs, including R&D investment,” enable firm to price above marginal cost, “no inference of monopoly can be drawn unless returns over a fairly long run are clearly excessive”); Landes & Posner, *supra* note 12, at 956-57 (arguing that firms do not have substantial market power even when they price substantially above marginal cost if they have incurred such high fixed costs that they do not earn supracompetitive profits).

²⁸ *See* Franklin M. Fisher, *Diagnosing Monopoly*, 19 *QUART. REV. ECON. & BUS.* 7, 19 (1979) (“Obviously, calculating the economic rate of return in any but the simplest situation is not a simple matter.”); *infra* Section I.B.1 (reviewing problems).

²⁹ *See* AREEDA-HOVENKAMP TREATISE, *supra* note 13, at 114 (“Instead of trying to measure the degree by which a profit-maximizing monopoly price exceeds the competitive price, courts traditionally attempt to infer market power from the defendant(s)’ market share.”).

³⁰ *See id.* at 135 (“[C]ourts have typically relied heavily on market definition and on the defendant firm’s share of the market thus defined.”). Some decisions indicate that market definition is necessary. *See* Walker Process Equip., Inc. v. Food Mach. & Chem. Corp., 382 U.S. 172, 177 (1965) (“Without a definition of [the relevant] market there is no way to measure [defendant’s] ability to lessen or destroy competition.”); *McWane, Inc. v. FTC*, 783 F.3d 814, 828 (11th Cir. 2015) (“Defining the market is a necessary step in any analysis of market power . . .” (quoting *U.S. Anchor Mfg., Inc. v. Rule Indus., Inc.*, 7 F.3d 986, 994 (11th Cir. 1993))). Other decisions state that market definition is the ordinary or first step in determining market power. *See* Spirit Airlines, Inc. v. Nw. Airlines, Inc., 431 F.3d 917, 935 (6th Cir. 2005) (“The existence of such power ordinarily is inferred from the seller’s possession of a predominant share of the market.” (quoting *Eastman Kodak Co. v. Image Tech. Servs., Inc.*, 504 U.S. 451, 464 (1992))); *Geneva Pharm. Tech. Corp. v. Barr Labs. Inc.*,

and imprecise tool for assessing whether a firm possesses market power.³¹ Indeed, when an industry consists of an array of differentiated products with no marked gaps between them, *any* market definition will be too narrow (because it excludes some close substitutes) or too broad (because it includes some imperfect substitutes); the resulting market shares will either overstate or understate power,³² making them unreliable by themselves.³³ In addition, even when both market definition and market share are reasonably accurate, they provide only an estimate of a defendant's ability to price above marginal cost. Market definition and market share do not indicate whether a defendant is earning economic profits, a critical issue in many industries.³⁴

The final two measures of the competitive level avoid these problems. The measures do not determine market power by comparing a defendant's price to its costs or by calculating its share of a market. They ask whether the *conduct* it employed was likely to raise price above the competitive level. These benchmarks would simplify antitrust analysis, combining two elements of many offenses—market power and anticompetitive effects—into one. The Supreme Court has recognized the logic of this approach, noting that where a defendant's

386 F.3d 485, 496 (2d Cir. 2004) (“Evaluating market power begins with defining the relevant market.”).

³¹ See generally Kaplow, *supra* note 12 (discussing serious drawbacks of market definition/market share approach).

³² See Herbert Hovenkamp, *Response: Markets in IP and Antitrust*, 100 GEO. L.J. 2133, 2146 (2012) (“[In] markets for distinctive manufactured goods, . . . market definition is least useful because it invariably either exaggerates or understates power.”).

³³ See EINER ELHAUGE, UNITED STATES ANTITRUST LAW AND ECONOMICS 257 (3d ed. 2018) (“Market share is a fairly unreliable proxy for market power.”); Louis Kaplow, *Market Definition and the Merger Guidelines*, 39 REV. IND. ORG. 107, 123 (2011) (“[T]here is no economically justifiable way to infer market power from market shares in . . . heterogeneous goods markets . . .”); Richard Schmalensee, *On the Use of Economic Models in Antitrust: The ReaLemon Case*, 127 U. PA. L. REV. 994, 1015 (1979) (“Very little meaning attaches to market share when the market includes commodities that are plainly imperfect substitutes.”). Moreover, the power conferred by a given market share depends not only on the breadth of the market (demand elasticity) but also on the ability of other firms in that market to expand (supply elasticity). See Kaplow, *supra* note 12, at 460.

³⁴ There is a connection between market share and the ability to price above marginal cost. A well-known formula, set forth in Kaplow, *supra* note 12, at 452, shows that in a homogenous product market, a firm's “Lerner Index” depends on its market share, the market elasticity of demand, and the supply elasticity of rivals. A firm's Lerner Index is simply its price-cost margin—the difference between its price and its marginal cost—divided by its price. See *id.* at 445-46. Thus, in such a market, higher market share implies greater power to price above marginal cost. But there is no comparable formula for economic profits. That is not surprising. While a high price-cost margin and high economic profits may sometimes be linked, there is no necessary correlation. In many industries, marginal cost is low but fixed costs are high. See *supra* note 24-25 and accompanying text. In these industries, firms may have high price-cost margins but earn no economic profits.

anticompetitive conduct has actually raised prices, its market power can be inferred from those effects.³⁵

The first of these price level benchmarks is the *prevailing* level. Under this test, the issue is not whether the defendant is pricing above cost; the issue is whether its conduct is likely to elevate price above the current level. In cases involving a potential price increase, this measure is already used to determine the impact of challenged conduct³⁶ and to define markets.³⁷ But absent *actual* anticompetitive effects, it is rarely used to evaluate market power directly.

The second price level benchmark addresses cases involving a potential price reduction. In the typical exclusion case, the question is whether the challenged conduct would prevent a rival from entering the market or expanding its business, thereby depressing the defendant's price. In this situation, the competitive level is the price level that would have existed had the competitor been successful—the price level that would have occurred *but for* the exclusionary conduct. A firm that can deploy exclusionary conduct to prevent price from falling to the “but for” level has market power because it has the power to charge a price significantly above the level that competition would have produced. Several economists and legal scholars have identified this benchmark,³⁸ but no court to my knowledge has adopted it. No decision over the

³⁵ See *Eastman Kodak Co.*, 504 U.S. at 477 (“It is clearly reasonable to infer that Kodak has market power to raise prices and drive out competition in the aftermarkets, since respondents offer direct evidence that Kodak did so.”); *FTC v. Ind. Fed’n of Dentists*, 476 U.S. 447, 460 (1986) (declaring that antitrust law examines market power not for its own sake, but to “determine whether an arrangement has the potential for genuine adverse effects on competition”); *id.* at 461 (noting that “market power . . . is but a ‘surrogate for detrimental effects’” (quoting 7 PHILLIP E. AREEDA, ANTITRUST LAW 429 (1986))).

³⁶ See AREEDA-HOVENKAMP TREATISE, *supra* note 13, at 263-64 (“For many antitrust purposes, we assume that the market was competitive and want to know whether challenged conduct . . . threatens to bring about supracompetitive prices in the future.”).

³⁷ In horizontal mergers, for example, the principal anticompetitive effect of concern is higher prices. See U.S. DEP’T OF JUSTICE & FED. TRADE COMM’N, HORIZONTAL MERGER GUIDELINES § 1 (2010) [hereinafter MERGER GUIDELINES]. To determine whether the merging parties have the power to impose such an anticompetitive effect, the relevant market is defined by asking whether a hypothetical monopolist would increase its price. See *id.* § 4.1.1 (explaining hypothetical monopolist test).

³⁸ See Lawrence J. White, *Market Power and Market Definition in Monopolization Cases*, in 2 ISSUES IN COMPETITION LAW AND POLICY 913, 914 (Wayne Dale Collins ed., 2008); Dennis W. Carlton, *Market Definition: Use and Abuse*, 3 COMPETITION POL’Y INT’L 3, 20 (2007); Krattenmaker, Lande & Salop, *supra* note 13, at 246; Steven C. Salop, *The First Principles Approach to Antitrust, Kodak, and Antitrust at the Millennium*, 68 ANTITRUST L.J. 187, 188 (2000); Gregory J. Werden, *Market Delineation Under the Merger Guidelines: Monopoly Cases and Alternative Approaches*, 16 REV. INDUS. ORG. 211, 217-18 (2000); Phillip B. Nelson & Lawrence J. White, *Market Definition and the Identification of Market Power in Monopolization Cases: A Critique and a Proposal* 19 (N.Y.U., Working Paper No. EC-03-26, 2003), <http://ssrn.com/abstract=1292646> [<https://perma.cc/N6MX-ZQOS>].

last fifteen years has evaluated whether a firm had market or monopoly power by comparing the price it charged to the price it would have charged had it not employed exclusionary conduct.³⁹

Courts should adopt these two benchmarks as their initial and primary means of determining market power and monopoly power. While other measures of the competitive level may sometimes be appropriate,⁴⁰ the price level benchmarks should be the principal tools for defining and diagnosing power. In cases that involve potential increases in power, courts should ask whether the defendant's conduct is likely to elevate prices above the prevailing level. In cases that involve the potential maintenance of power, courts should ask whether the defendant's conduct is likely to prevent prices from falling to the but for level.⁴¹ If the evidence is sufficient, courts can determine both market power (or monopoly power) and anticompetitive effects from the answers to these questions. Moreover, courts can infer the relevant market from their findings.⁴²

This approach would reduce the costs of antitrust litigation and enhance the effectiveness of antitrust enforcement. Instead of beginning with the traditional process of power determination—the market definition/market share paradigm—and then proceeding to anticompetitive effects,⁴³ courts would first

³⁹ In fact, two appellate cases rejected the but for benchmark, reasoning that the only way to show market power is to prove that the defendant was pricing above a cost benchmark. *See Geneva Pharm. Tech. Corp. v. Barr Labs. Inc.*, 386 F.3d 485 (2d Cir. 2004); *PepsiCo, Inc. v. Coca-Cola Co.*, 315 F.3d 101 (2d Cir. 2002). That is incorrect. *See infra* Section I.D.3 (explaining why).

⁴⁰ For example, if the defendant operates in two different geographic markets and prices are higher in the more concentrated market, prices in the less concentrated market could be used as a measure of the competitive level, assuming that costs do not account for the price difference.

⁴¹ To the extent non-price competition is at issue, both the prevailing level and the but for level should be measured by the relevant non-price terms.

⁴² If courts do need additional evidence, they can turn to the cost benchmarks or the traditional approach to market definition and market share. Professor Crane also proposes to infer market power from the likely effects of the challenged conduct. *See generally* Daniel A. Crane, *Market Power Without Market Definition*, 90 NOTRE DAME L. REV. 31 (2014). This Article, however, moves beyond Professor Crane's by adopting simpler terminology, setting forth a comprehensive methodology for implementing the approach, exploring this methodology's links to traditional market definition, and identifying the multiple ways this methodology would strengthen antitrust enforcement.

⁴³ The customary separation of power and conduct not only wastes time, it distracts the court and the parties from the ultimate issue—the effect of the challenged conduct on competition. *See* Louis Kaplow, *Market Definition, Market Power*, 43 INT'L J. INDUS. ORG. 148, 157 (2015) (“It does not make sense to assess market power first, in a vacuum, and match our estimate against some standardized threshold—after which we set market power to the side as we proceed to analyze the challenged practice.”); Kaplow, *supra* note 13, at 1396 (“[T]he right way to define and deploy market power is entirely derivative of the ways it may

assess the likely anticompetitive effects of the challenged conduct and then determine market power, anticompetitive effects, and market definition based on that assessment. The resulting gains in efficiency would be greatest in cases involving the asserted maintenance of market power or monopoly power, where courts do not use the proposed approach. In cases involving an alleged increase in power, courts already define markets using a test linked to the likelihood of a price increase.⁴⁴ As a result, in most of these cases, basing market definition on an effects assessment would not produce sharp gains in efficiency. But in one type of price increase case—unilateral effects cases—the proposal would allow courts to skip market definition altogether, a step which the government’s guidelines and many scholars have endorsed.⁴⁵

Some might object that the traditional approach cuts down on the number of false positives. If a court must define a market in the customary way, find a market share of sufficient size, *and* determine that the challenged conduct is likely to have significant anticompetitive effects, it is less likely to condemn conduct that is in fact procompetitive. But this benefit comes at a large cost. The traditional approach raises the burden of litigation, reduces deterrence, and increases the likelihood of false negatives. Moreover, there is little risk of false positives when it is clear or reasonably clear that the challenged conduct would have a significant adverse impact. In most cases, therefore, courts can safely replace the traditional approach with the new method set forth in this Article.

Part I analyzes the four principal measures of the competitive level, emphasizing the complexities of the cost benchmarks and the advantages of the proposed price level benchmarks. Part II discusses the shortcomings and virtues of the market definition/market share paradigm. Part III explains the proposed approach in more detail, illustrates it by applying it to *United States v. E.I. du Pont de Nemours & Co. (Cellophane)*,⁴⁶ and addresses potential objections to its most novel aspect, the but for benchmark.

I. MEASURES OF THE COMPETITIVE LEVEL

This Part describes the four principal measures of the competitive level. The first two are the traditional economic benchmarks, based on the idea that a firm has market power if it can price above an appropriate measure of its costs. These benchmarks are often difficult to apply, however, and are unnecessary where the actual or probable effects of the firm’s conduct show that it has or is likely to acquire market power. The second two are linked directly to the firm’s conduct.

be relevant to an optimal liability decision in a given setting.”); *id. passim* (criticizing siloing of power and conduct).

⁴⁴ See *infra* Section I.C (describing current approach).

⁴⁵ See *infra* notes 150-153 and accompanying text (citing support).

⁴⁶ 351 U.S. 377 (1956). For another illustration, see John B. Kirkwood, *Market Power and American Express*, 26 U. MIAMI BUS. L. REV. 17 (2018) (showing that but for benchmark would have demonstrated American Express’s market power).

They ought to be used whenever possible, since they would streamline antitrust litigation and enhance its impact.

A. *Marginal Cost*

In the perfectly competitive model, firms price at marginal cost.⁴⁷ They cannot raise their price above the market price, so they maximize profits by increasing output until their marginal cost equals the market price.⁴⁸ If a firm can price above marginal cost, it must have some ability to raise price without losing all its sales—it must have some pricing discretion.⁴⁹ Moreover, even in markets that are not so intensely competitive, marginal cost has a claim to be the competitive benchmark. A firm that can sell a unit of output for more than it cost to produce has to be immune from competition to some degree. Otherwise, why would a rival not offer that unit for a lower price, a price just above the marginal cost of producing it?⁵⁰

Marginal cost is the standard measure of the competitive level in the antitrust literature.⁵¹ It appears in the leading legal treatise,⁵² the leading economics textbook on industrial organization,⁵³ and numerous articles by legal and economic scholars.⁵⁴ It is appealing as a benchmark not only because a price above marginal cost indicates some departure from intense and frictionless competition, but also because it signifies a failure to use resources efficiently. When a firm reduces output by raising price above marginal cost, it no longer produces some units whose value to consumers exceeds the incremental cost of

⁴⁷ See *supra* notes 18-19 and accompanying text.

⁴⁸ See *supra* text accompanying note 22.

⁴⁹ See *supra* note 23 and accompanying text.

⁵⁰ See Baker, *supra* note 18, at 644 n.4.

⁵¹ See *supra* note 18.

⁵² AREEDA-HOVENKAMP TREATISE, *supra* note 13, at 147 (“The degree of market power is measured by the excess of the profit-maximizing price over marginal cost.”).

⁵³ CARLTON & PERLOFF, *supra* note 12, at 119 (“Monopoly or market power is the ability to price profitably above marginal cost.”).

⁵⁴ Baker, *supra* note 18, at 645 (referring to marginal cost pricing as “usual competitive benchmark”); Kaplow, *supra* note 12, at 500 (defining “possession of significant market power” as “ability to price significantly in excess of marginal cost for an extended period of time”); Krattenmaker, Lande & Salop, *supra* note 13, at 247 (“Economists use both ‘market power’ and ‘monopoly power’ to refer to the power of a single firm or group of firms to price profitably above marginal cost.”); Landes & Posner, *supra* note 12, at 939 (“A simple economic meaning of the term ‘market power’ is the ability to set price above marginal cost.”); Lemley & McKenna, *supra* note 18, at 2094-95 (stating that competitive level is “generally defined as marginal cost”); Werden, *supra* note 14, at 370 (noting that “the competitive price is marginal cost” and that “[t]he competitive firm is the benchmark used by economics to define market power”).

making them.⁵⁵ This output restriction means that consumer satisfaction is artificially depressed,⁵⁶ causing a deadweight loss.⁵⁷

Marginal cost can be determined in several ways. First, it can be measured directly. As explained below, that may be difficult, if not impossible, if the goal is to determine a precise figure. But if the goal is to determine whether a firm's price is substantially above its marginal cost, that is easy to do in some industries.⁵⁸ Second, it can be estimated from the elasticity of demand. In a homogenous product market, where a firm is dominant and faces only small, price-taking rivals, its marginal cost can be calculated once the elasticity of its demand at the optimal price is determined.⁵⁹ Third, it can be inferred from persistent price discrimination that is not cost justified. Normally, a firm would not continue to sell a product to a group of consumers at a price below marginal cost.⁶⁰ Thus, if a firm routinely sells the same product to two groups of consumers at two different prices, and no difference exists in the marginal cost of serving the two groups, the higher price is likely to be above marginal cost because the lower price is unlikely to be below marginal cost. As a result, a reasonable estimate of marginal cost can be derived from persistent *economic* price discrimination (i.e., price discrimination not justified by differences in marginal cost). For the same reason, one can infer market power from such discrimination, if marginal cost is the competitive benchmark.⁶¹

⁵⁵ CARLTON & PERLOFF, *supra* note 12, at 70.

⁵⁶ SCHERER & ROSS, *supra* note 19, at 23.

⁵⁷ Krattenmaker, Lande & Salop, *supra* note 13, at 265-66.

⁵⁸ See *infra* Section I.A.1 (explaining that marginal cost is plainly quite low in some industries).

⁵⁹ Professor Kaplow sets forth the relevant equations. The best known relates the Lerner Index to the elasticity of the firm's own demand. See Kaplow, *supra* note 12, at 449. If that elasticity can be measured, the firm's ability to elevate price over marginal cost can be determined, and marginal cost can be derived. See AREEDA-HOVENKAMP TREATISE, *supra* note 13, at 217. Another important equation, noted earlier, relates the firm's Lerner Index to its market share, the market elasticity of demand, and the supply elasticity of rivals. See *supra* note 34.

⁶⁰ While a firm may offer an introductory price or a temporary special that is below marginal cost, such prices do not create sustained price discrimination.

⁶¹ See AREEDA-HOVENKAMP TREATISE, *supra* note 13, at 150-51; Baumol & Swanson, *supra* note 14, at 662; Richard Schmalensee, *Another Look at Market Power*, 95 HARV. L. REV. 1789, 1806 (1982). In an opinion written by Judge Posner, the Seventh Circuit has suggested that price discrimination not only indicates market power but implies that the higher price exceeds average total cost (including cost of capital). See *In re Brand Name Prescription Drugs Antitrust Litig.*, 186 F.3d 781, 783 (7th Cir. 1999), *cert. denied sub nom.*, HJB, Inc. v. AmeriSource Corp., 528 U.S. 1181 (2000). In the short term, that is not correct. A firm may find it profitable to engage in price discrimination, even if its revenues do not cover its total costs, so long as its lower price covers marginal cost and its higher price exceeds marginal

In short, marginal cost has considerable appeal as a measure of the competitive level. But it also presents several potentially severe problems. First, it can be difficult to measure in certain circumstances. More importantly, marginal cost pricing is often infeasible; as a result, it is not the price level that competition would produce. For similar reasons, economic price discrimination often occurs in “competitive” markets. These considerations, explained in the following sections, suggest that the other cost benchmark—average total cost (including the cost of capital)—is superior. This benchmark, however, is even more difficult to measure and cannot be used by itself: a price above average total cost would not indicate market power if the price does not also exceed marginal cost.⁶² Accordingly, if a court must use a cost benchmark, it should address both of them, making it even harder to assess market power by measuring the deviation between price and cost.

1. Direct Measurement

If marginal cost were the sole measure of the competitive level, virtually every firm in the economy would have some market power.⁶³ Firms in the perfectly competitive model have no market power because their demand curves are perfectly flat.⁶⁴ If a firm’s demand curve had some slope—if it were not infinitely elastic—the firm would have some pricing discretion. Since almost all firms have some pricing discretion—even the corner convenience store would not lose all its customers if it raised its price a little—almost all firms have some ability to raise price above marginal cost.⁶⁵ As a result, if marginal cost were the benchmark, the pertinent question would not be whether a firm has market power, but how much it has.⁶⁶ Under a marginal cost benchmark, in other words, market power would be pervasive and the measurement issue would be critical.

Measuring marginal cost would often be daunting if the goal were a precise figure. After all, the issue is not one that businesses normally address: if the firm

cost. In the long term, however, the Seventh Circuit is right. If a firm’s higher price does not exceed its full costs, it cannot survive.

⁶² See *infra* Section I.B.2 (discussing scarcity rents).

⁶³ CARLTON & PERLOFF, *supra* note 12, at 642 (noting that if definition of market power is “applied literally, probably every firm in the United States has at least a tiny bit of market power”); Elhauge, *supra* note 14, at 330 (“[J]ust about every firm in the real world has some pricing discretion . . .”); Schmalensee, *supra* note 61, at 1790 (“Perfect competition is rarely encountered outside textbooks; almost all firms have some market power, though most have very little.”).

⁶⁴ They cannot raise price without losing all their sales. See *supra* notes 24-26 and accompanying text.

⁶⁵ Werden, *supra* note 14, at 371 (“[E]very seller of a product that is differentiated with respect to any relevant dimension almost certainly has some market power. This includes, for example, the corner convenience store . . .”).

⁶⁶ See CARLTON & PERLOFF, *supra* note 12, at 642-43; Schmalensee, *supra* note 61, at 1790.

were to increase output by a *single unit*, how much would costs increase? Moreover, the answer depends on which of the firm's costs vary with output, a question that can be vexing, as predatory pricing cases illustrate.⁶⁷ The answer is also a function of the time period involved, since the longer the period, the greater the opportunity to adjust the production process.⁶⁸ Some costs may be joint, which means they have to be allocated arbitrarily across the products involved.⁶⁹ Because of these problems, several scholars have concluded that direct measurement of marginal cost is nearly impossible.⁷⁰

In many instances, however, it would be reasonably easy to *approximate* marginal cost. Suppose that marginal cost is constant over the relevant range of output. If so, marginal costs equal average variable costs,⁷¹ and average variable costs are easier to calculate.⁷² That is likely in manufacturing, where production often involves the same repetitive process.⁷³ In some of these industries, moreover, it is clear that marginal costs are not only constant, but low. For example, in the production and distribution of electronic books, marginal costs are negligible.⁷⁴ In the manufacture of many brand name prescription drugs, variable costs are just "pennies a pill."⁷⁵ The marginal cost of an additional copy

⁶⁷ See, e.g., *Spirit Airlines, Inc. v. Nw. Airlines, Inc.*, 431 F.3d 917, 937-46 (6th Cir. 2005) (analyzing defendant's costs).

⁶⁸ See Kaplow, *supra* note 33, at 111.

⁶⁹ See *id.*

⁷⁰ See AREEDA-HOVENKAMP TREATISE, *supra* note 13, at 123 ("Computing marginal cost is much more difficult than computing average variable cost or average total cost."); Kaplow, *supra* note 33, at 111 ("[M]easurement of marginal cost is notoriously difficult in many settings . . ."); Werden, *supra* note 14, at 394 ("Marginal cost normally cannot be measured at all . . .").

⁷¹ See AREEDA-HOVENKAMP TREATISE, *supra* note 13, at 123; Werden, *supra* note 14, at 394.

⁷² See AREEDA-HOVENKAMP TREATISE, *supra* note 13, at 123.

⁷³ See *id.* ("Constant unit costs are common in some manufacturing industries . . ."); Werden, *supra* note 14, at 394 (stating that it is "commonly [] the case" that "marginal cost is roughly constant").

⁷⁴ Richard Epstein, *Not Proven: The DOJ Suit Against Apple for eBook Pricing*, RICOCHET (Apr. 12, 2012), <http://ricochet.com/main-feed/Not-Proven-The-DOJ-suit-Against-Apple-for-eBook-Pricing> (observing that "the marginal price for the production of an additional eBook is close to zero").

⁷⁵ Richard G. Frank & Joseph P. Newhouse, *Should Drug Prices Be Negotiated Under Part D of Medicare? And if So, How?*, 27 HEALTH AFF. 33, 34 (2008). The gap between the marginal cost of producing a brand name prescription drug and the high price at which it is sold can generate outrage, particularly when the price has risen rapidly. For example, Senator Bernie Sanders tweeted: "There's no reason an EpiPen, which costs Mylan just a few dollars to make, should cost families more than \$600." See Bernie Sanders (@SenSanders), TWITTER (Aug. 18, 2016, 6:19 AM), <https://twitter.com/SenSanders/status/766263360933466112> [<https://perma.cc/LK8P-K5LH>].

of a software program is essentially zero.⁷⁶ All three industries are well-known examples of cases in which the fixed costs of product development are high, but the marginal costs of production are minimal.⁷⁷ In such cases, producers typically have substantial market power, if marginal cost is the competitive benchmark. The following section explains why it cannot be in these cases.

2. Feasibility

The problem with marginal cost as a measure of the competitive level is that in many industries, it is a “recipe for insolvency.”⁷⁸ When marginal cost is flat over the relevant range of output, or when it remains low relative to fixed costs, a price equal to marginal cost will not generate the margin necessary to cover fixed costs.⁷⁹ If a firm must incur substantial fixed costs to develop or produce its product, it cannot price at marginal cost and remain a viable competitor. Thus, in information, high-tech, or other research-intensive industries, where firms must invest heavily to create new products—but once they have, they can manufacture them at low marginal cost⁸⁰—marginal cost pricing is neither “feasible nor desirable.”⁸¹ This creates a dilemma. Textbooks, treatises, and numerous articles have stated that the competitive benchmark for identifying market power is marginal cost.⁸² Yet in many important product lines, marginal cost pricing is unworkable.

Scholars have responded to this dilemma in various ways. Some, like Landes and Judge Posner, continue to maintain that pricing above marginal cost represents market power, but state that “there is no occasion for antitrust concern” when the margin is needed to cover fixed costs.⁸³ They do not explain, however, how marginal cost can constitute “the competitive level” in these

⁷⁶ Michal S. Gal & Daniel L. Rubinfeld, *The Hidden Costs of Free Goods: Implications for Antitrust Enforcement*, 80 ANTITRUST L.J. 521, 526 (2016) (“[T]he marginal cost of supply of digital products and services is often extremely low.”); Hovenkamp, *supra* note 32, at 2140 (“It costs millions of dollars to develop a program such as Microsoft Office, but once developed, the program can be burned to a DVD for a few cents or perhaps downloaded for virtually nothing.”).

⁷⁷ See Kirkwood, *supra* note 15, at 35 (discussing e-books); John B. Kirkwood, *Buyer Power and Healthcare Prices*, 91 WASH. L. REV. 253, 264 (2016) (discussing prescription drugs); Richard A. Posner, *Antitrust in the New Economy*, 68 ANTITRUST L.J. 925, 926-27 (2001) (“Intellectual property is characterized by heavy fixed costs relative to marginal costs . . . dramatically so in the case of software, where it is only a slight overstatement to speak of marginal cost as zero.”).

⁷⁸ Baumol & Swanson, *supra* note 14, at 668.

⁷⁹ See *supra* note 25 and accompanying text.

⁸⁰ See *supra* notes 73-76; see also *supra* note 24 (giving examples of “new economy” industries where marginal cost is “virtually negligible”).

⁸¹ See Elzinga & Mills, *supra* note 26, at 560.

⁸² See *supra* notes 52-54.

⁸³ Landes & Posner, *supra* note 12, at 939.

industries.⁸⁴ Others abandon marginal cost and suggest different benchmarks. Two scholars have contended that a firm does not have market power unless it can affect *market* prices.⁸⁵ But that is no help without an economically rigorous test for market definition, which is difficult, if not impossible, without using one of the benchmarks identified in this Article.⁸⁶ Other commentators argue that the appropriate benchmark in these settings is not marginal cost but average total cost, including the cost of capital.⁸⁷ Before turning to that benchmark, it is worth noting that when marginal cost is not a reliable indicator of market power, neither is price discrimination.

3. Price Discrimination

If marginal cost measures the competitive level, then price differences not based on cost differences imply market power for the reasons mentioned earlier.⁸⁸ Several courts adopted this logic, citing evidence of price discrimination in support of their conclusion that the defendant exerted market power.⁸⁹ Yet, if marginal cost pricing is infeasible, persistent non-cost-justified price discrimination does not necessarily imply supracompetitive pricing. To the contrary, competition among firms may lead them all to price discriminate. In that case, the result is “competitive” price discrimination.

Baumol and Swanson make this argument with the greatest force. Like many other commentators, they note that in numerous information and technology industries, firms develop new products by sinking substantial funds into R&D and specialized production facilities.⁹⁰ The differentiated products that emerge

⁸⁴ *See id.*

⁸⁵ *See* Elhauge, *supra* note 14, at 332 (arguing that firm “must be able to influence the prices of others in the market, not just have some discretion over its own prices” to have market power); Klein, *supra* note 23, at 76 (proposing that “it is more useful to define the extent of a firm’s antitrust market power in terms of whether changes in the firm’s prices have a significant effect on *market* quantities and prices”).

⁸⁶ *See* Klein, *supra* note 23, at 85 (acknowledging he cannot solve problem). Klein frames the issue in this way: consider two industries, both of which contain several differentiated products; in one, none of the products has market power; in the other, one product has substantial market power. How can the two be distinguished? Klein rejects a marginal cost benchmark because so many firms price in excess of marginal cost. *See id.* at 72. But he cannot identify another test.

⁸⁷ *See, e.g.*, AREEDA-HOVENKAMP TREATISE, *supra* note 13, at 189 (“[N]o inference of monopoly can be drawn unless returns over a fairly long run are clearly excessive.”).

⁸⁸ *See supra* notes 58-61 and accompanying text.

⁸⁹ *See, e.g.*, *E.I. du Pont de Nemours & Co. v. Kolon Indus., Inc.*, 637 F.3d 435, 448 (4th Cir. 2011) (stating that allegations that “U.S. para-aramid consumers pay more than consumers elsewhere . . . suggest price discrimination that would support Kolon’s contention that [du Pont] possessed . . . market power”).

⁹⁰ *See* Baumol & Swanson, *supra* note 14, at 681.

enable them to price above marginal cost.⁹¹ But they are unable to price above average total cost (including the cost of capital) because they are embroiled in “widespread innovative ‘arms races,’” in which each enterprise fears falling behind its rivals in the introduction of new products and processes.⁹² As a result, they invest heavily in R&D but the all-consuming rivalry prevents them from earning more than a competitive rate of return.⁹³ They utilize price discrimination because it maximizes their profits, and if they did not maximize profits, they would not survive.⁹⁴ In this intense, dynamic setting, Baumol and Swanson argue that price discrimination is a consequence of the competitive process, not a sign of its absence.⁹⁵ The Supreme Court agreed in *Illinois Tool Works, Inc. v. Independent Ink, Inc.*⁹⁶ Rejecting the notion that patents normally confer market power because patent holders frequently engage in price discrimination, the Court declared that price discrimination “occurs in fully competitive markets.”⁹⁷

This stark conclusion suggests that the marginal cost benchmark ought to be abandoned. If economic price discrimination occurs in “fully competitive markets,” how can marginal cost be a reliable measure of supracompetitive pricing? In fact, it is not in these settings. But it still has a role to play—and the Supreme Court was too quick to dismiss it. First, these markets are not in fact “fully competitive.” If they were, no firm could charge some customers a price above marginal cost.⁹⁸ Second, a price above marginal cost creates a profit margin and that margin matters for antitrust purposes. Firms innovate in order to capture that margin.⁹⁹ They may also exclude a competitor in order to protect that margin.¹⁰⁰ Courts should not ignore a significant gap between price and marginal cost, even when that gap is eaten up by fixed costs. Finally, the marginal cost benchmark is necessary to distinguish economic profits from scarcity rents.¹⁰¹ In short, despite its drawbacks, marginal cost should be considered whenever a court uses costs to assess power.

⁹¹ See *id.* at 661.

⁹² See *id.* at 662.

⁹³ *Id.* at 675.

⁹⁴ See *id.* (“In order to survive, the firm will have to charge discriminatory prices because . . . they are the only prices that yield the competitive rate of return.”).

⁹⁵ See *id.* at 666.

⁹⁶ 547 U.S. 28, 45 (2006).

⁹⁷ *Id.* at 45.

⁹⁸ See *supra* notes 47-50 and accompanying text.

⁹⁹ See Lemley & McKenna, *supra* note 18, at 2096 (declaring that “granting [intellectual property] rights works as an incentive precisely because it *does* confer . . . some power over price”).

¹⁰⁰ See Kaplow, *supra* note 12, at 501.

¹⁰¹ See *infra* Section I.B.2 (describing distinction).

B. *Average Total Cost (Including the Cost of Capital)*

This benchmark is much less popular than marginal cost. It is not the standard measure in textbooks, treatises, and numerous articles. It is not endorsed by most legal and economic scholars. It is also harder to state than marginal cost. In order to distinguish accounting average total cost from economic average total cost, it is necessary to add a phrase such as “including the cost of capital” or “measured economically.” Economic average total cost means the full opportunity cost, divided by output, of developing, producing, and marketing a product, including the cost of the required financial capital (adjusted for risk). It is equivalent to an economic profits test. A firm that prices above average total cost (including the cost of capital) earns economic profits.¹⁰² In contrast, a price above accounting average total cost, which does not include a return on equity, may not indicate any economic profits at all.

Multiple considerations favor this benchmark. First, in the perfectly competitive model, it is the long run measure of the competitive level.¹⁰³ Entry and exit eliminate economic profits in the long run in this model, causing price to equal average total cost (including the competitive cost of capital).¹⁰⁴ Second, this benchmark addresses the cases, detailed above, in which the firm’s price (or its higher price if it is price discriminating) is above marginal cost, but marginal cost is too low to cover the full costs of its business. In such settings, average total cost (including the cost of capital) is a superior measure of the competitive level. Third, this benchmark dovetails more closely with the consumer welfare focus of the antitrust laws. When a firm prices above marginal cost but not above average total cost, and the difference is used entirely to finance fixed costs that benefit consumers, no net reduction in consumer welfare occurs. There is, to be sure, some deadweight loss, but that loss is outweighed by the value of the new products that would otherwise not be produced. Further, no transfer of wealth from consumers to producers exists, a critical element of antitrust harm in a sell-side case.¹⁰⁵ The firm’s margin is spent on activities (R&D, production, etc.) that increase consumer surplus.¹⁰⁶ It does not make monopoly profits.

¹⁰² Economic profits are not always *supracompetitive* profits. A firm’s price might exceed average total cost (measured economically)—but not marginal cost—given a temporary surge in demand for its product or when it was earning “rents” on a scarce resource. Both could occur in a competitive market. See *infra* Section I.B.2 (explaining that firms earning scarcity rents do not exercise market power).

¹⁰³ See SCHERER & ROSS, *supra* note 19, at 19-20.

¹⁰⁴ *Id.*; see also CARLTON & PERLOFF, *supra* note 12, at 77 (noting that with free entry, “no one firm can succeed in the long run at earning profits that exceed costs”).

¹⁰⁵ See, e.g., Kirkwood, *Essence of Antitrust*, *supra* note 15, at 2440-44; Robert H. Lande, *Wealth Transfers as the Original and Primary Concern of Antitrust: The Efficiency Interpretation Challenged*, 34 HASTINGS L.J. 65, 105 (1982).

¹⁰⁶ See Hovenkamp, *supra* note 32, at 2148 (“Books, software, and insulated coffee mugs with patent numbers printed on their bottoms are presumably sold at prices higher than short-

Several scholars maintain, therefore, that the appropriate measure of the competitive level is average total cost (including the cost of capital). Some do this indirectly: they endorse the marginal cost benchmark but add that prices above marginal cost are not an antitrust concern unless prices are also above average total costs.¹⁰⁷ While this seems to preserve the primacy of marginal cost, it actually creates a broad exception. Marginal cost would be the test of market power only when it exceeds average total cost (measured economically). Others simply endorse a full cost benchmark.¹⁰⁸ The most prominent is Judge Posner, who defined market power and monopoly power as pricing above full cost (including the cost of capital).¹⁰⁹ In addition, two economists have straddled the issue, suggesting that an economic profits test would be appropriate for monopoly power but not market power.¹¹⁰

These scholars support a full cost benchmark even though in many circumstances it would be extremely difficult to determine whether a firm's economic rate of return exceeded the competitive cost of capital. The underlying complexities, summarized in the following three subsections, have caused "profit data to recede in importance" as a device for identifying market power.¹¹¹ Yet these difficulties would not foreclose the use of this benchmark in the clearest cases, in which accounting data or other information indicates that the defendant has earned exceptional profits for years.

run marginal costs. [But absent exclusionary behavior by intellectual property rights-holders], the amount of profit created will not be greater than what is needed to maintain diversity in that industry.").

¹⁰⁷ See AREEDA-HOVENKAMP TREATISE, *supra* note 13, at 188 (asserting that "the ability to charge prices above short-run marginal cost is typically not useful for establishing power in markets dominated by IP rights"); *id.* at 189 (insisting that long-run returns be "clearly excessive"); Landes & Posner, *supra* note 12, at 939 ("When the deviation of price from marginal cost . . . simply reflects certain fixed costs, there is no occasion for antitrust concern, even though the firm has market power in our sense of the term."); Werden, *supra* note 14, at 372 ("[M]arket power may not be of antitrust significance unless . . . sufficient to allow a firm to earn more than just a competitive return on investment . . .").

¹⁰⁸ See, e.g., George A. Hay, *Market Power in Antitrust*, 60 ANTITRUST L.J. 807, 814 (1992) (requiring "supranormal economic profits").

¹⁰⁹ See *Sheridan v. Marathon Petroleum Co. LLC*, 530 F.3d 590, 594 (7th Cir. 2008) ("Monopoly power we know is a seller's ability to charge a price above the competitive level (roughly speaking, above cost, including the cost of capital) . . ."); *In re Brand Name Prescription Drugs Antitrust Litig.*, 186 F.3d 781, 783 (7th Cir. 1999), *cert. denied sub nom.*, *HJB, Inc. v. Ameri-Source Corp.*, 528 U.S. 1181 (2000) (defining "market power" as "the power to charge a price above cost (including in 'cost' a profit equal to the cost of equity capital)"). When Judge Posner refers to "cost," he means full cost, not marginal cost, because marginal cost does not include fixed costs like the cost of capital. See Baumol & Swanson, *supra* note 14, at 668.

¹¹⁰ See CARLTON & PERLOFF, *supra* note 12, at 93.

¹¹¹ White, *supra* note 38, at 920.

1. Direct Measurement

The most direct way to measure a firm's economic profits is to determine its economic rate of return on the product at issue and compare it to the competitive cost of capital (the cost that firms with similar risks have to incur).¹¹² While the competitive cost of capital can be estimated,¹¹³ it is unlikely that the economic rate of return on the firm's investment can be identified with any precision. The economic rate of return on an investment is the "discount rate that equates the present value of its expected net revenue stream to its initial outlay."¹¹⁴ To determine that figure, one needs to know every outlay on the product, from the initial spending on R&D to the cost of the most recent shipment, and every dollar of revenue received, from the first sale to the latest transaction, as well as the timing of each of these items. The parties to an antitrust case would rarely, if ever, be able to collect or reconstruct all that information.¹¹⁵

The alternative is to start with the firm's accounting statements and adjust them to obtain a reasonable measure of the firm's economic profits on the product in question. That, however, would involve breaking down the figures by product line,¹¹⁶ and properly capitalizing and depreciating each expenditure that contributes to revenue over more than one year.¹¹⁷ Proper economic depreciation, however, would again require timing each outlay and each receipt. In addition, accounting results have to be adjusted for the growth rate of the product, since both the timing of the revenue stream and the growth rate of investment can produce sharp discrepancies between accounting profits and economic profits.¹¹⁸

Professors Fisher and McGowan conclude that "there is no way in which one can look at accounting rates of return and infer anything about relative economic

¹¹² See Franklin M. Fisher & John J. McGowan, *On the Misuse of Accounting Rates of Return to Infer Monopoly Profits*, 73 AMER. ECON. REV. 82, 82 (1983).

¹¹³ See AREEDA-HOVENKAMP TREATISE, *supra* note 13, at 145 ("Although the calculation is subject to continuing dispute, general agreement on the main elements makes the task manageable.").

¹¹⁴ Fisher & McGowan, *supra* note 112, at 82.

¹¹⁵ See *id.* at 90-91 (asserting that economic rate of return "requires information about both the past and the future which outside observers do not have, if it exists at all").

¹¹⁶ In the case of joint costs, that break down could not be done rigorously. See Baumol & Swanson, *supra* note 14, at 682 ("In a multi-product firm, 'average total cost' cannot even be defined . . ."). Instead, the joint costs would have to be allocated to each product line using some reasonable but arbitrary algorithm.

¹¹⁷ See Fisher, *supra* note 28, at 19.

¹¹⁸ See Fisher & McGowan, *supra* note 112, at 89 ("[I]t is impossible to infer either the magnitude or direction of differences in economic rates of return from differences in accounting rates of return. This is because such inferences require not only correction for growth rates, but *also* knowledge of the time shapes of returns.").

profitability or, a fortiori, about the presence or absence of monopoly profits.”¹¹⁹ This pessimistic assessment may be a fair statement of what most parties could *prove* from accounting data. But in exceptional cases, where accounting profits have been very high for a significant period of time, a court should take note. In *Conwood Co., L.P. v. United States Tobacco Co.*,¹²⁰ the Sixth Circuit pointed out that U.S. Tobacco “has the highest profit margin of any public company in the country.”¹²¹ In *United States v. Dentsply Int’l, Inc.*,¹²² the Third Circuit stated that the defendant’s “artificial tooth business is characterized as a ‘cash cow’ whose profits are diverted to other operations of the company.”¹²³ In *United States v. Microsoft Corp.*,¹²⁴ the company’s extraordinary profits likely made the D.C. Circuit more willing to sustain a finding of monopoly power.¹²⁵ Finally, du Pont’s striking and persistent profits on cellophane strongly implied monopoly power.¹²⁶ In exceptional cases like these, accounting profit data should be given substantial weight, unless the defendant can demonstrate that its economic rate of return was not abnormal.¹²⁷

Profitability should also have significant weight at the other extreme, where firms price above marginal cost (because their products are differentiated) but plainly do not earn economic profits (because they compete with numerous firms producing similar products). In cases like these, a defendant’s ability to demonstrate the absence of economic profits should preclude a finding of market

¹¹⁹ *Id.* at 90.

¹²⁰ 290 F.3d 768 (6th Cir. 2002).

¹²¹ *Id.* at 774.

¹²² 399 F.3d 181 (3d Cir. 2005).

¹²³ *Id.* at 185.

¹²⁴ 253 F.3d 34 (D.C. Cir. 2001).

¹²⁵ See White, *supra* note 38, at 923 n.32 (“[A]s arguably occurred in the *Microsoft* case, the defendant’s consistently large accounting profits may override any hesitation concerning the acceptability of accounting data in helping ascertain that the defendant has market power.”). For analysis of the case, see *infra* Section II.C.

¹²⁶ See AREEDA-HOVENKAMP TREATISE, *supra* note 13, at 147 (stating that du Pont earned “extraordinarily high profits” on cellophane sales “from the 1920s on,” that “as late as 1950 du Pont earned profits of 20 percent after taxes,” that “[d]uring the same period, du Pont invested in rayon production at returns averaging 7 to 8 percent,” and that “[p]rofits of such magnitude and durability strongly suggest market power”); George W. Stocking & Willard F. Mueller, *The Cellophane Case and the New Competition*, 45 AMER. ECON. REV. 29, 62-63 (1955) (“From the beginning of the depression in 1929 through the succeeding recovery and the 1938 recession du Pont averaged 29.6 per cent before taxes on its cellophane investment. On its rayon investment it averaged only 6.3 per cent.”).

¹²⁷ The court should address profit data, however, only if a price level benchmark is insufficient to resolve the case. See *infra* Part III (explaining proposed approach).

power, unless market power can be demonstrated through one of the price level benchmarks.¹²⁸

2. Scarcity Rents

The second complication is that both economic and accounting profits may be high not because the firm has market power, but because it is earning scarcity rents. Scarcity rents are returns to a factor of production, such as unusually fertile land or an especially talented entrepreneur, that allow the firm to make higher profits than rivals but do not allow it to raise price above marginal cost.¹²⁹ Scarcity rents occur, in other words, when a firm's price exceeds average total cost (measured economically) but it does not restrict output by raising price above marginal cost. It is easy in principle, therefore, to distinguish scarcity rents from economic profits that result from market power. A firm's profits are scarcity rents only if the firm is pricing at marginal cost. Thus, if a firm claims that its high profits reflect low costs, not market power, the firm should have to prove that its price does not exceed marginal cost. Otherwise, efficiency alone would not explain the firm's profits; it would also be restricting output.¹³⁰

3. Wasteful Expenditures

Just as high profits do not indicate monopoly returns when they represent scarcity rents, low profits do not indicate the absence of monopoly power when they result from wasteful expenditures. If a firm makes an inefficient acquisition or tolerates unproductive executives, its profits would be lower, but that would not demonstrate the absence of market power.¹³¹ Similarly, a firm with market

¹²⁸ The Second Circuit applied similar reasoning in *United States v. Eastman Kodak*, 63 F.3d 95 (2d Cir. 1995). It refused to find monopoly power even though the defendant's price appeared to be double its marginal cost, stating that "[c]ertain deviations between marginal cost and price, such as those resulting from high fixed costs, are not evidence of market power." *Id.* at 109. In fact, Kodak had not shown that its fixed costs were so high that it was earning only normal profits. *See* Werden, *supra* note 14, at 384. But if it had, the court's conclusion would have been correct.

¹²⁹ *See* AREEDA-HOVENKAMP TREATISE, *supra* note 13, at 139 ("Importantly, the firm earning scarcity rents rather than monopoly returns sets price at marginal cost, just as the competitor does."); Fisher, *supra* note 28, at 22 (defining rents as "returns which do not affect economic decisions[,] and thus do not restrict output attributable to inputs, like 'managerial talent' or 'advantageous location'").

¹³⁰ *See* AREEDA-HOVENKAMP TREATISE, *supra* note 13, at 139 (emphasizing that firm earning scarcity rents "has no power to increase its price by reducing total market output").

¹³¹ *See* *United States v. Aluminum Co. of Am. (Alcoa)*, 148 F.2d 416, 427 (2d Cir. 1945) ("[I]t is no excuse for 'monopolizing' a market that the monopoly has not been used to extract from the consumer more than a 'fair' profit."). Judge Learned Hand, writing for the Second Circuit, thought it possible, even likely, that defendant Alcoa's profits were low not because it faced competition, but because it had not, and as a result was sluggish and inefficient. *See id.* ("Many people believe that possession of unchallenged economic power deadens initiative,

power could dissipate its profits on rent seeking.¹³² Now, a court could not normally decide whether business behavior was simply a poor exercise of business judgment,¹³³ but that does not mean a plaintiff should never be able to show that a defendant's costs were artificially inflated.

4. Conclusion

The cost benchmarks are complicated to apply because they are valid in some respects and problematic in others. A price above marginal cost implies some impediment to effective competition and creates some incentive to exclude, but marginal cost pricing is infeasible in many industries.¹³⁴ In those industries, average total cost (including the cost of capital) is a superior benchmark. But discerning the existence of economic profits is challenging in most cases, and even then would not show supracompetitive pricing unless price was also above marginal cost.¹³⁵ Thus, if a court needs to use a cost benchmark—if it cannot resolve the power issue on the basis of a price level benchmark or market definition—it should examine both cost benchmarks.

The burden of proof, however, should not rest entirely on the plaintiff. While the plaintiff should have to present evidence that price is significantly above marginal cost—a burden that would not be onerous where marginal cost is plainly low—if the plaintiff makes that showing, the defendant should have the burden of establishing that its price did not persistently exceed average total cost (including the cost of capital).¹³⁶ If the defendant discharges that burden—if it shows that it did not earn sustained and significant economic profits—that ought

discourages thrift and depresses energy . . . [and] that the spur of constant stress is necessary to counteract an inevitable disposition to let well enough alone.”).

¹³² See Nelson & White, *supra* note 38, at 12 (“[F]irms that have market power may not earn supranormal economic profits if they expend these profits on costly efforts to insulate themselves from competition.”). Likewise, a firm may pay so much for a patent or other asset that confers market power that the firm does not make supracompetitive profits. See Crane, *supra* note 42, at 54-55 (noting that seller, not buyer, then captures excess profits).

¹³³ See AREEDA-HOVENKAMP TREATISE, *supra* note 13, at 144-45 (“The tribunal will seldom be able to identify and quantify inefficiencies, to classify and measure nonproductive rent-seeking activities, or to go behind the purchase price of patents and other assets.”).

¹³⁴ See *supra* Section I.A (explaining that in these industries, pricing at marginal cost does not cover fixed costs).

¹³⁵ Likewise, a price *below* average total cost does not necessarily show the absence of market power if price is above marginal cost. In a declining industry, sales revenues are no longer sufficient to cover full costs, but the firms may form a cartel and raise price above marginal cost, thereby restricting output and exercising market power.

¹³⁶ See Werden, *supra* note 14, at 384 (asserting that burden on profitability should rest on defendant); see also *infra* notes 248-250 and accompanying text (noting that D.C. Circuit effectively shifted burden on profitability to defendant in *Microsoft*).

to preclude a finding of market power,¹³⁷ unless the plaintiff presents strong evidence that the defendant's costs were artificially inflated.

A court should begin its analysis of market power or monopoly power with the price level benchmarks. They are easier to understand, ordinarily easier to apply, and relate directly to the ultimate focus of antitrust enforcement—the impact of the challenged conduct. They would also enable the court to resolve power and anticompetitive effects at the same time, thereby enhancing antitrust enforcement.

C. *Prevailing Level*

The first price level benchmark asks whether the challenged conduct would enable the defendant to raise price significantly above the prevailing level. If so, this control over price would show that the defendant have market power.¹³⁸ Unlike the cost levels, this benchmark is dynamic rather than static. It does not ask whether the prevailing level is “competitive;” it asks whether the defendant could *increase* price above that level. It asks, in short, whether the challenged conduct would make the market *less* competitive.¹³⁹

The prevailing level benchmark is the backbone for much of antitrust enforcement. Unlike the but for level, the prevailing level is widely used: a great deal of antitrust enforcement is directed at conduct that threatens to raise price above the current level. Horizontal merger enforcement is the obvious example. According to the Merger Guidelines, the purpose of horizontal merger enforcement is to prevent mergers that would enhance market power,¹⁴⁰ and enhancing market power means raising price or otherwise harming customers.¹⁴¹ This benchmark is also central to the well-known test for market definition in the Merger Guidelines, the Hypothetical Monopolist Test, which picks a candidate relevant product and asks whether a sole seller of that product would likely raise its price significantly above the prevailing level.¹⁴² In short,

¹³⁷ Similarly, a court should reject a finding of *monopoly* power if the defendant proves that it did not earn persistent and *substantial* economic profits. *See supra* note 131.

¹³⁸ If the price increase is likely to be *substantial*, the defendant would possess monopoly power. In either case, the price increase would have to be profitable.

¹³⁹ *See* Kaplow, *supra* note 33, at 159 (noting that this benchmark measures market power in comparative sense).

¹⁴⁰ *See* MERGER GUIDELINES, *supra* note 37, § 1. The full version is that mergers “should not be permitted to create, enhance, or entrench market power or to facilitate its exercise.” *Id.* at 2. The Guidelines, however, “generally refer to all of these effects as enhancing market power.” *Id.*

¹⁴¹ *See id.* The Guidelines set forth a longer list of harms but “generally discuss the analysis in terms of . . . price effects.” *Id.*

¹⁴² *See id.* § 4.1.1. Similarly, the Areeda-Hovenkamp Treatise defines a relevant market in terms of the ability of the firms in that market to subject customers to a price increase. *See* AREEDA-HOVENKAMP TREATISE, *supra* note 13, at 189 (“A relevant market is a grouping of

horizontal merger enforcement relies on the prevailing level benchmark to state its animating purpose and delineate the markets in which enforcement action may be appropriate. Likewise, the Competitor Collaboration Guidelines use this benchmark to measure anticompetitive effects and define markets.¹⁴³

Judges rarely employ the prevailing level benchmark, however, to assess market power directly. They use it to define markets, not to infer market power from the likely anticompetitive effects of the challenged conduct. In *It's My Party, Inc. v. Live Nation, Inc.*,¹⁴⁴ for example, the Fourth Circuit determined the scope of the geographic market by asking whether artists would turn to promoters outside the Washington-Baltimore area if Live Nation (a regional concert promoter) raised its price in that area above the prevailing level.¹⁴⁵ The court did not assess Live Nation's market power by determining the likely effects of its asserted tying agreement and then inferring the presence or absence of power from those effects. Likewise, in *Federal Trade Commission v. Staples Inc.*,¹⁴⁶ Judge Hogan used the famous pricing evidence to define a narrow market, not to establish market power directly.¹⁴⁷ In contrast, courts ought to determine power whenever they can from the anticompetitive effects of the challenged conduct, not from traditional market definition.

To be sure, in many potential price increase cases it may be impossible to determine the effects of the challenged conduct without using the traditional tools of market definition, including the Hypothetical Monopolist Test. But this can be done in two types of cases, which would expedite antitrust enforcement. The first type involves *actual* anticompetitive effects. Where direct evidence is introduced that the defendants have in fact increased price above the prevailing level, it is well established that market power can be inferred from that fact.¹⁴⁸

sales such that customers cannot easily switch to something else in response to a price increase in that grouping.”).

¹⁴³ See U.S. DEP'T OF JUSTICE & FED. TRADE COMM'N, ANTITRUST GUIDELINES FOR COLLABORATIONS AMONG COMPETITORS §§ 1.2, 3.32(a) (2000). The prevailing level is also used to measure damages to purchasers. See HERBERT HOVENKAMP, FEDERAL ANTITRUST POLICY: THE LAW OF COMPETITION AND ITS PRACTICE 724-32 (4th ed. 2011) (describing “overcharge” and “before-and-after” measures of damages).

¹⁴⁴ 811 F.3d 676 (4th Cir. 2016).

¹⁴⁵ *Id.* at 680.

¹⁴⁶ 970 F. Supp. 1066 (D.D.C. 1997).

¹⁴⁷ See *id.* at 1075-78 (citing pricing evidence to define superstore-only market).

¹⁴⁸ See *Eastman Kodak Co. v. Image Tech. Serv., Inc.*, 504 U.S. 451, 465 (1992); *FTC v. Ind. Fed'n of Dentists*, 476 U.S. 447, 460 (1986); *Nat'l Collegiate Athletic Ass'n v. Bd. of Regents*, 468 U.S. 85, 99 (1984); *Addyston Pipe & Steel Co. v. United States*, 175 U.S. 211, 237 (1899); *Geneva Pharm. Tech. Corp. v. Barr Labs*, 386 F.3d 485, 500 (2d Cir. 2004); *PepsiCo, Inc. v. Coca-Cola Co.*, 315 F.3d 101, 107 (2d Cir. 2002); *Toys “R” Us, Inc. v. FTC*, 221 F.3d 928, 937 (7th Cir. 2000); *Re/Max Int'l, Inc. v. Realty One, Inc.*, 173 F.3d 995, 1016-19 (6th Cir. 1999); *Tops Markets, Inc. v. Quality Markets, Inc.*, 142 F.3d 90, 97-98 (2d Cir. 1998).

In such cases, market definition is not required.¹⁴⁹ The second type of case involves the *predicted* unilateral effects of a merger. As many scholars have noted,¹⁵⁰ and the most recent Merger Guidelines confirm,¹⁵¹ a court can predict the likelihood of a unilateral price increase from the “upward pricing pressure” created by a merger and other data. In these cases as well, market definition is unnecessary.¹⁵² While a court could deduce the boundaries of the relevant market from the results of its unilateral effects analysis,¹⁵³ it need not proceed through the traditional market delineation process in order to evaluate whether the merger is likely to create market power.¹⁵⁴

In short, the prevailing level benchmark not only undergirds much of antitrust enforcement, it would make antitrust enforcement more effective if it were used[em dash]as it could be in unilateral effects cases[em dash]to infer market power directly from the predictable impact of the challenged conduct.¹⁵⁵

In fact, this benchmark is so widely employed that courts reflexively invoke it even when it is inapt. In *United States v. Visa U.S.A., Inc.*,¹⁵⁶ the government

¹⁴⁹ See *Toys “R” Us*, 221 F.3d at 937 (“The Supreme Court has made it clear that there are two ways of proving market power. One is through direct evidence of anticompetitive effects.”).

¹⁵⁰ See, e.g., Carl Shapiro, *The 2010 Horizontal Merger Guidelines: From Hedgehog to Fox in Forty Years*, 77 ANTITRUST L.J. 49, 65 (2010).

¹⁵¹ See MERGER GUIDELINES, *supra* note 37, § 6.1.

¹⁵² See *id.* (“Diagnosing unilateral price effects based on the value of diverted sales need not rely on market definition . . .”); Hovenkamp & Shapiro, *supra* note 5, at 17 (“[I]n most cases, unilateral effects can be estimated without the need to define a relevant antitrust market, and the legal requirement that it be done does not assist in this analysis.”); Steven C. Salop, *The Evolution and Vitality of Merger Presumptions: A Decision-Theoretic Approach*, 80 ANTITRUST L.J. 269, 300 (2015) (“[The Gross Upward Pricing Pressure methodology] does not require a market to be defined. . . .”).

¹⁵³ See MERGER GUIDELINES, *supra* note 37, § 4.1.1 ex. 5 (concluding that Products A and B constitute relevant market because unilateral effects analysis indicates that producer owning both of them would raise their prices ten percent). Note, however, that if another product is a closer substitute for Product A than Product B, the Guidelines would also include that third product in the market. See *id.* at ex. 6.

¹⁵⁴ Because the relevant market can be inferred from the unilateral effects analysis, the *Philadelphia National Bank* presumption may still be available. See *United States v. Phila. Nat’l Bank (PNB)*, 374 U.S. 321, 363 (1963). In the future, however, it may be better to replace the *PNB* presumption in unilateral effects cases with a presumption rooted in unilateral effects analysis. See Salop, *supra* note 152, at 301.

¹⁵⁵ For another example, see *United States v. Empire Gas Corp.*, 537 F.2d 296 (8th Cir. 1976), where the government lost because the court ruled that the challenged conduct occurred outside the government’s proposed geographic markets. *Id.* at 298. Had the court focused instead on the effects of the challenged conduct, it would have reached a different result, since it found that the conduct raised or threatened to raise prices above prevailing levels. See *id.* at 300. These effects obviated the need for market definition.

¹⁵⁶ 344 F.3d 229 (2d Cir. 2003).

had challenged the rules promulgated by Visa and MasterCard that prevented member banks from issuing American Express or Discover cards.¹⁵⁷ The district court found that the defendants had market power because they could *raise* the prices they charged consumers and the fees they charged merchants without causing either group to abandon the defendants' cards in substantial numbers.¹⁵⁸ The Second Circuit held that this evidence was sufficient to establish market power.¹⁵⁹ In fact, however, the court's analysis was off target. The government's claim was not that the challenged exclusionary rules were likely to result in *higher* prices in the future. The theory was that the challenged rules, enacted years earlier,¹⁶⁰ had impeded competition from American Express and Discover, which would have resulted in *lower* prices or *better* service.¹⁶¹ Accordingly, the court should have used the but for benchmark. Indeed, the court could have easily identified it. In Europe, where Visa had not promulgated an exclusionary rule, competition with American Express had caused Visa to strengthen its product offerings.¹⁶²

As *Visa* indicates, if the challenged conduct threatens to maintain price above, or quality below, the level that new competition would produce, the competitive level is the but for level[em dash]the level to which price would fall or quality would rise if the conduct failed to exclude this new competition.

D. *But for Level*

Despite its logic, the endorsements of multiple scholars,¹⁶³ and its direct link to the Supreme Court's definition of monopoly power,¹⁶⁴ the but for benchmark has not been accepted by the courts. No decision to my knowledge determines the but for level and then holds that a defendant had market power or monopoly power because it prevented prices from falling to that level. In fact, two decisions rejected this benchmark. This Section explains why the but for level ought to be used much more frequently. First, in cases involving the maintenance of market power or monopoly power, it would be the most efficient way to resolve them. Using the but for level, a court could determine both power and

¹⁵⁷ *Id.* at 236.

¹⁵⁸ *See id.* at 239 (citing expert testimony that "if prices for general purpose payment cards were to rise significantly, cardholders would likely pay the increased fees, rather than abandon their cards in favor of other forms of payment"); *id.* at 240 (noting that "merchants testified that they could not refuse to accept payment by Visa or MasterCard, even if faced with significant price increases, because of customer preference").

¹⁵⁹ *Id.* at 240.

¹⁶⁰ *See id.* at 236 n.3.

¹⁶¹ *See id.* at 241-42.

¹⁶² *Id.* at 241.

¹⁶³ *See supra* notes 36, 40.

¹⁶⁴ *See* United States v. E.I. du Pont de Nemours & Co. (*Cellophane*), 351 U.S. 377, 392 (1956) (stating that firm has monopoly power if it can "exclude competition").

anticompetitive effects at the same time, without undertaking traditional market definition, thereby reducing the cost and enhancing the effectiveness of antitrust enforcement. Second, in most situations the but for level can be identified with reasonable accuracy. Third, the decisions that rejected it were mistaken, and two more authoritative cases have recognized its logic. Finally, as Section I.D.4 points out, this benchmark is not a universal solution—in two settings it would have to be supplemented.

1. Efficient Enforcement

In cases involving the asserted maintenance of market or monopoly power, the but for level is the most direct and efficient way to measure such power. Once the but for level is identified,¹⁶⁵ market power can be determined directly if the but for level is *significantly* below the current level. Likewise, monopoly power can be found if the but for level is *substantially* below the current level. The court would not have to navigate the complexities of price-cost relationships or the uncertainties of traditional market definition.¹⁶⁶

Further, a court need not dispense with the benefits of market definition. To satisfy precedent or describe the case more easily, the court can select a market based on three features of but for analysis: the target of the challenged conduct, the breadth of its effects, and the ultimate conclusion.¹⁶⁷ For example, if the target of the conduct is a single rival, the relevant market should ordinarily be limited to the defendant and that rival. Likewise, if successful entry would have caused prices to fall on the defendant's product, but not other products, the defendant's product should constitute the relevant market. Finally, if the but for analysis shows that the defendant exercised monopoly power, the market should be narrow.

The but for benchmark would also avoid the *Cellophane* Fallacy,¹⁶⁸ the most severe problem that can result from applying the standard market definition methodology in exclusion cases. The standard methodology, the Hypothetical Monopolist Test, asks whether a putative sole seller of the candidate product would find it profitable to impose a significant price increase.¹⁶⁹ That could lead to the wrong result if the issue is not whether the challenged conduct is likely to increase prices but whether it is likely to foreclose a price reduction. A firm that is profit-maximizing will not, by definition, be able to impose a profitable price increase, but it may nevertheless have market power or monopoly power if the

¹⁶⁵ See *infra* Section I.D.2 (describing various ways to measure the but for level).

¹⁶⁶ For exceptions, see *infra* Section I.D.4.

¹⁶⁷ See Kaplow, *supra* note 19, at 116 (noting that one can always make “the choice of the relevant market an ex post conclusion”).

¹⁶⁸ See *infra* text accompanying notes 170-172 (describing *Cellophane* Fallacy).

¹⁶⁹ See MERGER GUIDELINES, *supra* note 37, § 4.1.1.

price it is charging is supracompetitive.¹⁷⁰ Thus, the Hypothetical Monopolist Test may indicate that a firm has no market power, because it cannot profitably increase price, when in fact it has monopoly power as measured by all the other benchmarks.¹⁷¹ The but for benchmark would avoid this false negative, known as the *Cellophane* Fallacy.¹⁷²

The but for benchmark would broaden the reach of antitrust law, enabling it to challenge exclusionary conduct that would otherwise be immune. Imagine an industry with four equally-sized firms that compete vigorously with each other. Suppose their rivalry is so intense that none of the firms can charge a price above marginal cost or average total cost (including the cost of capital). None of these firms would have market power under either a cost benchmark or a market share test. A twenty-five percent share is far below the threshold for monopoly power,¹⁷³ and it is unlikely to support a finding of market power where each firm competes with three equally large rivals. Yet without proof of market power or monopoly power, these firms would be immune from antitrust scrutiny if they engaged in parallel, non-collusive conduct that excluded a more efficient entrant, an entrant whose new technology would have led to significantly lower prices.¹⁷⁴ The but for benchmark, in contrast, would permit a court to find that each firm had market power, enlarging the law's ability to combat anticompetitive parallel exclusion.¹⁷⁵

¹⁷⁰ See AREEDA-HOVENKAMP TREATISE, *supra* note 13, at 303; Krattenmaker, Lande & Salop, *supra* note 13, at 256; Nelson & White, *supra* note 38, at 19.

¹⁷¹ See AREEDA-HOVENKAMP TREATISE, *supra* note 13, at 300 (“The price-increase methodology for defining the extent of a market works only if prices in the provisional market are at or near the competitive level.”).

¹⁷² The cost benchmarks would also avoid the *Cellophane* Fallacy, but they are often difficult to apply. See *supra* Section I.B.4 (explaining measurement problems).

¹⁷³ See *United States v. Dentsply Int'l, Inc.*, 399 F.3d 181, 187 (3d Cir. 2005) (“[A] share significantly larger than 55% has been required to establish prima facie market power[.]”); U.S. DEP'T OF JUSTICE, COMPETITION AND MONOPOLY: SINGLE-FIRM CONDUCT UNDER SECTION 2 OF THE SHERMAN ACT 22 (2008) (“The Department is not aware . . . of any court that has found that a defendant possessed monopoly power when its market share was less than fifty percent.”). The Obama Administration withdrew this report because of disagreements with its enforcement approach. See Press Release, U.S. Dep't of Justice, Justice Department Withdraws Report on Antitrust Monopoly Law (May 11, 2009), available at <https://www.justice.gov/opa/pr/justice-department-withdraws-report-antitrust-monopoly-law> [<https://perma.cc/758L-WYW3>] (stating that “[t]he report . . . raised too many hurdles to government antitrust enforcement and favored extreme caution and the development of safe harbors for certain conduct within the reach of Section 2”).

¹⁷⁴ See C. Scott Hemphill & Tim Wu, *Parallel Exclusion*, 122 YALE L.J. 1182, 1235 (2013) (arguing that horizontal collusion is unnecessary for parallel exclusion).

¹⁷⁵ If a court ruled that each firm had market power, it could readily condemn vertical exclusionary contracts between each firm and its distributors, since the agreements would violate Section 1 of the Sherman Act (assuming they lacked adequate justification). See ABA SECTION OF ANTITRUST LAW, ANTITRUST LAW DEVELOPMENTS 214-15, 220 (7th ed. 2012)

2. Measurement

The but for level is a practical tool. It can usually be estimated from one or more of the following sources of information.

Business Plans. No rational entrant or small rival is likely to sink substantial funds into an entry or expansion attempt without a business plan, and that plan is likely to predict the sales and prices the entrant or rival expects to achieve in the first few years of its campaign. To be sure, some business plans are flawed,¹⁷⁶ and the tendency to exaggerate is likely to be especially great among very small entrants.¹⁷⁷ But if the entrant or rival is a significant firm, and particularly if it needs the support of outside investors, its estimate of the but for price—the price that would prevail if it were successful—is likely to be reasonably reliable. Similarly, no rational incumbent is likely to invest in an expensive exclusionary campaign without first determining that the entrant poses a significant threat to its prices and profits. The magnitude of the predicted threat would provide another estimate of the but for price.

Actual Experience of Entry. If the exclusion takes place after the entry attempt had begun, the entrant's introductory price and the defendant's response to it would provide concrete evidence of the but for level. To be sure, the entrant's initial price is likely to be below that level, since it would reflect introductory discounts and other promotions that would end if the entrant becomes established. But the difference between the initial price and the but for price—the price that would last if the entry succeeds—is unlikely to be large.

Entry in Other Markets. If entry had occurred in another geographic market, the price level in that market would help identify the but for level in the relevant market. Although this scenario is unlikely to occur often, when it does, it is likely to provide compelling evidence.

(discussing market power and justification elements of rule of reason analysis). If, however, there were no agreements, horizontal or vertical, the exclusion would be very difficult to reach. Section 2 would apply only if each firm had monopoly power, but that is unlikely since all four firms in this hypothetical produce the same product. None is a "monopolist." See *supra* note 13. To be sure, there is academic support for a "shared monopoly" theory. See Hemphill & Wu, *supra* note 174, at 1236-39 (endorsing theory and citing support from Turner, Areeda, and Hovenkamp). But there is little or no precedent for it.

¹⁷⁶ See Christopher R. Leslie, *Rationality Analysis in Antitrust*, 158 U. PA. L. REV. 261, 276 (2010) (noting that businesses often exaggerate expected sales of new products but providing only single example: du Pont's introduction of Corfam in 1964-65). Entrants might also understate the but for price in order to put themselves in a better position if they eventually bring an antitrust action. But they have a powerful incentive not to do this, since if they downplay the revenues they expect to achieve post-entry, they will reduce the likelihood of outside funding and the damages they would receive in a lawsuit.

¹⁷⁷ See John B. Kirkwood & Richard O. Zerbe, *The Path to Profitability: Reinvigorating the Neglected Phase of Merger Analysis*, 17 GEO. MASON L. REV. 39, 47 n.44 (describing behavioral economics research finding that great amount of small-scale entry takes place even though, by objective measures, entry is unlikely to be profitable).

Knowledgeable Observers. Numerous observers may be able to furnish reliable information about the but for level, including competitors, customers, suppliers, potential entrants, investors, industry analysts, and economic experts.¹⁷⁸

Recent cases illustrate these possibilities. In *McWane, Inc. v. Federal Trade Commission*,¹⁷⁹ the defendant's exclusive dealing program had prevented a new entrant from gaining more than ten percent of the market.¹⁸⁰ The entrant had forecast, however, that if the program "had not been in place, its sales would have been greater by a multiple of 2.5 in 2010 and by a multiple of three in 2011."¹⁸¹ This expansion would almost certainly have depressed the market price. Indeed, a McWane executive warned that if McWane did not adopt exclusive dealing, Star would "drive profitability out of our business."¹⁸² This suggests that the but for price was approximately equal to McWane's average total cost.

In *Dentsply*, experts for the defendant and the government agreed that were the challenged conduct to end, "prices would fall."¹⁸³ Though the court did not calculate a specific price level, presumably they could have.

In *Northwest Airlines*, Spirit entered the Detroit-Philadelphia market with a forty-nine dollar fare.¹⁸⁴ Four months later it began offering flights on the Detroit-Boston route at fares as low as sixty-nine dollars.¹⁸⁵ Northwest responded with equally low fares.¹⁸⁶ Since Northwest's prices had been many times higher, both Spirit's introductory prices and Northwest's reactions indicated that the but for level on these routes—the price level that would have prevailed had Spirit not been driven out—was substantially below the pre-entry level.¹⁸⁷ Thus, if Spirit had sued at this point, it could have established monopoly power from the gap between the pre-entry level and the but for level.

Northwest did in fact drive out Spirit and then increase its fares by a factor of almost seven.¹⁸⁸ This stunning price increase also demonstrated monopoly power—the ability to elevate prices substantially above the prevailing level. In a successful predatory pricing case, then, a case in which the incumbent destroys

¹⁷⁸ Comparable evidence is likely to be available if the excluded firm is not an entrant but an existing rival undertaking a significant expansion.

¹⁷⁹ 783 F.3d 814 (11th Cir. 2015).

¹⁸⁰ *Id.* at 823.

¹⁸¹ *Id.* at 822.

¹⁸² *Id.* at 841.

¹⁸³ *United States v. Dentsply Int'l, Inc.*, 399 F.3d 181, 190-91 (3d Cir. 2004).

¹⁸⁴ *Spirit Airlines, Inc. v. Nw. Airlines, Inc.*, 431 F.3d 917, 922 (6th Cir. 2005).

¹⁸⁵ *Id.*

¹⁸⁶ *See id.* at 923-24, 930.

¹⁸⁷ *See id.* at 924, 950-51 (noting that when Spirit withdrew from two routes and Northwest restored its pre-entry fares, it raised prices nearly seven-fold).

¹⁸⁸ *Id.*

the entrant and restores prices to the pre-entry level, both the initial price cut and the subsequent price increase would, if the changes are substantial, establish monopoly power. There would be no need to engage in traditional market definition or compare the defendant's pre-entry prices to its costs. The defendant's monopoly power could be inferred from the effects of its conduct, making it easier to challenge and deter predatory pricing.¹⁸⁹

In *Geneva Pharmaceuticals Technology Corp. v. Barr Laboratories Inc.*,¹⁹⁰ the defendant had acquired an exclusive license for an essential ingredient in generic warfarin.¹⁹¹ When that license ended, the plaintiffs entered the generic warfarin market, and in response the defendant "lowered its price and offered substantial price discounts and rebates."¹⁹² Those responses supplied a clear indication of the but for level—the price level that would have prevailed had the defendant not excluded the plaintiffs.

In *Visa*, as noted earlier, other geographic markets strongly suggested the but for level. The Second Circuit observed that in countries "where Visa International rather than Visa U.S.A. operates the Visa network, and no exclusionary rule applies, Amex has succeeded in convincing banks that issue Visa cards also to issue Amex cards. This has caused Visa International to 'proactively strengthen' its product offerings to member banks abroad."¹⁹³ Absent some reason to disregard these results, Visa's offerings abroad supplied a telling measure of the but for level in the United States. In fact, whenever another geographic market for the same product exists in which the structure is less concentrated but costs are comparable, the but for level can be identified.¹⁹⁴

These four cases illustrate five different types of relevant information: (1) an entrant's prediction of its future market share, (2) an incumbent's assessment of the impact of entry, (3) an entrant's introductory prices, (4) an incumbent's response to entry, and (5) the incumbent's behavior in a more competitive geographic market. These sources, plus the evaluations of others inside and outside the industry,¹⁹⁵ would normally enable a judge or jury to generate a reasonably precise estimate of the but for level.

¹⁸⁹ Indeed, there is no need for a separate monopoly power element in such cases. While a separate power element would reduce false positives, an issue discussed below, that is unnecessary where recoupment is clear.

¹⁹⁰ 386 F.3d 485 (2d Cir. 2004).

¹⁹¹ *Id.* at 491.

¹⁹² *Id.* at 500.

¹⁹³ *United States v. Visa U.S.A., Inc.*, 344 F.3d 229, 241 (2d Cir. 2003).

¹⁹⁴ *See White, supra* note 38, at 919. Prices in the less concentrated market might be taken as an independent measure of the competitive level. *See supra* note 40. But regardless of whether they are treated as an independent benchmark or as a basis for estimating the but for level in the more concentrated market, the implications for market power are the same.

¹⁹⁵ *See Werden, supra* note 38, at 216-17 (stating that economist may be able to estimate but for level by performing simulation, comparable to merger simulation, of market without exclusionary conduct).

To be sure, all of this information would not be available to an incumbent trying to determine whether it could respond aggressively to a new entrant without risking Section 2 liability. But the incumbent would presumably know the entrant's introductory prices, whether the entrant had entered other geographic markets, and the entrant's effects on prices there. Moreover, the incumbent would have to determine the entrant's likely impact on its revenues in order to calculate whether an aggressive response would be profitable. Thus, an incumbent ought to know enough—and learn enough—about the entrant's probable effect on prices to make a reliable assessment of the but for level.

In sum, the but for benchmark is likely to be a practical method of determining market power and monopoly power in most exclusion cases. As the next Section explains, the precedent for this approach is mixed, but the more authoritative decisions are supportive.

3. Precedent

Two decisions rejected the but for benchmark. In *Geneva Pharmaceuticals*, as noted, Barr had acquired an exclusive license for an essential ingredient in generic warfarin.¹⁹⁶ When the license ended, the plaintiffs were able to produce generic warfarin and Barr reacted by reducing its price and offering substantial discounts and rebates.¹⁹⁷ The plaintiffs argued that Barr's higher price during the exclusivity period showed that it had monopoly power.¹⁹⁸ The Second Circuit refused to accept this evidence, stating that the plaintiffs had not provided "any analysis of Barr's costs," and as a result it could not determine "whether the allegedly elevated prices led to an abnormally high price-cost margin."¹⁹⁹ According to the court, monopoly power cannot be measured by the difference between Barr's price and the but for price (the price Barr would have charged, and did charge, without exclusivity), but only by the difference between Barr's price and its marginal cost.²⁰⁰

This reasoning is incorrect. It assumes, first of all, that the only way to assess monopoly power is by the power to control price. Yet, as the Supreme Court made clear in the *Cellophane* case, monopoly power also includes the power to

¹⁹⁶ *Geneva Pharm. Tech. Corp.*, 386 F.3d at 491.

¹⁹⁷ *Id.* at 500.

¹⁹⁸ *Id.* at 494, 500.

¹⁹⁹ *Id.* at 500.

²⁰⁰ The court was apparently referring to marginal cost, not full cost, because it used "high price-cost margin," not high profitability. *Id.* The standard economic measure of the price-cost margin is the Lerner Index, which measures the gap between price and marginal cost. See Hovenkamp, *supra* note 32. Of course, if a court were going to use a cost benchmark, it should not have focused on marginal cost, since pricing at marginal cost is not feasible in pharmaceutical manufacturing. See *supra* notes 72, 74 and accompanying text.

“exclude competition.”²⁰¹ The Second Circuit also assumed that the power to control price can only be measured by a cost benchmark.²⁰² But that is also incorrect. A firm that can maintain price substantially above the level that competition would have produced—the but for level—also has monopoly power. Finally, the court’s position is undesirable as a policy matter. A firm that uses exclusionary conduct to prevent its price from falling substantially should not be excused from antitrust liability on the ground that its price barely covered its costs. That would insulate a high-cost incumbent from a more efficient entrant, protecting a competitor at the expense of consumers.

The Second Circuit rejected another attempt to use the but for benchmark in *PepsiCo, Inc. v. Coca-Cola Co.*²⁰³ PepsiCo had challenged Coke’s “enforcement of loyalty provisions in its distributorship agreements with independent food service distributors (‘IFD’) that prohibit the IFDs from delivering PepsiCo products to any of their customers”²⁰⁴ PepsiCo asserted that it could deliver fountain syrup more cheaply through IFDs and that if the loyalty provisions were struck down, it could lower prices to customers.²⁰⁵ The court refused to treat this as evidence of market power, stating: “That PepsiCo could lower prices if it used IFDs does not create a triable issue with respect to whether Coca-Cola charges supracompetitive prices.”²⁰⁶ But if PepsiCo could have reduced its prices significantly and if Coca-Cola would have had to match those reductions, Coca-Cola’s ability to foreclose this result established that it was pricing above the but for level.

In short, both decisions improperly limited the meaning of market power. They restricted market power to the power to control price, ignoring the power to exclude competition; and they restricted the power to control price to the power to elevate price above cost, ignoring the power to hold price above the but for level—the level that would have resulted from greater competition.

In contrast, two recent decisions supported but for analysis. Though neither calculated the but for level, both indicated it was proper to infer market power from conduct that made no sense unless it forestalled a significant price reduction. In *Federal Trade Commission v. Actavis, Inc.*,²⁰⁷ the Supreme Court stated that a firm without market power is unlikely to pay a large sum to induce a competitor to stay out of the market.²⁰⁸ Such an expenditure would only be profitable if it enabled the firm to maintain its price above the competitive

²⁰¹ *United States v. E.I. du Pont de Nemours & Co. (Cellophane)*, 351 U.S. 377, 392 (1956) (“Monopoly power is the power to control prices or exclude competition.”).

²⁰² *See Geneva Pharm. Tech. Corp.*, 386 F.3d at 500.

²⁰³ 315 F.3d 101 (2d Cir. 2002).

²⁰⁴ *Id.* at 103.

²⁰⁵ *See id.* at 108.

²⁰⁶ *Id.*

²⁰⁷ 570 U.S. 136 (2013).

²⁰⁸ *Id.* at 157.

level—the level that new entry would produce.²⁰⁹ Similarly, in *Microsoft*, the D.C. Circuit quoted with approval the trial court’s statement that “Microsoft’s pattern of exclusionary conduct could only be rational ‘if the firm knew that it possessed monopoly power.’”²¹⁰ While this statement could refer to Microsoft’s ability to price above full cost, the court may also have meant the company’s power to prevent a substantial price reduction, since Microsoft embarked on a campaign of exclusion in order to block Netscape and Sun Java from turning Windows into a commodity and sharply reducing its price.²¹¹

Both cases, in short, lend support to but for analysis. Coupled with the considerations set forth above, they suggest that courts should find market power (or monopoly power) whenever a plaintiff shows that the defendant was able, through its exclusionary conduct, to preclude a significant (or substantial) reduction in price.

4. Need to Supplement

In two situations, but for analysis would have to be supplemented. The first would arise whenever the evidence is inadequate to develop a reliable estimate of the but for level. While that may be infrequent—given the array of information sources described above—it cannot be ruled out.²¹² In the second situation, the but for level is significantly but not substantially below the current level. Where that is true, a court could not infer monopoly power from the but for level, since monopoly power requires a substantial amount of market power.²¹³ The defendant could still be liable for monopolization nonetheless, because a firm with monopoly power violates Section 2 of the Sherman Act so long as its conduct makes a *significant* contribution to the maintenance of its power.²¹⁴ Thus, the prevention of a significant price decline, though not enough

²⁰⁹ *Id.*

²¹⁰ *United States v. Microsoft Corp.*, 253 F.3d 34, 58 (D.C. Cir. 2001) (citation omitted).

²¹¹ *See infra* note 250 and accompanying text.

²¹² One situation in which the but for level may be difficult to determine was pointed out to me by Doug Ross, a Partner at Davis Wright Tremaine who specializes in antitrust law. It is common for an insurance company to negotiate an aggregate payment to a hospital system based on the total number of patients the insurer expects to supply to the system. The system can then set whatever reimbursement rates it chooses for individual services, so long as the result for the patient population as a whole is the negotiated aggregate payment. In this setting, new competition may reduce the aggregate payment to the system, but it might be impossible to predict the impact on the reimbursement rate for a particular service. Determining the but for level of the *aggregate* payment, however, may be relatively easy, since that is effectively the price the hospital system charges the insurance company. That price, like other but for prices, can be identified using the kinds of information described in the text.

²¹³ *See supra* note 13.

²¹⁴ *United States v. Dentsply Int’l, Inc.*, 399 F.3d 181, 187 (3d Cir. 2005) (“Unlawful maintenance of a monopoly is demonstrated by proof that a defendant has engaged in anti-competitive conduct that reasonably appears to be a significant contribution to maintaining

to show monopoly power using the but for benchmark, may be enough to establish monopolization, if the firm can otherwise be shown to possess monopoly power.

Both situations call for other evidence of power. The plaintiff could supply that evidence by measuring the elasticity of the defendant's demand curve²¹⁵ or by establishing that its price significantly or substantially exceeds marginal cost.²¹⁶ In addition, or alternatively, the plaintiff could offer evidence sufficient to define a relevant market and calculate the defendant's share of that market. This approach, the traditional approach to the determination of market power, is the subject of Part II.

II. THE MARKET DEFINITION/MARKET SHARE PARADIGM

Courts customarily measure market power and monopoly power by defining a relevant market and calculating the market share of the leading firm in that market.²¹⁷ This method is the ordinary, if not compulsory, first step in power analysis,²¹⁸ and although courts say it can be avoided with direct evidence of power,²¹⁹ they rarely, if ever, rely exclusively on direct evidence and skip market definition altogether.²²⁰ As an analytical tool, however, the market definition/market share paradigm is routinely criticized,²²¹ even described as

monopoly power.”); *Microsoft*, 253 F.3d at 79 (stating that Section 2 liability may be established if exclusionary conduct “is reasonably capable of contributing significantly to a defendant’s continued monopoly power . . .”).

²¹⁵ See generally Werden, *supra* note 14.

²¹⁶ If so, the defendant should be able to rebut by showing that its price did not persistently exceed average total cost (including the cost of capital). See *supra* Section I.B.4 (describing burdens of proof when courts apply cost benchmarks).

²¹⁷ See *supra* notes 27-29 and accompanying text.

²¹⁸ See *supra* note 29.

²¹⁹ See *Broadcom Corp. v. Qualcomm Inc.*, 501 F.3d 297, 307 (3d Cir. 2007) (stating that “monopoly power may be proven through direct evidence of supracompetitive prices” or may be inferred from “the structure and composition of the relevant market”); *Harrison Aire, Inc. v. Aerostar Int’l, Inc.*, 423 F.3d 374, 381 (3d Cir. 2005) (same).

²²⁰ See *United States v. Microsoft*, 253 F.3d 34, 50-51 (D.C. Cir. 2001) (“Because such direct proof is only rarely available, courts more typically examine market structure in search of circumstantial evidence of monopoly power.”); Gregory J. Werden, *Why (Ever) Define Markets? An Answer to Professor Kaplow*, 78 ANTITRUST L.J. 729, 733 n.17 (2013) (“[T]he courts typically find insufficient any direct evidence of market power.”). Indeed, one court stated that even if there were direct economic evidence of power, the plaintiff would still have to define a market, at least roughly. See *Republic Tobacco Co. v. N. Atl. Trading Co., Inc.*, 381 F.3d 717, 737 (7th Cir. 2004) (declaring that “rough contours of a relevant market” must be identified, since “economic analysis is virtually meaningless if it is entirely unmoored from at least a rough definition of a product and geographic market”).

²²¹ See Lemley & McKenna, *supra* note 18, at 2059. For further criticisms, see *supra* notes 28-30 (citing articles by Kaplow, Hovenkamp, and Schmalensee).

“entirely bankrupt.”²²² Section A briefly reviews the principal grounds for the attack. Despite this critique, market definition continues to be the standard approach, partly due to the weight of precedent, but also due to its value as a narrative device. Section B discusses this benefit. Section C examines how the paradigm operates in practice. It shows that courts commonly supplement their structural analysis with some economic evidence of power—such as price increases not warranted by cost increases or price differences not justified by cost differences—and often reach sensible results. But this approach is inefficient. Courts can usually determine the presence or absence of power from the likely anticompetitive effects of the challenged conduct—and define the market accordingly.

A. Critique

The main critique of the market definition/market share paradigm is that it is binary—products and geographic areas are either inside or outside of the relevant market—when the truth usually is that certain products or areas should be partially inside and partially outside the market.²²³ Suppose, for example, that Product B is an imperfect substitute for Product A, the defendant’s product. If Product B is excluded from the relevant market, it indicates that Product B imposes no constraint on the defendant’s pricing power. But if Product B is included in the relevant market, it suggests that Product B completely constrains the defendant’s ability to raise Product A’s price. Neither conclusion is correct.²²⁴ As a result, in either market, the market share of Product A is an inaccurate measure of market power. In the narrow market, Product A’s one hundred percent market share overstates its power; in the broader market, A’s smaller share understates its power.²²⁵

²²² Kaplow, *supra* note 33, at 123 (“The market definition/market share paradigm is not merely clumsy and sometimes misleading. Rather, it is entirely bankrupt.”); Kaplow, *supra* note 12, at 440 (“[T]he market definition process should be abandoned.”).

²²³ See ELHAUGE, *supra* note 33, at 257 (“Market share conclusions are distorted by the all-or-nothing judgments used to define markets.”); Hovenkamp, *supra* note 32, at 2146 (“The market definition process is inherently binary in the sense that a product is either inside or outside of the market. But in a product differentiated market, both conclusions are commonly ‘wrong.’”).

²²⁴ See Frank H. Easterbrook, *The Limits of Antitrust*, 63 TEX. L. REV. 1, 22 (1984) (“Usually the search for the ‘right’ market is a fool’s errand.”); Hovenkamp, *supra* note 32, at 2146; Werden, *supra* note 220, at 736-37 (“[S]ettling on *the* relevant market is difficult in such cases, and any choice is problematic. . . . [T]he delineated market might be too small or too large but not just right.”).

²²⁵ If Product B is very different from Product A or if Product B is essentially identical to Product A, the ambiguities of market definition disappear. Thus, if there are no close substitutes for the defendant’s product, the relevant market can be quite easy to determine, as several cases in Section II.C illustrate.

Precisely measuring A's power requires confining the market to Product A alone, measuring the elasticity of demand of Product A (which takes into account the constraining effect of Product B), determining the defendant's share of that market (assuming there are other producers of Product A), and calculating the elasticity of supply of those other producers.²²⁶ But this methodology requires two restrictive assumptions. First, it assumes that the measure of the competitive level is marginal cost, not full economic cost,²²⁷ and not either of the price level benchmarks. Second, it assumes that all other producers of Product A are price takers, too small to affect the market price by their own output decisions.²²⁸ It posits, in other words, that the relevant market consists of a dominant firm and a competitive fringe.

Thus, even if the goal is simply to determine a firm's ability to price above marginal cost, market share alone is never enough. A court must also know the market elasticity of demand and the supply elasticity of other producers.²²⁹ Moreover, if other producers are large enough to affect the market price, then the firm's market power (measured by this benchmark) depends on their reactions to its prices, and its reactions to their prices; thus, the market power question is no longer unilateral, but multilateral—an issue that may be much more complicated.²³⁰ Finally, if a court does broaden the market to include Product B as well as Product A, because, for example, the defendant produces both products or proposes to acquire a supplier of Product B, no formula relates the defendant's share in the broader market to its ability to elevate price above marginal cost.²³¹ In a heterogeneous product or geographic market, the significance of market share depends on multiple factors.

In short, the market share calculated by the market definition/market share paradigm may be quite misleading, even if the market is confined to a single product and the competitive benchmark is marginal cost.²³² If the market

²²⁶ See Kaplow, *supra* note 12, at 452.

²²⁷ See *supra* note 34 and accompanying text (describing economic model).

²²⁸ See Kaplow, *supra* note 12, at 451 (noting that "the rivals are assumed to act as price-takers").

²²⁹ More precisely, a court would have to know these elasticities *either* to define the market in the first place *or* to interpret the significance of a particular market share in a market defined with less rigorous evidence.

²³⁰ See, e.g., MERGER GUIDELINES, *supra* note 37, § 7.2 (describing various factors relevant to determining whether market is vulnerable to coordinated supracompetitive pricing).

²³¹ See Kaplow, *supra* note 33, at 112 ("[T]here exists no valid economic way to infer the firm's market power in this broader market, using its market share in the market or otherwise."); see also Kaplow, *supra* note 13, at 1319 (asserting that only rigorous way to infer market power from market share is to stick to homogenous product market).

²³² See AREEDA-HOVENKAMP TREATISE, *supra* note 13, at 135-36 ("[T]he power of a firm with a dominant market share might be very high or negligible, depending upon the intensity of demand, the responsiveness of existing rivals, and the height of barriers to entry by other firms."). The power of the firm's customers may also affect its ability to charge a price

includes differentiated products, the problems are magnified. If the competitive benchmark were average total cost (measured economically), the market definition/market share paradigm would be even less useful. A firm with a large share of a well-defined market may be able to price substantially above marginal cost, but that does not guarantee economic profits. The firm may need a high price-cost margin to fund the R&D and marketing that make its product attractive.

B. *Benefits*

The market definition/market share paradigm persists despite its drawbacks in large part because of precedent. Given the repeated declarations by the Supreme Court and lower courts that market definition and market share are the required or ordinary tools for determining power,²³³ a federal judge is highly unlikely to dispense with them. But the market definition/market share paradigm also has benefits. Most importantly, it provides a simple, understandable description of an antitrust case.²³⁴ The relevant market identifies the competitive arena that matters and the defendant's market share tells you whether it is a major or minor player in that arena. If you are told that the relevant market is the sale of artificial teeth in the U.S. and that Dentsply has had a seventy-five percent share of that market for over a decade, you immediately think of a monopolist.²³⁵ If you are told that Marathon accounted for "only 4.3 percent of total U.S. gasoline sales,"²³⁶ you think of a firm with no market power.

This narrative force does not justify the market definition/market share paradigm. If the market definition is incorrect, it is no help to have it.²³⁷ A court does not need market share, moreover, to provide a clear description of a defendant's power. The court could say that the defendant's price is twice its marginal cost, that its rate of return is extraordinary, or that its conduct prevented its price from falling twenty percent. Nor does the tribunal have to define a market to depict entry conditions. It might note, for example, that the defendant

significantly above marginal cost. See MERGER GUIDELINES, *supra* note 37, § 8; John B. Kirkwood, *Powerful Buyers and Merger Enforcement*, 92 B.U. L. REV. 1485, 1503 (2012).

²³³ See *supra* note 30; see also Kaplow, *supra* note 33, at 153 ("All [guidelines, court opinions, legal treatises, or other sources] state that there is a market power requirement, and all denominate it in terms of [market share].").

²³⁴ See Werden, *supra* note 220, at 730 ("Because the relevant market identifies the competitive process at issue, alleging the relevant market can bring clarity and power to the narrative.").

²³⁵ See *United States v. Dentsply Int'l, Inc.*, 399 F.3d 181, 185, 188 (3d Cir. 2005).

²³⁶ *Sheridan v. Marathon Petroleum Co. LLC*, 530 F.3d 590, 595 (7th Cir. 2008) ("That is no one's idea of market power.").

²³⁷ See Lemley & McKenna, *supra* note 18, at 2098 n.187 ("[A]lthough Werden is correct that we use market definition to . . . provid[e] a compelling narrative for a jury and a basis for assigning burdens of proof, none of those things are desirable if the market definition is itself a flawed analysis.").

enjoys economies of scale that are so great that no other firm could offer a similar product and compete effectively. Thus, it is possible to tell a good antitrust story without a market and market shares. Yet there is no gainsaying the advantage of these tools. By identifying a market, recounting the defendant's high share of it, describing the walls that surround it, and delineating the steps the defendant took to keep a rival out, one can quickly tell a powerful antitrust tale.

Both precedent and narrative force, then, make it unlikely that the market definition/market share paradigm will disappear anytime soon. That is not a problem, though, if the paradigm correctly portrays the defendant's power. And that is most likely if the court first determines market power using one of the price level benchmarks and then defines a market based on the results of that analysis.²³⁸ Part III explains how this can be done.

This would not mean that market definition and market share would play no role in applying the price level benchmarks. The standard method of market definition, the Hypothetical Monopolist Test, incorporates the prevailing price level as its own baseline.²³⁹ Thus, in cases using the prevailing level benchmark, the ordinary method of market definition would be the prime tool for determining whether the defendant can exercise market power. In cases involving the maintenance of power, however, where the proper benchmark is the but for level, the Hypothetical Monopolist Test is generally unhelpful, because it is designed to detect the power to increase prices—not the power to block price reductions.²⁴⁰ But in determining the defendant's power to forestall price reductions, a simple form of market definition may be useful. Suppose that Microsoft wants to convince Hewlett Packard ("HP") to load Internet Explorer rather than Netscape Navigator on HP computers. Microsoft could pay HP for this exclusionary arrangement. If so, Microsoft's power to exclude would depend on whether the necessary payment was feasible and profitable. But if Microsoft resorts to its leverage instead, threatening to withhold or delay Windows unless HP agrees, Microsoft's power to exclude would depend on HP's ability to substitute other operating systems. If Microsoft has an overwhelming share of the operating system market, HP's other options would be very limited. For this reason, the market definition/market share paradigm may be helpful in determining the power to exclude.²⁴¹ But it will likely be easy to define the relevant market for that purpose.²⁴²

²³⁸ See Kaplow, *supra* note 12, at 440 (noting that one can avoid error by adopting "a purely results-oriented market definition stratagem under which one first determines the right legal answer and then announces a market definition that ratifies it").

²³⁹ See *supra* Section I.C (explaining methodology).

²⁴⁰ See *supra* Section I.D (describing limitation).

²⁴¹ See Elhauge, *supra* note 14, at 336; Krattenmaker, Lande & Salop, *supra* note 13, at 260.

²⁴² For example, if the issue is whether the defendant had the power to induce a supplier to raise its price to the defendant's competitors, the most important question is whether the

C. *Recent Exclusion Cases*

Recent exclusion cases rely heavily on the market definition/market share paradigm, beginning their analysis with it and focusing most of their attention on it. But sensing its weakness, they almost invariably bolster it with some economic evidence, such as unjustified price increases or price differences.²⁴³ While this approach (“market definition plus”) usually produces plausible results, courts rarely push the economic analysis all the way—they never determine, for example, whether the defendant was making economic profits—and they never use the but for benchmark. Were they to employ it, they could increase the speed and reduce the cost of antitrust enforcement.

In *Microsoft*, the D.C. Circuit began in the conventional way. It canvassed potential substitutes, ruled that none of them were close,²⁴⁴ and agreed with the trial judge that the relevant market was “the licensing of all Intel-compatible PC operating systems worldwide.”²⁴⁵ This conclusion meant that Microsoft’s market share was ninety-five percent,²⁴⁶ far above the ordinary threshold for monopoly power. But the court was unwilling to decide the issue solely on the basis of Microsoft’s market share. The company contended that it could not—and did not—exert monopoly power, whatever market share it supposedly possessed.²⁴⁷ To test that argument, the court did not compare Microsoft’s price to the standard benchmark—marginal cost—presumably because Microsoft could not have survived had it set its price equal to marginal cost. As counsel for the company noted: “Marginal costs are essentially zero.”²⁴⁸ Instead, the court suggested that Microsoft was charging more than full economic cost.²⁴⁹ The court did not determine this level, though; it implied that Microsoft was earning monopoly profits because it had failed to show otherwise.²⁵⁰

defendant purchases more from that supplier than its competitors. *See* Krattenmaker, Lande & Salop, *supra* note 13, at 259 (stating that in determining firm’s power to exclude, courts should look at “the excluding firm’s relative market share”). To answer that question, a court would not have to delve into the substitutability issues that frequently plague market definition—whether the defendant’s product is sufficiently different from other products that it can charge a price significantly above marginal cost. *See* AREEDA-HOVENKAMP TREATISE, *supra* note 13, at 236 (noting that potential to foreclose does not depend principally on “the defendant’s present ability to price above marginal cost”).

²⁴³ *See* Crane, *supra* note 42, at 39 (noting that courts compensate for imprecision of market definition by considering other evidence).

²⁴⁴ *See* United States v. Microsoft Corp., 253 F.3d 34, 52-54 (D.C. Cir. 2001).

²⁴⁵ *Id.* at 52 (citation omitted).

²⁴⁶ *Id.* at 51.

²⁴⁷ *See id.* (summarizing Microsoft’s contentions on appeal that direct proof revealed its lack of monopoly power).

²⁴⁸ *Id.* at 79.

²⁴⁹ *Id.* at 57.

²⁵⁰ In response to the company’s claim that “it never charged the short-term profit-maximizing price for Windows,” the court retorted: “Microsoft never claims that it did not

The D.C. Circuit also relied on two aspects of the company's conduct, both significant because they utilize the logic of the price level benchmarks. First, "the company set the price of Windows without considering rivals' prices."²⁵¹ This implies that Microsoft had the power to raise its price above the *prevailing* level even if competitors did not follow.²⁵² Second, the trial court found that "Microsoft's pattern of exclusionary conduct could only be rational 'if the firm knew that it possessed monopoly power.'"²⁵³ Now, this might merely mean, as noted earlier, that the company knew it was making monopoly profits. But it could also mean that Microsoft knew it was pricing above the but for level—that if it did not exclude Netscape, the price of Windows would fall substantially. After all, in his famous "Internet Tidal Wave" memo, Bill Gates warned that Netscape's goal was to turn Windows into a commodity, which would sharply depress its price.²⁵⁴

Like *Microsoft*, the *Dentsply* opinion begins with market definition and then turns to economic evidence.²⁵⁵ The court found that the relevant market was the sale of artificial teeth in the United States and that Dentsply had occupied a "dominant position" in that market for over a decade.²⁵⁶ The court also cited evidence that Dentsply's prices exceeded both cost benchmarks. First, Dentsply had a reputation for aggressive price increases,²⁵⁷ which it would make whether or not competitors followed.²⁵⁸ This indicated that Dentsply's products were differentiated from those of its rivals, enabling it to price above marginal cost. Second, its profit margins had increased in recent years,²⁵⁹ showing that the gap between price and marginal cost had widened. Third, its artificial tooth business was characterized as a "cash cow," whose profits were diverted to other parts of the enterprise.²⁶⁰ The diversion implied that its artificial tooth prices exceeded the full economic costs of that business. Finally, experts for both sides testified

charge the long-term monopoly price." *Id.* Presumably this was the price that maximized its long run economic profits. In effect, the court shifted the burden to Microsoft on the economic profits issue and held that the company had not met it.

²⁵¹ *Id.* at 58.

²⁵² This point, however, creates a puzzle. If the company paid no attention to rivals in setting prices, what constrained its pricing? Why were its prices not higher? The D.C. Circuit did not address these questions.

²⁵³ *Microsoft*, 253 F.3d at 58 (internal citation omitted).

²⁵⁴ See ANDREW I. GAVIL & HARRY FIRST, *THE MICROSOFT ANTITRUST CASES* 51 (2014) (quoting Memorandum from Bill Gates, CEO, Microsoft, to Exec. Staff and Direct Reports (May 26, 1995), available at <https://www.justice.gov/sites/default/files/atr/legacy/2006/03/03/20.pdf> [<https://perma.cc/FHQ9-2EGQ>]).

²⁵⁵ *United States v. Dentsply Int'l, Inc.*, 399 F.3d 181, 187-91 (3d Cir. 2005).

²⁵⁶ *Id.* at 185, 188.

²⁵⁷ *Id.* at 185.

²⁵⁸ *Id.* at 191.

²⁵⁹ *Id.*

²⁶⁰ *Id.* at 185.

that if Dentsply allowed its dealers to carry rivals' products, prices would fall.²⁶¹ To the court, this was simply additional evidence that Dentsply's prices were above its costs. But it had independent significance: it showed that Dentsply was pricing above the but for level. If this level had been substantially below its current prices, it would have established monopoly power directly, without market definition or cost analysis.

In *McWane*, as in the two prior cases, the court relied on both structural evidence and some economic evidence to determine that McWane possessed monopoly power.²⁶² But had the court utilized but for analysis, it could have found monopoly power more quickly. Again, market definition was not difficult. The American Recovery and Reinvestment Act of 2009 had authorized six billion dollars to fund water infrastructure projects but had restricted spending to projects with domestically manufactured pipe fittings.²⁶³ Since McWane charged more on these projects than on projects where it faced import competition,²⁶⁴ the Eleventh Circuit readily upheld the FTC's finding that the relevant market was the sale of "domestically manufactured fittings for use in . . . projects with domestic-only specifications."²⁶⁵ McWane's share of this market, according to the FTC, was at least ninety percent, a statistic accepted by the court.²⁶⁶ The court also accepted the FTC's finding that McWane's profit margins were higher on domestic fittings than on imported fittings.²⁶⁷ Because both prices and profit margins were higher, McWane was engaged in economic price discrimination, strong evidence that McWane's domestic prices were above marginal cost.²⁶⁸ The court did not ask, though, whether McWane was

²⁶¹ *Id.* at 190-91.

²⁶² *See* *McWane, Inc. v. FTC*, 783 F.3d 814, 830-32, 842 (11th Cir. 2015) (resting power determination on McWane's market share, entry barriers in domestic fittings market, and McWane's pricing/profits of domestic fittings compared to non-domestic fittings).

²⁶³ *Id.* at 820 n.1 (citing American Recovery and Reinvestment Act of 2009, Pub. L. No. 111-5, 123 Stat. 115).

²⁶⁴ *Id.* at 829 (explaining that "ALJ found that McWane charged approximately 20%-95% more for its domestic fittings for domestic-only projects than for open-specification projects").

²⁶⁵ *See id.* at 828-30.

²⁶⁶ *Id.* at 823 (stating that "[t]he Commission . . . found that McWane had monopoly power in that market, with 90-95% market share from 2010-11" (citing *McWane, Inc.*, 2014-1 Trade Cas. (CCH) ¶ 78670, 2014 WL 556261, at *15 (F.T.C. Jan. 30, 2014))).

²⁶⁷ *See id.* at 832 ("After Star's entry, McWane continued to sell domestic fittings for domestic-only products at prices that 'earned significantly higher gross profits than for non-domestic fittings, which faced greater competition.'" (quoting *McWane, Inc.*, 2014 WL 556261, at *17)).

²⁶⁸ *See supra* Section I.A.3 (explaining inference). The Eleventh Circuit also pointed out that McWane raised its domestic fittings prices soon after Star entered. *McWane*, 783 F.3d at 838-39. This price increase, however, did not show that McWane had market power, since it could have been a response to the sharp increase in demand created by the Recovery Act. If

pricing above average total cost (including the cost of capital). Since domestic production required large capital costs,²⁶⁹ McWane may not have been earning supracompetitive profits.

But regardless of whether McWane's profits were supracompetitive, its exclusionary conduct prevented prices from falling sharply. McWane had been the only manufacturer of domestic fittings,²⁷⁰ and when Star entered in 2009 to take advantage of the stimulus spending, McWane promptly adopted an exclusive dealing program, which limited Star's penetration to ten percent.²⁷¹ Without this exclusive dealing, Star estimated, it would have tripled its market share in two years.²⁷² Star could not have taken this much share from McWane without provoking a price war. Indeed, a McWane executive forecast that Star's unrestricted growth would "drive profitability" from its domestic fittings business.²⁷³ Another wrote that "'the domestic market [might] get[] creamed from a pricing standpoint' should Star become a 'domestic supplier.'"²⁷⁴ By suppressing Star, in short, McWane maintained domestic fittings prices substantially above the but for level—direct evidence of monopoly power.

Sheridan v. Marathon Petroleum Co.,²⁷⁵ was a very different case. As the following discussion makes clear, Marathon was not a dominant firm like Microsoft, Dentsply, or McWane. The issue was not whether it had monopoly power but whether its brand was sufficiently differentiated from other brands that it had market power. Sheridan alleged that Marathon had wielded its "appreciable economic power" to force its franchise dealers to use its credit card processing services.²⁷⁶ But Sheridan had not defined a relevant market or asserted that Marathon had a substantial share of it.²⁷⁷ The Seventh Circuit, in an opinion written by Judge Posner, found these defects fatal and declared: "'Not even the most zealous antitrust hawk has ever argued that Amoco gasoline, Mobil gasoline, and Shell gasoline'—or, we interject, Marathon gasoline—'are three [with Marathon, four] separate product markets.'"²⁷⁸ If the relevant market

McWane could not meet this demand with its existing capacity, it may have raised prices to ration its output. If so, the higher profits that followed would be scarcity rents, not supracompetitive returns. *See supra* Section I.B.2 (describing distinction).

²⁶⁹ *See McWane*, 783 F.3d at 832.

²⁷⁰ *Id.* at 820.

²⁷¹ *Id.* at 820-23 (discussing McWane's program, Star's market penetration, and FTC's conclusion that program was unlawful).

²⁷² *Id.* at 822.

²⁷³ *Id.* at 841.

²⁷⁴ *Id.* at 821.

²⁷⁵ 530 F.3d 590 (7th Cir. 2009).

²⁷⁶ *Id.* at 592, 595.

²⁷⁷ *Id.* at 594-95.

²⁷⁸ *Id.* at 595 (quoting *Generac Corp. v. Caterpillar, Inc.*, 172 F.3d 971, 977 (7th Cir. 1999)).

was all gasoline sold in the U.S., then Marathon's share was a tiny 4.3%²⁷⁹—“no one's idea of market power,”²⁸⁰ according to Judge Posner. He recognized that product differentiation could confer market power but rejected that idea here. First, Sheridan had not claimed that the market is characterized by “monopolistic competition,” an instance where “minor product differences (or the kind of locational advantage that a local store, such as a barber shop, might enjoy in competing for some customers) limit the substitutability of otherwise very similar products”²⁸¹ Moreover, even if Sheridan had advanced that claim, “the exploitation of the slight monopoly power thereby enabled does not do enough harm to the economy to warrant trundling out the heavy artillery of federal antitrust law.”²⁸²

While Judge Posner was correct that Sheridan had not demonstrated market power, his dismissal of that possibility was too quick. If no gasoline brand has market power—if all brands tightly constrain each other's prices—then gasoline prices should be identical or nearly identical, but they are not.²⁸³ Further, scholars have shown that individual brands possess significant pricing discretion, even if they compete with products that are functionally similar.²⁸⁴ Judge Posner's opinion, therefore, reflects a judicial tendency that Lemley and McKenna have pointed out and that Hovenkamp also believes exists—a tendency to define markets too broadly.²⁸⁵ But for analysis would avoid this bias.

²⁷⁹ *Id.*

²⁸⁰ *Id.*

²⁸¹ *Id.* For the classic discussions of monopolistic competition, see EDWARD HASTINGS CHAMBERLIN, *THE THEORY OF MONOPOLISTIC COMPETITION: A RE-ORIENTATION OF THE THEORY OF VALUE* (7th ed. 1958); JOAN ROBINSON, *THE ECONOMICS OF IMPERFECT COMPETITION* (1950).

²⁸² *Sheridan*, 530 F.3d at 595.

²⁸³ See Lemley & McKenna, *supra* note 18, at 2084 n.132 (citing studies showing retail price differences among gasoline brands of eleven to eighteen cents a gallon).

²⁸⁴ See generally Deven R. Desai & Spencer Waller, *Brands, Competition, and the Law*, 2010 B.Y.U. L. REV. 1425 (2010); Lemley & McKenna, *supra* note 18. Responding to *Marathon*, Professors Desai and Waller write: “The ‘slight’ market power conferred by a location advantage in a particular neighborhood that the court mocks says nothing, however, about the more real market power that a successful brand can confer.” Desai & Waller, *supra* at 1474. Lemley and McKenna point out that an individual brand can generate such strong preferences that it belongs in a market by itself:

Neuroscience research shows that brands convey emotional content as well as information about product characteristics When preferences created by that information or those attachments are substantial and rivals cannot readily attain the same status, then it is simply wrong to say that the brand does not constitute its own relevant market.

Lemley & McKenna, *supra* note 18, at 2081.

²⁸⁵ See Hovenkamp, *supra* note 32, at 2146 (agreeing that Lemley and McKenna are probably right that “product differentiation may call for radically narrower market definitions than antitrust currently employs and perhaps even the conclusion that single brands in product

Three other cases illustrate the advantages of but for analysis. In *E.I. du Pont de Nemours & Co. v. Kolon Industries, Inc.*,²⁸⁶ Kolon alleged that the relevant geographic market was the United States.²⁸⁷ du Pont asserted, and the district court held, that the market should also encompass the two countries where du Pont's competitors for U.S. sales were headquartered.²⁸⁸ The Fourth Circuit reversed after an extensive analysis of traditional methodologies for defining a geographic market.²⁸⁹ The court could have resolved the power issue more quickly by asking whether du Pont's exclusion of the plaintiff had prevented U.S. prices from falling substantially. In *Geneva Pharmaceuticals*, the district court ruled that the relevant product market included both brand name warfarin (Coumadin) and generic warfarin.²⁹⁰ The court of appeals reversed, but only after addressing six factors relevant to market definition.²⁹¹ Had the court used the but for benchmark, one of these factors would have been decisive. After the plaintiff entered generic production, the price of the defendant's generic product fell substantially while the price of Coumadin hardly moved.²⁹² In *PepsiCo*, both the district court and the court of appeals concluded that the market included fountain syrup distributed by bottlers as well as syrup distributed by IFDs.²⁹³ Again, this conclusion rested on multiple indicia of product market definition.²⁹⁴ But had the courts accepted PepsiCo's evidence that it could deliver syrup more cheaply through IFDs[em dash]and that if Coke had not blocked its access to IFDs, it would have lowered prices to customers[em dash]the courts could have quickly concluded that the market was limited to IFD distribution.

These three decisions, like those reviewed earlier, indicate that the but for benchmark would typically provide a simpler and more efficient method of determining market power or monopoly power than the traditional analysis. Using this benchmark, a court need not determine whether Windows was sufficiently differentiated from another operating system to warrant a separate market, or whether Microsoft had engaged in persistent economic price discrimination, or whether the company's investment in Windows had generated supracompetitive profits. If Microsoft's enormous share of licenses to PC manufacturers was enough to induce them to exclude a competitor, and if that

differentiated markets constitute 'monopolies,'" because "courts have [often] defined differentiated markets too broadly, ignoring the fact that many of the goods that were included were not capable of holding the defendant's prices to cost").

²⁸⁶ 637 F.3d 435 (4th Cir. 2011).

²⁸⁷ *Id.* at 439, 444.

²⁸⁸ *See id.* at 445.

²⁸⁹ *See id.* at 441-48.

²⁹⁰ *See Geneva Pharm. Tech. Corp. v. Barr Lab. Inc.*, 386 F.3d 485, 496 (2d Cir. 2004).

²⁹¹ *See id.* at 496-99.

²⁹² *Id.* at 497 ("When other generic competitors entered the market, Barr's prices dropped substantially, but Coumadin's remained virtually unchanged and even rose slightly.").

²⁹³ *PepsiCo, Inc. v. Coca-Cola Co.*, 315 F.3d 101, 106, 109 (2d Cir. 2002).

²⁹⁴ *See id.* at 105-07.

conduct was likely to prevent a substantial drop in the price of Windows, it would demonstrate monopoly power.

In short, courts ought to place much more weight on the but for benchmark. Part III combines this conclusion with the other tools discussed above and proposes a new approach for determining market power and monopoly power—an approach that would reduce the costs and improve the accuracy of antitrust enforcement.

III. THE PROPOSED APPROACH

This approach, outlined in Section A, would place primary emphasis on the price level benchmarks, supplement them where necessary with the cost benchmarks or direct measurement of demand elasticity, and infer the relevant market from the results of the analysis. Section B illustrates the approach by applying it to the classic *Cellophane* case.²⁹⁵ Section C addresses possible objections to the but for benchmark.

A. Elements

The ultimate question in an antitrust case is whether the challenged conduct is likely to reduce competition. To answer that question in the affirmative, a court must find (or presume) that the conduct is likely to create market power, since without an increase in market power, competition could not be reduced and consumers could not be hurt.²⁹⁶ The market power that matters in an antitrust case, therefore, is the market power the challenged conduct would create. As a result, a court should determine market power by asking whether and how much the conduct would produce. Likewise, a court should identify the competitive level by the price level benchmarks, because they measure the effects of the challenged conduct, “the true core of antitrust.”²⁹⁷ The cost benchmarks, in contrast, focus on whether the defendant’s price exceeded its costs, regardless of whether the challenged conduct contributed to that result.²⁹⁸

1. Type of Case

Under this approach the threshold issue is which price level benchmark applies. If Whole Foods proposes to buy Wild Oats and the government alleges the acquisition would produce higher prices, the correct benchmark is the prevailing level—the price level that exists prior to the acquisition. The market power question is not whether Whole Foods is pricing above cost but whether

²⁹⁵ United States v. E.I. du Pont de Nemours & Co. (*Cellophane*), 351 U.S. 377 (1956).

²⁹⁶ In a buy-side case, where the victims are powerless suppliers, the challenged conduct must create monopsony power.

²⁹⁷ Salop, *supra* note 38, at 188.

²⁹⁸ A court may not be able to resolve the power issue by using the price level benchmarks. See *supra* Section I.D.4 (discussing exceptions). But they are the place to start.

the acquisition is likely to enable Whole Foods to raise prices above the pre-merger level. If, instead, Wild Oats is preparing to enter a metropolitan area in which Whole Foods is the only premium, organic, and natural foods supermarket, and Whole Foods blocks that entry through exclusionary conduct, the appropriate benchmark is the but for level. The market power issue is whether Whole Foods's conduct prevented prices from falling significantly. If it did, then Whole Foods's behavior elevated prices significantly above the but for level—the level that unrestricted competition would have produced.²⁹⁹

In the paragraphs that follow, the discussion of each type of case distinguishes the price movements required to establish market power from those required to prove monopoly power. This is unavoidable, since some antitrust offenses require monopoly power or its prospect, while others can be established by showing a lesser degree of power.³⁰⁰ Because the price level benchmarks measure power by price movements, the size of those movements must be specified, just as the traditional paradigm requires courts to state the size of the necessary market shares.³⁰¹

2. Prevailing Level Case

If the challenged conduct is likely to enable the defendant, acting alone or in parallel with other firms, to raise the price of a product or service significantly above the prevailing level, the court should find that the conduct is likely to create market power. Likewise, if the alleged conduct is likely to enable the defendant to raise price substantially above the prevailing level, the court should find monopoly power. To make these tests concrete, let me suggest following the federal government's traditional approach to merger analysis that a "significant" price increase should be at least five percent and a "substantial" increase should be at least ten percent.³⁰² These numbers are tentative—subject

²⁹⁹ The hypotheticals in this Section are based on *FTC v. Whole Foods Market, Inc.*, 548 F.3d 1028 (D.C. Cir. 2008) because the market definition issue in it was especially complex. There was substantial evidence that the relevant product market was "premium, natural, and organic supermarkets," but there was also considerable evidence that the market included all supermarkets. *See Id.* at 1037. The but for benchmark would normally allow courts to avoid these intricate issues of product substitutability.

³⁰⁰ For example, Section 2 of the Sherman Act prohibits monopolization and attempted monopolization, while Section 1 prohibits agreements in restraint of trade whether or not they result in monopoly power. *See* 15 U.S.C. §§ 1-2 (2012). At the same time, Section 1 often requires proof of market power. *See supra* note 12 (quoting AREEDA-HOVENKAMP TREATISE).

³⁰¹ *See supra* note 237 and accompanying text.

³⁰² *See* U.S. DEP'T OF JUSTICE & FED. TRADE COMM'N, COMMENTARY ON THE HORIZONTAL MERGER GUIDELINES 5 (2006) (stating that "Agencies generally use a price increase of five percent" to determine whether hypothetical monopolist could profitably impose "significant" price increase); ROGER D. BLAIR & JEFFREY L. HARRISON, MONOPSONY IN LAW AND ECONOMICS 66 n.54 (2010) ("The hypothetical 5-10 percent price change is how the

to revision as courts gain experience with the proposed approach. They are also approximate and should vary with the circumstances, especially the number of customers affected and the duration of the price increase. For example, a nationwide increase of three cents a gallon in the average price of gasoline should be considered “significant,” even though it would be less than a five percent increase, because millions of consumers would be injured. Similarly, an eight percent price increase should be regarded as “substantial” when it is set just below the price that is likely to induce entry and thus may last many years.

Under this approach, a court need not determine whether the prevailing level is at or above a cost benchmark. If the challenged conduct is likely to raise price significantly above the prevailing level, it would create market power.³⁰³ Thus, Whole Foods acquiring Wild Oats would create market power if it is likely to raise prices at Whole Foods, Wild Oats, or both by five percent above the prevailing level, whether or not Whole Foods had been pricing above cost. Similarly, if Whole Foods drives Wild Oats out of business and increases prices by five percent, it would show market power.

The relevant market would follow. If the evidence establishes that the challenged conduct would enable the defendant to raise the price of a particular product significantly above the prevailing level, the relevant product market would be the sale of that product. Thus, if the acquisition of Wild Oats would enable Whole Foods to raise the prices of premium, natural, and organic foods at both chains by five percent, even if the prices of similar items at conventional supermarkets did not increase, the relevant product market would be the sale of premium, natural, and organic foods at supermarkets specializing in the sale of those products.³⁰⁴

The ability of the defendant to raise prices above the prevailing level could be evaluated through the Hypothetical Monopolist Test; direct measurement of

Department of Justice and the Federal Trade Commission have interpreted the ‘small but significant’ language in the Merger Guidelines.”).

³⁰³ A defendant may be able to raise price substantially above the prevailing level by introducing a new product. While such a price increase would show monopoly power, it would not trigger antitrust liability, since a firm may acquire monopoly power by outperforming its rivals. *See, e.g.,* United States v. Aluminum Co. of Am. (*Alcoa*), 148 F.2d 416, 430 (2d Cir. 1945) (declaring that it is contrary to “prime object” of Sherman Act to condemn firm that gains monopoly “merely by virtue of . . . superior skill, foresight and industry”); 21 CONG. REC. 3152 (Apr. 8, 1889) (statement of Sen. Hoar) (“[A] man who merely by superior skill and intelligence . . . got the whole business because nobody could do it as well as he could was not a monopolist.”); Hillary Greene, *Muzzling Antitrust: Information Products, Innovation and Free Speech*, 95 B.U. L. REV. 35, 39 (2015) (asserting that bona fide innovation is “essentially immunized regardless of its anticompetitive effect”).

³⁰⁴ The relevant geographic market would be the area in which the price of the relevant product is likely to increase significantly. If the acquisition would not enable Whole Foods to raise prices at either specialty retailer unless prices at other retailers increased, the relevant market would include the other retailers.

demand elasticity; comparisons of price levels in different geographic areas; and company documents, expert testimony, or other pertinent evidence. Since this information is also relevant to traditional market definition, the relationship between the direct assessment of power and the traditional paradigm would be particularly close under the prevailing level benchmark.

3. But For Level Case

If the challenged conduct is likely to enable the defendant, acting alone or in parallel with other firms, to prevent the price of a product or service from falling significantly, the court should find that the defendant has market power. Similarly, if the conduct would enable the defendant to prevent the price from falling substantially, the court should find monopoly power. A significant price decline should generally be at least five percent and a substantial price decline should generally be at least ten percent.³⁰⁵

The relevant market would flow from this determination. If the evidence established that the challenged conduct would enable the defendant to prevent the price of a particular product from declining significantly, the relevant product market would be the sale of that product. For example, if Whole Foods excluded Wild Oats from entering a metropolitan area and as a result the prices of premium, natural, and organic foods did not fall significantly at Whole Foods or other specialty stores in the area, the relevant market would be the sale of premium, natural, and organic items at specialty supermarkets in that area.³⁰⁶

A court could determine the but for level from the business plans of the entrant, its introductory price, the defendant's appraisal of the impact of entry, the defendant's response to entry, experience with entry in other geographic areas, evaluations of the effect of entry by industry or economic experts, or other pertinent information.³⁰⁷

As explained earlier, but for analysis would need to be supplemented in two situations. First, a court would have to resort to other evidence, such as traditional market definition, direct measurement of demand elasticity, or the cost benchmarks, if the court could not make a reasonable determination of the but for level.³⁰⁸ Second, a court may have to examine other evidence of power in cases in which the plaintiff alleges monopolization but the but for level is not substantially below the current level. In such a case, the defendant may possess monopoly power and its exclusionary conduct may have made a significant

³⁰⁵ Again, these numbers are approximate and should vary with the circumstances. *See supra* note 302 and accompanying text. In a buy-side case, the impact that matters is the impact on small suppliers.

³⁰⁶ The product market would include the sale of those items at conventional supermarkets if Wild Oats's entry would have depressed prices significantly at those retailers as well.

³⁰⁷ The same types of evidence would be relevant if the target of the defendant's exclusion was an existing rival intent on expanding, rather than a new entrant.

³⁰⁸ *See supra* Section I.D.4 (explaining exception).

contribution toward preserving it, but the but for level would not be sufficient to show it.³⁰⁹

B. *Application to Cellophane*

In *Cellophane*, the Supreme Court famously and mistakenly concluded that du Pont did not have monopoly power over cellophane.³¹⁰ The Court reasoned that du Pont faced competition from other flexible wrapping materials in every category of cellophane usage,³¹¹ and that customers shifted between cellophane and other packaging as their relative prices and qualities changed.³¹² This “[g]reat sensitivity of customers in the flexible packaging markets to price or quality changes’ prevented du Pont from possessing monopoly control over price.”³¹³ The Court would not have made this error had it employed the but for benchmark. It would not have focused on whether other flexible wrapping materials were close substitutes for cellophane at the current price, but whether du Pont’s exclusionary conduct had maintained that price substantially above the level that unrestricted competition would have produced.

In *Cellophane*, the appropriate benchmark was the but for level rather than the prevailing level because du Pont’s acquisition of power was not the problem. It did not invent cellophane,³¹⁴ but after obtaining a license to produce and sell it in the United States,³¹⁵ du Pont developed a process to make it moisture proof, which greatly enlarged its commercial value.³¹⁶ This was procompetitive. Once du Pont had acquired a dominant position, however, it took steps to exclude both

³⁰⁹ See *supra* Section I.D.4 (discussing second exception). In addition, a court may have to define an input market in order to determine whether the defendant can induce suppliers of that input to raise the costs of its rivals. The inquiry, however, is likely to be quite simple. See *supra* Section II.B (explaining relevant analysis).

³¹⁰ See *United States v. E.I. du Pont de Nemours & Co. (Cellophane)*, 351 U.S. 377, 400, 404 (1956) (concluding that cellophane was part of “flexible packaging material market”).

³¹¹ *Id.* at 399 (stating that in food products, its “chief outlet,” “cellophane furnishes less than 7% of wrappings for bakery products, 25% for candy, 32% for snacks, 35% for meats and poultry, 27% for crackers and biscuits, 47% for fresh produce, and 34% for frozen foods”).

³¹² See *United States v. E.I. du Pont de Nemours & Co.*, 118 F. Supp. 41, 91 (D. Del. 1953), *aff’d*, 351 U.S. 377 (1956).

³¹³ *Cellophane*, 351 U.S. at 400 (internal citation omitted).

³¹⁴ See *id.* at 382-83 (noting that Swiss chemist first discovered cellophane and only later did du Pont become involved).

³¹⁵ *Id.* at 383 (discussing 1923 agreement between du Pont Cellophane Company and La Cellophane).

³¹⁶ See *id.* at 384 (attributing “growth of cellophane production and sales” to “the perfection of moisture proof cellophane, a superior product of du Pont research and patented by that company through a 1927 application”); *id.* at 385 (“Between 1928 and 1950, du Pont’s sales of plain cellophane increased from \$3,131,608 to \$9,330,776. Moistureproof sales increased from \$603,222 to \$89,850,416.”).

foreign and domestic competition. Its principal effort to block foreign rivals involved legal petitioning activity: du Pont convinced the United States Customs Court to reclassify cellophane, resulting in an increased import duty.³¹⁷ In contrast, the company stifled the growth of its only domestic rival, Sylvania, by entering into a market division agreement with it—a patent settlement that placed a ceiling on its market share for moisture proof cellophane.³¹⁸ As explained below, this agreement largely extinguished price competition between Sylvania and du Pont and enabled du Pont to maintain its cellophane price above the but for level.

The gap between du Pont's price and the but for price was almost certainly substantial.³¹⁹ Before Sylvania entered the United States, its parent, a Belgian firm, had been exporting cellophane to the United States and undercutting du Pont's price. This price cutting stopped only after a court imposed duties of from twenty-five to sixty percent on imported cellophane.³²⁰ These large duties suggest that the but for price was at least twenty-five percent lower than du Pont's price.³²¹ In addition, after Sylvania entered, du Pont sued it for patent infringement and negotiated a settlement agreement that included both a two percent royalty and a limit on Sylvania's output.³²² This limit, initially set at twenty percent of total United States cellophane sales,³²³ almost completely eliminated price competition from Sylvania. Once Sylvania reached the market share cap, it lost all incentive to lower prices. As a result, list prices moved in lockstep and discounts were rare.³²⁴ Absent this restriction on price competition, it is likely that cellophane prices would have fallen substantially. Du Pont could have cut prices by more than twenty percent and still earned a competitive rate of return.³²⁵ Thus, if Sylvania was even nearly as efficient as du Pont, it could

³¹⁷ See Stocking & Mueller, *supra* note 126, at 34-35 (citing *Cellophane*, 118 F. Supp. at 167, 221).

³¹⁸ *Cellophane*, 351 U.S. at 384-85.

³¹⁹ See *supra* note 302 and accompanying text (suggesting 10% as approximate measure of substantial price difference).

³²⁰ See Stocking & Mueller, *supra* note 126, at 35 (citing *E.I. du Pont de Nemours & Co.*, 118 F. Supp. at 167, 221).

³²¹ A year after the court decision, the Tariff Act of 1930 imposed a duty of forty-five percent on imported cellophane, *see id.*, suggesting that the but for price was more than twenty-five percent below du Pont's price.

³²² See *Cellophane*, 351 U.S. at 384-85; Stocking & Mueller, *supra* note 126, at 41-43.

³²³ The limit was gradually raised to 29%. See Stocking & Mueller, *supra* note 126, at 43.

³²⁴ See *id.* at 44 & n.66. Sylvania could expand output and cut prices if its sales were below the market share cap, but once it attained its sales quota, it had no reason to increase production or reduce price. There were harsh penalties for exceeding the cap and Sylvania never did. See *Cellophane*, 351 U.S. at 385; Stocking & Mueller, *supra* note 126, at 43.

³²⁵ For over a decade, du Pont earned an average rate of return of 29.6% on its investment in cellophane production. See Stocking & Mueller, *supra* note 126, at 62-63. At the same time, its return on rayon production averaged 6.3%. See *id.* at 60-63. If this lower figure

have driven prices down sharply. To be sure, since domestic cellophane production was a duopoly, prices were unlikely to settle in the long run at a level that just covered du Pont's and Sylvania's full costs. But for a significant period of time—as Sylvania broke into the market, gained the sales it needed to be viable, and tried to capture as much of du Pont's high margin cellophane business as it could—it is likely that prices would have fallen more than ten percent.

In short, had the Court measured the competitive level by using the but for level, it could have easily found monopoly power. It need not have undertaken a detailed and ultimately misleading analysis of the substitutability of cellophane and other flexible wrapping materials. To the contrary, it could have defined the relevant market based on but for analysis. Since this analysis showed that du Pont had monopoly power, the relevant market had to be narrow. Moreover, both the price effects and the target of du Pont's exclusionary conduct indicated a narrow market. When du Pont reduced its price in order to open up new uses for cellophane, the makers of other flexible wrapping materials did not follow.³²⁶ If Sylvania could have competed freely, therefore, the price of cellophane would have dropped, but the prices of other flexible wrapping materials would not have fallen similarly. Likewise, du Pont's conduct was directed at Sylvania, not the producers of other flexible wrapping materials, which made little sense if those producers were equally effective competitors.³²⁷

This brief discussion shows how a court would apply the proposed approach to an iconic case, saving time and improving the accuracy of power determination.³²⁸ The final Section addresses objections to the but for benchmark.

provided a competitive return, du Pont could have reduced its cellophane prices by over 23% and still earned a normal profit. If, as Areeda and Hovenkamp posit, the competitive return may have been as high as 12%, see AREEDA-HOVENKAMP TREATISE, *supra* note 13, du Pont could have cut its cellophane prices by almost 18% and still earned an acceptable return.

³²⁶ See Stocking & Mueller, *supra* note 126, at 55 (“[W]hile du Pont was ‘broadening its market’ by reducing cellophane prices, the prices of other wrappers did not follow a similar pattern.”); *id.* at 56 (“[C]ellophane continued to decrease in price relative to most other wrapping materials.”); see also *Cellophane*, 351 U.S. at 418 (Warren, C.J., dissenting) (“That producers of glassine and waxed paper remained dominant in the flexible packaging materials market without meeting cellophane’s tremendous price cuts convinces us that cellophane was not in effective competition with their products.”).

³²⁷ See *Cellophane*, 351 U.S. at 420 (Warren, C.J., dissenting) (“If close substitutes for cellophane had been commercially available, du Pont, an enlightened enterprise, would not have gone to such lengths to control cellophane.”).

³²⁸ The proposed approach would also simplify the determination of market power in *Ohio v. Am. Express Co.*, 138 S. Ct. 2274 (2018). The Supreme Court divided sharply over the definition of the relevant market, see *id.*, but the market need not be defined to decide whether American Express exercised market power. The but for benchmark makes clear that it did. See Kirkwood, *supra* note 46.

C. *Objections to the But For Benchmark*

The most basic objection is conceptual. It maintains that market power and monopoly power cannot be measured by the difference between the current price and the but for price, but only by the difference between the defendant's price and its costs. This was the reasoning of the two courts that rejected the but for benchmark—*Geneva Pharmaceuticals* and *PepsiCo*—which was incorrect.³²⁹ Market power and monopoly power require the ability to price profitably above the competitive level,³³⁰ and the competitive level is the level that competition would have produced. If competition would have produced a lower price (in the absence of the defendant's exclusionary conduct), that price measures the competitive level, whether it is above or below the defendant's costs.

Insisting on a cost benchmark would also turn antitrust policy on its head. It would permit a high-cost incumbent to exclude a more efficient entrant, so long as the incumbent was not pricing above its own costs. That would protect a competitor at the expense of competition, harming consumers. The other price level benchmark—the prevailing level—does not require a price above cost. It finds market power when a merger would raise price *above* the prevailing level, whether that level equals, exceeds, or is below the merging parties' costs.³³¹ Likewise, exclusionary conduct can create power regardless of whether the defendant was pricing above cost.³³² This is plainly true when the defendant drives out an existing rival whose presence had forced it to price at cost. It is also true when the defendant destroys an entrant whose expansion would have forced the defendant to become more efficient.³³³ The Supreme Court implicitly recognized these possibilities when it defined monopoly power as *either* the power to control prices *or* the power to exclude competition.³³⁴

In short, there is no theoretical reason why the but for benchmark cannot be used to determine market power and monopoly power. If valid objections to the but for level exist, they are practical. The main concern is that it is too difficult

³²⁹ See *supra* Section I.D.3 (explaining error).

³³⁰ See *supra* notes 13-14 and accompanying text (defining market power and monopoly power).

³³¹ See *supra* Section I.C (describing methodology).

³³² See Krattenmaker, Lande & Salop, *supra* note 13, at 255 (stating that pre-existing power to price above cost "is not a prerequisite for a successful exclusionary strategy" but that "[i]t is the exclusionary conduct that creates the market power being evaluated, not the other way around").

³³³ In that situation, successful entry might deprive the incumbent of revenues it was using to fund R&D. But that is no justification for excluding the entrant, since the entry could not succeed unless a significant number of consumers preferred the entrant's offering (its product, price, and service) to the incumbent's. In the contest between the incumbent and the entrant, competition ought to determine the winner.

³³⁴ See *United States v. E.I. du Pont de Nemours & Co.(Cellophane)*, 351 U.S. 377, 391 (1956) ("Monopoly power is the power to control prices or exclude competition.")

to identify. After all, it requires the fact finder to construct a market that did not exist[em dash]the market in which a rival was allowed to enter or expand free from the defendant's exclusionary behavior. But that task would normally be manageable. Both the new entrant and a large incumbent are likely to estimate the impact of entry.³³⁵ If an entry attempt occurred, the entrant's introductory prices and the incumbent's reaction to them would provide additional sources of relevant information.³³⁶ If the challenged conduct ends before the litigation begins, and entry is allowed to succeed, direct evidence of its impact will exist.³³⁷ Finally, an incumbent's behavior in a more competitive geographic area may be telling.³³⁸ All these sources, coupled with the analyses of economic and industry experts, would usually enable a judge or jury to determine the but for level.

Some might object that the but for benchmark is no better than the traditional tools at identifying market power or monopoly power. As the case discussion indicated,³³⁹ the traditional tools—market definition and market share, supplemented with some economic evidence like price movements and price discrimination—commonly produce plausible results. Why use a different tool? Because in most exclusionary conduct cases, it would make power determination simpler, more efficient, and more accurate. The traditional approach separates the power inquiry from the conduct inquiry. It first asks whether the defendant has market power or monopoly power and then asks whether its exclusionary conduct has prevented a significant increase in competition.³⁴⁰ But if the defendant's conduct has foreclosed a significant price reduction, the defendant has exercised market power. Thus, the but for benchmark would enable courts to resolve the power question and the

³³⁵ In *McWane*, the entrant had calculated the market shares it would achieve in the absence of the defendant's exclusionary behavior and two of the defendant's executives had forecast the effect of successful entry on their profits. *McWane, Inc. v. FTC.*, 783 F.3d 814 (11th Cir. 2015); see *supra* notes 265-268 and accompanying text.

³³⁶ In *Northwest Airlines*, the court described both Spirit's initial fares and Northwest's aggressive responses. *Spirit Airlines, Inc. v. Nw. Airlines, Inc.*, 431 F.3d 917 (6th Cir. 2005); see *supra* notes 173-76 and accompanying text.

³³⁷ See *Geneva Pharm. Tech. Corp. v. Barr Labs. Inc.*, 386 F.3d 485, 500 (2d Cir. 2004). While this setting is likely to be rare, it would provide the clearest evidence of the but for level.

³³⁸ In *Visa U.S.A.*, greater competition in Europe forced Visa to enhance its product offerings. *United States v. Visa U.S.A., Inc.*, 344 F.3d 229 (2d Cir. 2003); see *supra* note 193 and accompanying text; see also *supra* note 194 and accompanying text (noting that information from other geographic areas can sometimes be used to identify but for level).

³³⁹ See *supra* Section II.C (discussing cases).

³⁴⁰ See Kaplow, *supra* note 13, at 1305 (“[A]uthoritative court opinions, leading treatises, and competition agency guidance documents deem market power to be essential and analyze it first, but then largely ignore it in their analyses of allegedly anticompetitive practices.”).

anticompetitive effects question at the same time,³⁴¹ while inferring the relevant market from the result.

This would not only simplify and speed up exclusionary conduct cases, it would focus them on the ultimate issue: whether the challenged conduct is likely to harm consumers.³⁴² If the conduct would not harm consumers, the defendant's power is irrelevant. And if it is likely to harm them significantly, the defendant's power can be deduced from that fact. In some cases, moreover, the but for benchmark would enhance the reach of antitrust law, enabling a court to find power that neither the cost benchmarks nor market definition would identify.³⁴³ For all these reasons, the proposed approach would strengthen antitrust enforcement.

Despite its drawbacks, the traditional approach does reduce the likelihood of false positives. If courts must negotiate a two-step process—first defining markets the customary way and then determining whether the challenged conduct would have anticompetitive effects—they are less likely to condemn conduct that does not hurt consumers.³⁴⁴ But this benefit does not warrant a separate market power requirement. In most cases, the but for level will be clear or reasonably clear, and in those cases it will be evident whether the challenged conduct is likely to restrict competition and create market power.³⁴⁵ In some cases, to be sure, the but for level will be obscure and judges and juries can fall back on the traditional two-step approach. But a flat rule that the fact finder must never rely solely on but for analysis would be unwise. While such a rule may reduce false positives, it would increase false negatives and raise the costs of antitrust enforcement.

CONCLUSION

Despite the pivotal role of market power in antitrust law, its meaning is uncertain. While courts and antitrust scholars generally agree that market power is the ability to raise price profitably above the competitive level, they do not agree on how to determine the competitive level. There is no consensus on whether it should be measured by marginal cost, average total cost (including the cost of capital), the prevailing price level, or the but for level (the level to which price would have fallen but for the challenged conduct). This Article explains why courts ought to measure the competitive level by price levels, not

³⁴¹ See Ramsi A. Woodcock, *Inconsistency in Antitrust*, 68 U. MIAMI L. REV. 105, 181-82 (2013) (stating that it is wasteful to inquire into defendant's power after having determined that its conduct is anticompetitive).

³⁴² In a buy-side case, the ultimate issue is whether the challenged conduct would harm powerless suppliers.

³⁴³ See *supra* notes 172-174 and accompanying text.

³⁴⁴ See ELHAUGE, *supra* note 33, at 217 (“[O]ne important reason for a market power requirement is to provide a screen on antitrust review . . .”).

³⁴⁵ See *id.* (noting that market power screen is least desirable where it is relatively easy to determine that conduct is anticompetitive).

cost levels. They ought to determine market power by asking whether the challenged conduct would enable a defendant to raise price above the prevailing level (in the typical price increase case) or the but for level (in the typical exclusion case).

This approach would have multiple advantages. It would enable tribunals to resolve two critical issues at the same time: market power and anticompetitive effects. Courts could also infer the relevant market from the result, enabling them to preserve the benefits of market definition while avoiding its drawbacks. In some cases, the approach would broaden the reach of antitrust law. Overall, the proposal would enhance the efficiency and effectiveness of antitrust enforcement at a time when more active enforcement is a national priority.