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Toward a Unified Theory of Exclusionary Vertical Restraints

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The law of exclusionary vertical restraints—contractual arrangements or informal business relationships between vertically related firms that impair the competitiveness of either the upstream or downstream market—is largely incoherent in both the United States and the European Union.[1] The sources of this incoherence are potentially two fold.

First, in both jurisdictions antitrust law is primarily made by generalist courts giving effect to discrete statutory or treaty texts.[2] Hence, some of the incoherence in the case law may be the product of unavoidable statutory constructions that require courts to treat economically similar commercial practices differently despite the economic fungibility of the practices. It is doubtful, however, that statutory or treaty design accounts for much of the incoherence. The foundational legal instruments of both jurisdictions are sufficiently open-textured to accommodate judicial development of a unified and coherent account of vertical restraints.

Rather than reflecting an avoidable rendering of statutory or treaty commands, the incoherence largely arises from a failure to grasp the commonalities among various different forms of vertical restraints. In particular, much of the confusion arises from the failure to give a systematic account of the significance of three related factors: (1) whether the restraint involves a nominal price reduction (as in the case of predatory

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[1] In discussing the law of the European Union, we focus on the law developed under Articles 101 and 102 of the Treaty on the Functioning of the European Union ("TFEU"), as interpreted by the European Commission, the European Court of First Instance, and the European Court of Justice, and not on the national laws of any Member States of the European Union.
[2] See generally DANIEL A. CRANE, THE INSTITUTIONAL STRUCTURE OF ANTITRUST ENFORCEMENT, cpts. Xxx, xxx (2010).

pricing, price discrimination, and bundled discounting) or non-price coercion (as in the case of exclusive dealing and tying); (2) whether the restraint involves a single product (as in a single-product exclusive dealing contract) or multiple products (as in the case of tying arrangements or bundled discounts); and (3) whether the contract harms competition at the level of the firm giving the discount (as in the case of "primary line" price discrimination) or at the level of the firm receiving the discount (as in the case of "secondary line" price discrimination).[3]

In this paper, we argue that all allegedly exclusionary vertical restraints should be analyzed under a single organizing principle: substantial foreclosure. In every exclusionary vertical restraints case, the ultimate question should be whether the loyalty-inducing provision poses an unacceptable risk of harming consumer welfare by denying to rivals a reasonable opportunity to participate efficiently in the market and does so without a sufficient efficiency justification. In order to make this assessment, three analytical questions must be answered.

First, does the vertical restraint "foreclose" *any* portion of the relevant market? The answer depends on whether rivals had a reasonable opportunity to compete for the contracted business. A non-price contractual term that requires one party to deal exclusively with the other party "forecloses" some percentage of the market to rivals if the rivals were unable to offer their own exclusive dealing contracts. A contractual provision that offers a discount to incentivize the customer to do business only forecloses rivals if the rivals could not profitably offer their own competitive discounts.

If the restraint involves contractual terms that span multiple products (as in the case of tying and bundled discounting) it is necessary to identify one or more markets in which competition is potentially harmed. Once that market is identified, the question is how much of that market the contractual arrangement in question places off limits to rivals. If the contractual arrangement is a price discount, then none of the relevant markets should be deemed off limits to rivals unless the rivals would have to price below cost in order to obtain that business. But once some portion of business in that market is deemed "foreclosed"—either because a party has contractually committed or because the discounts impacting that segment of business could not be overcome without pricing below cost—we have the foreclosure percentage. And then a court or agency should ask the usual question—is the foreclosure substantial?

In performing a foreclosure analysis, it should not matter whether the foreclosure occurs at the level of the upstream firm (usually a manufacturer) or downstream firm (usually a wholesaler or retailer). Thus, for example, in a primarily line price discrimination case, the question should be whether the manufacturer priced below cost and, if so, whether the below-cost pricing was across a sufficient share of the market to

[3] *See generally* Andrew I. Gavil, *Secondary Line Price Discrimination and the Fate of Morton Salt: To Save it, Let it Go*, 48 Emory J. J. 1057 (1999).

substantially foreclose competition. Similarly, in a secondary line case, the question should be whether the retailer that received the discriminatory price obtained such a competitive advantage that rivals could not profitably compete for some segment of retail sales.

Second, once a court or agency determines that some portion of the market is foreclosed, it must decide whether the foreclosure is substantial. To date, judicial precedents that have analyzed substantiality have usually fallen back on generic market share percentages that bear little or no relationship to the significant economic questions. In economic terms, a foreclosure percentage should be deemed substantial when it denies rivals a sufficient probability of obtaining a sufficient amount of business to reach minimum viable scale. This analysis requires identifying not only the percentage of the market necessary for a rival to minimize its average costs (minimum viable scale), but also the probability that the rival will win that particular increment of business in the unforeclosed segment of the market. In performing this analysis, a court or agency needs to consider both the role of an incumbency advantage and the countervailing claim—usually made by ostensibly frustrated new entrants—that the new entrant's technology, product, or service is superior to the status quo.

Third, even if a vertical restraint results in substantial foreclosure, it should not be declared unlawful if efficiencies resulting from the restraint and passed onto consumers exceed its anticompetitive effects.[4]

This paper's organization is as follows. In Part I, we provide the foundational assumptions for a unified theory of exclusionary vertical restraints. In particular, we explore some differences between exclusion-based theories of vertical restraints—those with which this paper is concerned—and collusion or exploitation-based theories, which we do not address here. We also discuss the importance of unifying the approach to vertical restraints in the US and the EU given the increasingly trans-Atlantic or global nature of many commercial practices that may be challenged as exclusionary vertical restraints. In Part II, we survey the leading US and EU precedents and diagnose the sources of the doctrinal and analytical incoherence. In Part III, we advance our central normative claim—that all exclusionary vertical restraints should be analyzed prima facie within a broad and circumstantially adaptive two-part framework centering on foreclosure and substantiality.[5] We also assign economic content to those elements. We do not analyze efficiencies defenses in vertical restraints cases, but simply observe that such defenses should not come into play unless the plaintiff meets the prima facie substantial foreclosure test. Finally, in Part IV, we provide illustrations of our unified

[4] Since our paper is not primarily concerned with efficiencies defenses, we do not address the proper treatment of efficiencies that are captured by producers and not passed onto consumers. *See, e.g.*, Oliver E. Williamson, *Economies as an Antitrust Defense: The Welfare Tradeoffs*, 58 Am. Econ. Rev. (1968).
[5] We do not address efficiencies defenses that should arise once the plaintiff makes a prima facie showing of substantial foreclosure. *See infra* xxx.

theory in action in the context of three significant recent vertical restraints cases.

I. FOUNDATIONAL ASSUMPTIONS

A. Distinguishing Exclusion, Collusion, and Exploitation

Antitrust law may prohibit vertical restraints for three quite different kinds of reasons. First, vertical restraints have the capacity to exclude rivals from effectively competing in some market, usually an upstream (or supply) market or downstream (or resale) market. Second, vertical restraints may facilitate collusion between firms at either the upstream or downstream level.[6] For example, colluding retailers may force upstream suppliers to impose resale price maintenance in vertical contracts in order to prevent cheating on the retail-level cartel agreement.[7] Finally, a dominant upstream firm may use vertical contractual practices such as tying, bundling, or exclusive dealing to engage in price discrimination and hence to extract consumer surplus from purchasers.[8]

This paper concerns only the first of these concerns—exclusionary vertical restraints. Collusive theories of vertical restraints raise very different concerns. Collusive vertical restraints are usually manifested as intra-brand restrictions, such as resale price maintenance or territorial restrictions.[9] Exclusionary vertical restraints usually operate as inter-brand restrictions, such as prohibitions on carrying a competing brand or a tying arrangement that locks out competitive sellers. Collusive restraints often occur where the colluding firms have little market power individually and hence must band together to thwart competition.[10] By contrast, exclusionary vertical restraints are only likely to be practiced by dominant firm with large market shares. Similarly, collusive restraints involve no market foreclosure.[11] Indeed, collusion makes entry by new firms easier

[6] *See* Leegin Creative Leather Prods., Inc. v. PSKS, Inc., 551 U.S. 877, 892-93 (2007); RICHARD A. POSNER, ANTITRUST LAW 172 (2d ed. 2001); Howard P. Marvel & Stephen McCafferty, *The Welfare Effects of Resale Price Maintenance*, 28 J. L. & Econ. 363, 373 (1985).
[7] *Leegin*, 551 U.S. at 893.
[8] Einer Elhauge, *Tying, Bundled Discounts, and the Death of the Single Monopoly Profit Theory*, 123 Harv. L. Rev. 397 (2009).
[9] *Leegin*, 551 U.S. at 893.
[10] Market power is not a prerequisite for illegal price fixing. *United States v. Socony-Vacuum Oil Co.*, 310 U.S. 150 (1940). The colluding firms often have no individual market power at all.
[11] It is, of course, possible that a group of dominant firms will collude to exclude rivals from the market. However, such cases are best analyzed as instances of joint exclusion where the market power and foreclosure effects of the co-conspirators are aggregated rather than non-coercive collusion. We consider multi-party cumulative foreclosure effects below in Part ____.

since it increases market prices and reduces output.[12] By contrast, as we argue in Part III, foreclosure is a necessary ingredient of vertical exclusion.

Exploitation is also a very different concern from exclusion. Exploitation requires market power, but it does not require that the market power have been obtained through an exclusionary device. For example, a firm with a valid exclusionary patent might engage in a form of "exploitative" price discrimination.[13] Exploitation operates only vertically—it involves the extraction of surplus from a person or firm at a different level of production or distribution from the exploiting firm. By contrast, vertical exclusion devices employ vertical relations instrumentally to exclude competitors, and hence operate horizontally. For example, a firm that engages in predatory pricing lowers its prices to consumers in order to exclude a competitor. Later, it increases its prices to recoup the costs of predation and to earn monopoly profits.[14] This later act of excessive pricing might be said to be "exploitative," but it is differently "exploitative" than emerging theories of exploitation, which rely on the manipulation of price structures to extract consumer welfare regardless of any prior exclusion.[15] Prior exclusion is not a necessary ingredient of an exploitation theory, and exploitation is not a necessary consequence of an exclusion strategy. Exploitation is not anticompetitive in a conventional sense, since it does not turn on the avoidance of competition.

There is also an important juridical difference between exclusion and exploitation. It is doubtful whether US antitrust law recognizes a pure exploitation theory.[16] By contrast, EU law does—at least in theory.[17] Antitrust laws in many emerging antitrust jurisdictions also recognize stand-alone exploitation offenses, such as excessive pricing and non-exclusionary price discrimination.[18]

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[12] This is not to say that cartels automatically attract entry. If potential new entrants understand that current prices are the product of collusion and that new entry will disrupt the patterns of collusion, then they may not consider entry worthwhile. *See generally* Ariel Ezrachi & David Gilo, *Are Excessive Prices Really Self-Correcting?*, 5 J. Comp. L. & Econ. 249 (2009).

[13] *See, e.g.*, William F. Baxter, *Legal Restrictions on the Exploitation of the Patent Monopoly: An Economic Analysis*, 76 Yale L. J. 267 (1966).

[14] Daniel A. Crane, *The Paradox of Predatory Pricing*, 91 Cornell L. Rev. 1, 2-3 (2005).

[15] *See, e.g.*, Elhauge, *supra* n. xxx.

[16] *See* Pac. Bell Tel. Co. v. linkLine Communcs., Inc., ___ U.S. ___, 129 S. Ct. 1109, 1118 (2009) (holding that simply charging monopoly prices does not violate Section 2 of the Sherman Act).

[17] In theory, Article 102 of the Treaty on the Functioning of the European Union prohibits both exclusionary and exploitative abuses of dominance. However, successful cases challenging abuses of dominance on pure exploitation theories are rare. John Vickers, *Abuse of Market Power*, 115 Econ. J. F244, F246 (2005) ("All but a few EC cases on abuse of dominance have concerned exclusionary conduct by dominant firms--that is, conduct preventing or restricting competitors--rather than behavior directly exploitative of consumers.").

[18] ELEANOR FOX & DANIEL CRANE, GLOBAL ISSUES IN ANTITRUST AND COMPETITION LAW (West 2010).

Although the conceptual foundations of these three separate theories of vertical restraint are quite different, antitrust law often fails to distinguish clearly which theory of wrong it is addressing with a particular analytic matrix. For example, tying arrangements may be anticompetitive because they exclude competitors,[19] facilitate cartel arrangements,[20] or extract surplus from consumers.[21] However, antitrust law often approaches tying as a unified legal wrong amenable to a single test. For instance, under U.S. case law the seller's share of the tying market must generally be thirty to forty percent in order for the tying to be illegal.[22] But a single market share screen makes little sense in light of the different possible theories of wrong. If the tie-in is wrongful because it excludes competitors in the tied market, then a fairly high degree of market power in the tying market is likely necessary. If it is wrongful because it represents a cartel-stabilization effort, then a much lower market share might be sufficient.

Although this paper does not propose an analytic framework for collusive or exploitative theories of harm, one implication of the framework we propose for exclusionary theories is that the plaintiff in a vertical restraints case should be required to articulate with precision which theory it is advancing. The relevant analytical questions in exclusion, exploitation, and collusion cases are quite different. Adopting a unified theory of *exclusionary* vertical restraints is reasonable; adopting a unified theory of *vertical restraints* is nonsensical.

B. The Need and Opportunity for a Unified Trans-Atlantic Approach

Divergences in US and EU treatment of exclusionary vertical restraints are unexceptional, since US and EU competition laws differ in many important respects.[23] Nonetheless, there are at least three compelling reasons for articulating a theory capable of unifying and rationalizing the law of exclusionary vertical restraints in both jurisdictions.

First, as we shall note in the following section, the existing bodies of US and EU law on exclusionary vertical restraints are incoherent internally and not just conflicting with each other. Each of the bodies of law is in need of systematization within a coherent economic framework, and there

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[19] Eastman Kodak Co. v. Image Tech. Servs., Inc., 504 U.S. 451, 481-85 (1992) (examining elements of a tying claim brought under Section 2 of the Sherman Act, which concerns monopolization).

[20] *See* Christopher R. Leslie, *Tying Conspiracies*, 48 Wm. & Mary L. Rev. 2247 (2007).

[21] Elhauge, *surpa* n. xxx at xxx.

[22] Jefferson Parish Hosp. Dist. No. 2 v. Hyde, 466 U.S. 2, 26 n.43 (1984); Times-Picayune Pub. Co. v. U.S., 345 U.S. 594, 611-13 (1953).

[23] *See generally*, Heike Schweitzer, *Parallels and Differences in the Attitudes toward Single-Firm Conduct: What Are the Reasons? The History, Interpretation, and Underlying Principles of Sec. 2 of the Sherman Act and Art. 82 EC*, (2007) LAW 2007/32 EUI Working Papers; Eleanor M. Fox, *GE/Honeywell: The Merger that Europe Stopped—A Story of the Politics of Convergence* in ANTITRUST STORIES (Eleanor M. Fox & Daniel A. Crane, eds. 2007).

is no good reason to systematize the two bodies differently. While the foundational legal instruments of the two systems (the US statutes and EU treaty provisions) imply different approaches on certain vertical issues—such as exploitative uses of market power or intra-brand restraints that segment the common European market at national borders[24]—the foundational instruments require no difference of approach on exclusionary vertical restraints.

To the extent that the two jurisdictions differ on matters of emphasis—for example, the relative priority to be given to short run or long run effects or default assumptions in the absence of clear proof—such differences can be expressed within the unified framework we propose. For example, some commentators believe that EU law tends to give priority to short-run consumer pricing effects over long-run interests in innovation.[25] The relative priority of those two competing interests can be expressed during the balancing of anticompetitive effects against offsetting efficiencies. However, differences in the relative weights accorded to each interest in the different jurisdictions do not negate the substantial foreclosure framework for ascertaining whether a vertical restraint even excludes any rival.

Second, an increasing number of exclusionary vertical restraints cases involve commercial practices by dominant suppliers that span the American and Europeans markets. Recent parallel cases in the US and EU against Intel[26] and Microsoft,[27] for example, have exposed significant analytic differences between the US and EU approaches with respect to the same commercial practices involving the same competitors and customers. For example, the European Commission insisted that Microsoft "unbundle" its PC operating system, Windows, and its media player.[28] The EU decision effectively required Microsoft to redesign its operating system for the European market, since Microsoft was permitted to continue to carry the "bundled" version of Windows in the rest of the world. In 2005, Microsoft

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[24] *See* Nicola Giocoli, *Competition Versus Property Rights: American Antitrust Law, The Freiburg School, and the Early Years of European Competition Policy*, 5 J. Comp. L. & Econ. 747 (2009) (explaining European hostility to intra-brand vertical restraints as grounded in common market objectives); Illene Knable Gotts, *Nature vs. Nurture and Reaching the Age of Reason: The US/EU Treatment of Transatlantic Mergers*, 61 NYU Sur. Am. L. 453, 471-72 (2005).

[25] *See, e.g.*, Alan Devlin & Michael Jacobs, *Microsoft's Five Fatal Flaws*, 2009 Colum. Bus. L. Rev. 67, 71; J. Bruce McDonald, Deputy Assistant Attorney Gen. in Antitrust Div., Dep't. of Justice, *Section 2 and Article 82: Cowboys and Gentlemen*, Presentation to the Modernisation of Article 82 Conference (June 16, 2005) available at http:// www.usdoj.gov/atr/public/speeches/210873.htm.

[26] *See infra* text accompanying notes xxx-xxx.

[27] An examination of the various cases against Microsoft appears in WILLIAM H. PAGE & JOHN E. LOPATKA, THE MICROSOFT CASE: ANTITRUST, HIGH TECHNOLOGY, AND CONSUMER WELFARE (2007).

[28] Commission of the European Communities, Commission Decision of 24.03.2004 relating to a proceeding under Article 82 of the EC Treaty (Case COMP/C-3/37.782 Microsoft), art 6(a), 2004 OJ (C900), available online at <http://ec.europa.eu/comm/competition/antitrust/cases/decisions/37792/en.pdf> (visited Jan 11, 2009).

complied with the EU's decision and began to make available "Windows XP Home Edition N," with the "N" conspicuously and clumsily—as if to make the point—standing for "not with Media Player." Although the European Court of First Instance eventually affirmed the Commission's decision,[29] "Edition N" proved highly unpopular with original equipment manufacturers serving the European market and very few installed it on their computers. Microsoft thus redesigned its operating system for the European market only to find no takers. A unified approach to exclusionary vertical restraints in the US and EU might not have avoided this debacle, since a common analytical framework does not guarantee identical application in both jurisdictions. It would, however, reduce the likelihood of similar occurrences in the future.

Third, the time is ripe for a comprehensive examination of vertical restraints policy. In the US, the law governing a wide variety of exclusionary vertical practices—including bundled discounting, exclusive dealing, tying, and secondary line price discrimination—is currently in play in the courts and the academy. Richard Posner has opined that "[a]ntitrust policy toward vertical restraints is the biggest substantive issue facing antitrust."[30] In Europe, the European Commission recently announced its intention to move from a formalistic or "form-based" approach to abuse of dominance issues to an "effects" based approach.[31] This shift in approach may facilitate moving vertical restraints policy into a unified economic framework. While both jurisdictions struggle in parallel with the same issues and increasingly rely on economic analysis—which has no juridical borders—the possibility of convergence is enhanced.

II. US AND EU PRECEDENTS

A. U.S. Precedents

In the US, courts typically analyze exclusionary vertical restraints under one of five statutory provisions: Section 1 of the Sherman Act, which prohibits contract, combinations, and conspiracies in restraint of trade; Section 2 of the Sherman Act, which prohibits monopolizing; Section 3 of the Clayton Act, which prohibits anticompetitive tying and exclusive dealing; the Robinson-Patman Act, which prohibits anticompetitive price discrimination; and Section 5 of the Federal Trade Commission Act, which empowers the FTC to prohibit unfair methods of competition. Rather than following statutory lines, the courts have largely divided exclusionary

[29] *Microsoft Corp v Commission*, Case T-201/04, [2007] 5 CMLR 11, ¶¶ 1345–66 (Sept 17, 2007) (European Court of First Instance).
[30] *See* Richard A. Posner, *Vertical Restraints and Antitrust Policy*, 72 U. Chi. L. Rev. 229, 229 (2005) ("Antitrust policy toward vertical restraints is the biggest substantive issue facing antitrust.").
[31] Neelie Kroes, *Preliminary Thoughts on Policy Review of Article 82*, prepared remarks at Fordham Corporate Law Institute (2005).

vertical restraints into classes of commercial conduct that overlap statutory categories. Thus, for example, courts consider primary line price discrimination under the Robinson-Patman Act to be functionally equivalent to predatory pricing under the Sherman Act, but consider secondary line price discrimination under the Robinson-Patman Act to be a separate offense from primary line price discrimination.[32] Tying offenses are cognizable under Section 3 of the Clayton Act or Sections 1 or 2 of the Sherman Act, without much distinction between the statutory source.[33]

Although the courts have largely treated the causes of action associated with potentially anticompetitive vertical restraints to apply regardless of the statutory provision invoked by the plaintiff, they have often abandoned this functional approach when addressing different forms of exclusionary vertical restraints. Instead, they have created sometimes formalist sometimes functionalist doctrines depending on the type of restraint at issue. In many cases, the courts have treated similar forms of vertical restraints quite differently based on insubstantial classificatory distinctions. In particular, the courts have treated as unjustifiably significant the distinctions between single-product and multi-product practices, primary and secondary line effects, and price or non-price terms of sale or exchange.

Significant doctrinal differences between the treatment of tying (which necessarily involves two products) and exclusive dealing (which need only involve one product) exemplify the overemphasis on the differences between single and multi-product practices. Often, the same conduct could be described as either tying or exclusive dealing.[34] For example, in the *Standard Stations* case,[35] the Justice Department challenged Standard Oil's requirement that independent gasoline retailers sell Standard's oil exclusively as an exclusive dealing requirement. As Herbert Hovenkamp has noted, however, the arrangement "could also have been described as a tying arrangement in which the franchise itself, or the right to bear the

[32] *See* XIV HERBERT HOVENKAMP, ANTITRUST LAW: AN ANALYSIS OF ANTITRUST PRINCIPLES AND THEIR APPLICATION ¶ 2300, at 3 (1999). Primary and secondary line price discrimination under the Robinson-Patman Act overlap on many statutory elements—such as the "roughly contemporaneous," "sales," "commodities," and "like grade and quality" requirements, *id.*, but those statutory elements have little to do with the economic substance of the antitrust analysis.

[33] Jefferson Parish Hosp. Dist. No. 2 v. Hyde, 466 U.S. 2, 23 n. 39 (1984) (observing that "with respect to the definition of tying the standards used by the two statutes [the Clayton Act and Section 1 of the Sherman Act] are the same"); Eastman Kodak Co. v. Image Tech. Servs., Inc., 504 U.S. 451, 481-85 (1992) (acknowledging that "[m]onopoly power under § 2 requires, of course, something greater than market power under § 1," but otherwise reaching same conclusions about tying conduct under both Sections 1 and 2 of Sherman Act").

[34] XI HERBERT HOVENKAMP, ANTITRUST LAW: AN ANALYSIS OF ANTITRUST PRINCIPLES AND THEIR APPLICATION ¶ 1800b, at 7-12 (2005) (distinguishing causes of action for tying and exclusive dealing and observing that "[m]any of the practices that have been characterized as exclusive dealing could also be described as tying, although perhaps not all of the technical legal requirements for a tying arrangement could be met").

[35] Standard Oil of California v. United States, 337 U.S. 293 (1949).

Standard brand, or the right to use tanks and pumps that Standard provided its dealers was conditioned on their purchase of gasoline from Standard."[36] Similarly, in *Jefferson Parish*,[37] five Justices saw a hospital's agreement to use a single anesthesiology service as a tying arrangement (albeit a legal one) whereas four concurring Justices imagined it as a species of exclusive dealing arrangement.[38]

Whether an arrangement is characterized as tying or exclusive dealing has important implications under U.S. law, since the courts have traditionally treated tying arrangements with considerably greater hostility—more formally and categorically—than they have treated exclusive dealing arrangements.[39] However, to the extent that the concern in tying cases is over the exclusion of rivals in the tied market and not exploitation of consumers through price discrimination,[40] the exclusionary effects of tying and exclusive dealing depends equally on the foreclosure of rivals. Indeed, if anything, tying arrangements may generally be less threatening to rivals in the tied market than exclusive dealing arrangements, since tying arrangements often apply to only particular uses of the product in the tied market (for example, in conjunction with a particular machine) whereas exclusive dealing contracts blanketly forbid the buyer from purchasing any of its requirements from the seller's rivals.[41] This is not to say that tying arrangements should be treated with greater leniency than exclusive dealing arrangements—only that in either case, the first step is to evaluate how much of the relevant market is foreclosed to competitors.

Some courts have drawn a similar dividing line between single-product predatory pricing and multi-product bundled discounting.[42] In *3M v. LePage's*,[43] for example, an en banc panel of the United States Court of Appeal for the Third Circuit held that bundled discounting should not be governed by single-product predatory pricing rules but instead should be analogized to tying arrangements whose "foreclosure effects are similar."[44] That characterization was problematic. While recognizing the analytical similarity between price and non-price practices (bundled discounting and tying), it assumed that a bundled discount forecloses rivals in a significantly different manner than single-product predation. As we shall show in the

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[36] XI Hovenkamp, *supra* n. xxx at 7.
[37] Jefferson Parish Hosp. Dist. No. 2 v. Hyde, 466 U.S. 2 (1984).
[38] XI Hovenkamp, *supra* n. xxx at 7.
[39] *Id.* at 10-11.
[40] *See* Elhauge, *supra* n. xxx at xxx.
[41] XI Hovenkamp, *supra* n. xxx at 10-11.
[42] A bundled discount involves the seller's offer to sell two or more products at a discounted package price, even though the seller is still willing to make the two products available for individual purchase. *See* Daniel A. Crane, *Mixed Bundling, Profit Sacrifice, and Consumer Welfare*, 55 Emory L. J. 423, 425 (2006).
[43] *LePage's, Inc. v. 3M*, 324 F.3d 141 (3d Cir. 2003) (en banc).
[44] *Id.* at 155 (citing PHILLIP E. AREEDA & HERBERT HOVENKAMP, ANTITRUST LAW ¶ 794, at 83 (Supp. 2002) (asserting that "[r]ather than analogizing [bundled discounts] to predatory pricing, , [bundled discounts] are best compared with tying, whose foreclosure effects are similar.").

following section, in both single-product and multi-product discounting contexts, the competitor is only foreclosed if it cannot reasonably match its rivals' prices. While the precise questions necessary to ascertain whether or not this is true may vary depending whether single or multi-product discounting is at issue, the fundamental foreclosure issue is the same.

A second manifestation of doctrinal and analytical incoherence concerns the radically different treatment accorded to primary line and secondary line price discrimination. As previously noted,[45] under U.S. law primary line price discrimination (which concerns injury to competition at the level of the firm giving the discount—usually a manufacturer) is addressed under the same standards as predatory pricing under the Sherman Act. To satisfy its prima facie case, the plaintiff must show that the defendant priced below the "appropriate measure of cost" and that its conduct created a dangerous probability that the defendant would later be able to recoup its costs of predation through supracompetitive pricing.[46] Under U.S. case law, however, secondary line price discrimination (which concerns injury to competition at the level of the firm receiving the discount—usually a dealer) is an odd and aberrational antitrust offense. There is no requirement that the firm giving the discount has market power,[47] nor any requirement of a general injury to the competitive process—an injury to a single competitor may be sufficient.[48] There is not even a requirement that the discriminatory price have threatened the disadvantaged firm's existence in the market.[49]

In its most recent secondary line case, the Supreme Court signaled a potential willingness to change course and harmonize secondary line price discrimination with the broader currents of antitrust law that are focused on the protection of the competitive process rather than individual competitors.[50] If so, the Court will need to significantly revise secondary line price discrimination doctrine to introduce analytical tools of the kind that are employed in primary line cases. In particular, it will need to articulate the questions that judges and juries should ask in determining whether a discriminatory discount to one dealer impaired that dealers' rivals' ability to compete efficiently in the market. As set forth in the following section, that inquiry should depend upon the same kind of showing currently required in predatory pricing and primary line cases, that

[45] *Supra* text accompanying nn. xxx-xxx.
[46] Brooke Group Ltd. v. Brown & Williamson Tobacco Corp., 509 U.S. 209, 222, 224 (2003).
[47] *See, e.g.*, Texaco v. Hasbrouck, 496 U.S. 543, 547 (1990). *See also* Hovenkamp, *supra* n. xxx ¶ 2301b, at 7.
[48] See Chroma Lighting v. GTE Prods. Corp., 111 F.3d 653 (9th Cir. 1998); Rebel Oil Co. v. Atlantic Richfield Co., 51 F.3d 1421, 1445 (9th Cir. 1995).
[49] *See* Hovenkamp, *supra* n. xxx at ¶ 2331 at 80-90. *See also FTC v. Morton Salt,* 324 U.S. 726 (1945).
[50] *Volvo Trucks of North America, Inc. v. Reeder-Simco GMC, Inc.*, 546 U.S. 164, 181 (2006) ("[W]e would resist interpretation [of the Robinson-Patman Act] geared more to the protection of existing *competitors* than to the stimulation of *competition*.) (emphasis in original).

the rival dealer would have had to sell its goods below cost in order to compete, and hence was foreclosed from some segment of the relevant market.

This latter observation raises a third branch of inconsistency in U.S. treatment of exclusionary vertical restraints. As already noted, the plaintiff in a predatory pricing case must show that the defendant priced below cost. Any below-cost sales are considered off-limits to an equally efficient rival, and hence anticompetitive. At that point, the analysis in exclusive dealing and predatory pricing cases seems to converge on the foreclosure effect of the vertical restraint. In exclusive dealing cases, however, foreclosure is only one ingredient. In order for the foreclosure to be illegal, it must be "substantial."[51] Trivial amounts of foreclosure through exclusive dealing do not exclude rivals. The same is true of predatory pricing. Trivial amounts of predatory pricing—say below-cost pricing on just one or two contracts in market with hundreds of customers—cannot exclude rivals. Predation can only exclude rivals if it forecloses them from so much of the market that they cannot efficiently remain in the market. However, under U.S. case law, "substantiality" is not an identified element of a predatory pricing claim. Some courts have rejected predatory pricing claims where the plaintiff offered only selective evidence of predation or failed to show pricing across the defendant's entire product line,[52] but the courts have not articulated a systematic principle of substantiality in predatory pricing cases and, at times, have allowed plaintiffs to proceed on evidence of selective predation without a showing of overall market foreclosure.[53] Although the foreclosure effects of price and non-price vertical restraints are often analytically identical, extant doctrine treats price and non-price as though they were completely distinct species of offense.

In sum, the U.S. case law contains no general theory of exclusionary vertical restraints. It tends to muddle through on a practice-by-practice basis, sometimes drawing weak analogies to, other times weak distinctions from, other forms of vertical restraints. These distinctions are not justified by any general theory of exclusionary conduct or any statutory imperative. Rather, they are the products of uneven evolution of economic understanding and path dependence based on the happenstance of how cases were presented to and decided by courts, often generations ago.

B. E.U. Precedents

[51] Tampe Elec. Co. v. Nashville Coal Co., 365 U.S. 320, 329 (1961).

[52] *E.g.*, *Vollrath Co. v. Sammi Corp.*, 9 F.3d 1455, 1461 (9th Cir. 1993); *Morgan v. Ponder*, 892 F.2d 1355, 1361-62 (8th Cir. 1989); Stitt *Spark Plug Co. v. Champion Spark Plug Co.*, 840 F.2d 1253, 1256 (5th Cir. 1988); *Directory Sales Management Corp. v. Ohio Bell Tel. Co.*, 833 F.2d 606, 614 (6th Cir. 1987); *Lomar Wholesale Grocery, Inc. v. Dieter's Gourmet Foods, Inc.*, 824 F.2d 582, 597-98 (8th Cir. 1987); *Bayou Bottling, Inc. v. Dr. Pepper Co.*, 725 F.2d 300, 305 (5th Cir. 1984); *Janich Bros. v. American Distilling Co.*, 570 F.2d 848, 856 (9th Cir. 1977).

[53] See, e.g., C.E. Servs., Inc. v. Control Data Group, 759 F.2d 1241, 1247 (5th Cir. 1985).

Vertical restraints analysis under EU competition law exhibits similar incoherence. As with the US, it is possible to identify three sources of incoherence. The first concerns the different legal treatment of the same practice depending on which section of the Treaty on the Functioning of the European Union ("TFEU") is applied. The second relates to the different treatment of practices having similar economic effects based on superficial differences in the challenged conduct. The third involves the still unclear interpretation of the concept of anticompetitive foreclosure. Clarifying these ambiguities is necessary for establishing a consistent framework of analysis, providing predictable standards for firms, and promoting consumer welfare.

An initial source of analytical incoherence has textual roots, although it is doubtful that the textual differences require the degree of analytical difference reflected in judicial decisions. The texts of the articles in the TFEU dealing with competition policy imply a different approach to the treatment of concerted or joint practices[54] on the one hand, and unilateral conduct on the other. This is reflected in two textual provisions that apply exclusively to concerted practices. First, under the Article 101.1, the provision relating to concerted practices, only agreements that "may affect trade between Member States and which have as their object or effect the prevention, restriction or distortion of competition within the common market" are considered anticompetitive. An assessment of foreclosure is intrinsically required. Second, even if a concerted practice triggers scrutiny under Article 101.1, Article 101.3[55] permits justifying any such practice on efficiency grounds.[56]

Article 102, dealing with unilateral conduct, refers to the illegality of an abuse of dominant position in the relevant market.[57] The treaty's text allows no ex post justification of a practice deemed abusive, nor does it

[54] By concerted practice we refer to the meeting of wills in the form of an agreement or other as opposed to the unilateral conduct deployed by a single undertaking.

[55] Article 101.3 of the TFEU: "The provisions of paragraph 1 may, however, be declared inapplicable in the case of: any agreement or category of agreements between undertakings, any decision or category of decisions by associations of undertakings, any concerted practice or category of concerted practices, which contributes to improving the production or distribution of goods or to promoting technical or economic progress, while allowing consumers a fair share of the resulting benefit, and which does not: (a) impose on the undertakings concerned restrictions which are not indispensable to the attainment of these objectives; (b) afford such undertakings the possibility of eliminating competition in respect of a substantial part of the products in question". This provision is further developed by the 'Commission Communication – Notice – Guidelines on the application of Article 81(3) of the Treaty', in,OJ 101, 27.4.2004, p. 97 2004).

[56] Case T-17/93. Matra Hachette SA v Commission of the European Communities. [1994] ECR II-00595 at para 85 ("[N]o anti-competitive practice can exist which, whatever the extent of its effects on a given market, cannot be exempted, provided that all the conditions laid down in Article 85(3) of the Treaty are satisfied and the practice in question has been properly notified to the Commission").

[57] Case 85/76 *Hoffmann-La Roche v Commission* [1979] ECR 461 at para 91.

require an analysis of anticompetitive effects. Justifications are permitted, if at all, in the threshold assessment of whether a practice is abusive at all.[58]

From this difference in the Treaty texts, courts have extrapolated significant consequences. The same or very similar practices could often be analyzed either as an abuse of dominance or as a concerted practice, with dramatically different results.[59]

European jurisprudence under Article 101 has followed a similar analytical distinction to the dichotomous categorization under US law of some restraints as hard core violations that are per se illegal and all other restraints that are adjudged under an effects-based rule of reason.[60] Reflecting Article 101's prohibition on restraints that restrict competition by either "object or effect," the European courts have developed separate analytical approaches for "restraints by object" and "restraints by effect." Since its earliest cases, the European Court of Justice, now Court of Justice of the European Union (CJEU), analyzed vertical restraints as possible restrictions of competition by effect rather than by object, unless a clear anticompetitive intent was present.[61] Practically, this meant that most vertical restraints were analyzed for their foreclosure effects when scrutinized under Article 101.

Not so under Article 102. Unlike in Article 101 cases, the European authorities did not feel compelled to look at the effects of a given practice once it had been tagged as an anticompetitive practice performed by a dominant firm.[62] The General Court (GC), formerly known as Court of First Instance, encapsulated this form-based approach in *Michelin II:* "[F]or the purposes of applying Article [102 TFEU], establishing the anti-competitive object and the anti-competitive effect are one and the same

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[58] AG JACOBS, 'conclusions in Case C-53/03, 28 October 2004- Syfait vs. GlaxoSmithKline', in 2004) at ¶ 72.

[59] Frank H. Easterbrook, *When Is It Worthwhile to Use Courts to Search for Exclusionary Conduct*', 2003 Colum. Bus. L. Rev, 345, 345 ("Aggressive, competitive conduct by any firm, even one with market power, is beneficial to consumers. Courts should prize and encourage it. Aggressive, exclusionary conduct is deleterious to consumers, and courts should condemn it. The big problem lies in this: competitive and exclusionary conduct look alike").

[60] This terminology, however, is not totally accurate. See RICHARD WHISH, COMPETITION LAW 130-31 (Oxford University Press 2009) (discussing the danger of importing those terms from US law).

[61] Case 56/65 *Societé Technique Minière* [1966] ECR 235 at 248 ("[I}n order to decide whether an agreement containing a clause 'granting an exclusive right of sale' is to be considered as prohibited by reason of its object or its effect, it is appropriate to take into account in particular the nature and quantity, limited or otherwise, of the products covered by the agreement, the position and importance of the grantor and the concessionaire on the market for the products concerned, the isolated nature of the disputed agreement or, alternatively, its position in a series of agreements, the severity of the clauses intended to protect the exclusive dealership or, alternatively, the opportunities allowed for other commercial competitors in the same products by way of parallel re-exportation and importation.").

[62] *See* Whish, *supra* n. xxx att 194 on the lack of a clear definition about what constitutes an abuse: "A quite different approach to defining abuse would be to suggest that it consists of all those practices that the Community Courts have found to be abusive in the cases that have come before them".

thing...If it is shown that the object pursued by the conduct of an undertaking in a dominant position is to limit competition, that conduct will also be liable to have such an effect.*"*[63] This interpretation is particularly dangerous in the absence of a possible exemption mirroring the one contained in Article 101.3, since even restrictions of competition by object can theoretically be exempted under that escape valve. If there are no genuine *per se* rules under Article 101, it is hard to see the justification for such rules under Article 102.[64]

The *Delimitis* decision of the CJEU articulates a broad foreclosure test for exclusionary vertical restraints under Article 101.[65] The European Commission challenged an exclusive dealing contract between a brewery and a reseller exploiting an outlet owned by that brewery. The retailer agreed to carry only the brewer's products (beer and soft drinks). This form of agreement was common in the industry and was only one of many similar contracts whose cumulative effects on competition in the EU market the Court considered. The Court established that, given that competitors' access to the market of beer consumption was the key issue at stake, the effects of this bundle of agreements depended mainly on the number of tied outlets in a national territory, the duration of the commitments, and the quantities involved in comparison with those sold by non-tied outlets.[66] The Court articulated a two-part test for such agreements: (1) access, whether the agreement foreclosed market participation by rivals, and (2) significance of the agreement at issue.[67] There was a clear conception that without market power the efficiencies associated with a vertical restraint would outweigh any anticompetitive effect, and that even in a context where similar agreements might have compromised other players' ability to compete in the relevant market, the agreement at issue was to be prohibited only if it itself significantly contributed to this foreclosure.

Delimitis provided a clear path for subsequent regulatory activity of the European Commission in similar Article 101 cases. When issuing block exemptions for various categories of restraints of trade unlikely to harm competition, the Commission has hewed to a foreclosure-based approach. Under the *De minimis* Notice,[68] agreements by small and medium-sized undertakings below a given market-share threshold are deemed to lack an appreciable impact on intra-community trade or competition and therefore do not fall under Article 101.1 of the TFEU provided that they do not touch upon certain core restrictions of competition by object.[69] The Vertical

[63] Case T-203/01 *Michelin v Commission (Michelin II)* [2003] ECR II-4071 at ¶ 241.
[64] Denis Waelbroeck, *Michelin II: A Per Se Rule Against Rebates by Dominant Companies*?, 1 Journal of Competition Law and Economics 153 (2005)
[65] Case C-234/89 Stergios Delimitis v Henninger Bräu AG. [1991] ECR I-00935
[66] Id. at para 19
[67] Id. at para 76
[68] EUROPEAN COMMISSION, 'Commission Notice on agreements of minor importance which do not appreciably restrict competition under Article 81(1) of the Treaty establishing the European Community (de minimis)', in,Official Journal C 368 , 22/12/2001 P. 0013 - 0015 2001).
[69] Id. at in.para 11

Block Exemption Regulation (vBER)[70] refers to categories of vertical agreements that, falling within the scope of Article 101.1, qualify for an exemption under Article 101.3 of the TFEU as they are presumed to satisfy its conditions with a sufficient degree of certainty. The key element of the presumption that the added efficiencies will outweigh any possible anticompetitive effects is again the lack of foreclosing effects. When neither the supplier nor the buyer have more than 30% market share and the agreement does not include any non-indispensable obligations or hard-core restrictions,[71] the block exemption applies.

Although the effects-based approach under Article 101 works relatively well when the Commission considers Article 101 to apply, trouble shows up with the initial question of which treaty provision to apply. The recently reformed Guidelines on Vertical Restraints (GVR)[72] propose a four-step, effects-based assessment to determine whether an undertaking falls within the vBER[73]. However, the Guidelines specify that, in principle, dominant undertakings cannot qualify for an exemption.

The Guidelines' implicit assumption is that vertical restraints by dominant firms shift into Article 102 territory, which entails a significant analytical disconnect from Article 101 analysis. The classic definition of abuse of dominance under Article 102, established by the CJEU in *Hoffmann-LaRoche*, does not turn upon efficiency or market foreclosure but rather upon a formalistic view of what constitutes competition on the merits.[74] This implies a rather awkward task considering that an anticompetitive practice under Article 102 might be totally legitimate in the absence of a finding of dominance. The European Community Courts have

[70] EUROPEAN COMMISSION, 'Commission Regulation (EU) No 330/2010 of 20 April 2010 on the application of Article 101(3) of the Treaty of the Functioning of the European Union to categories of vertical agreements and concerted practices', in,OJ L 102, 23/04/2010 P. 0001–0007 2010).

[71] The detailed list of incompatible provisions is contained in Articles 4 and 5 of the vBER.

[72] EUROPEAN COMMISSION, 'Commission notice - Guidelines on Vertical Restraints', in,Official Journal C 130, 19/05/2010 P. 0001 - 0046 2010).

[73] The proposed methodology involves a four-step assessment including (1) an initial definition of the relevant market in order to assess (2) if the agreement falls within the scope of application of the vBER. If the relevant market share is above 30% or, for any other reason, the presumption of compliance established in the vBER does not apply to the agreement at issue, the next step (3) will establish if the agreement restricts competition in the sense of Article 101.1 of the TFEU. Should the agreement fall within the scope of application of Article 101.1, it will be determined (4) whether this restriction might be outweighed by its associated efficiencies in the sense of Article 101.3.

[74] Case 85/76 *Hoffmann-La Roche v Commission* at ¶ 91 ("[T]he concept of abuse is an objective concept relating to the behavior of an undertaking in a dominant position which is such as to influence the structure of a market where, as a result of the very presence of the undertaking in question, the degree of competition is weakened and which, through recourse to methods different from those which condition normal competition in products or services on the basis of the transactions of commercial operators, has the effect of hindering the maintenance of the degree of competition still existing in the market or the growth of that competition").

undertaken the task of defining certain categories and subcategories of practices considered abusive if performed by a dominant undertaking.

An example of this categorization is provided by the non-cost related analysis of a price-based practice such as rebates, also analyzed within Article 101 under the heading of single-branding obligations as a quantity-forcing device. In one of its early cases on abuse of dominance, *Suiker Unie*, the CJEU established a general distinction leading to the dualist understanding of quantity rebates as cost-justified and thus procompetitive versus loyalty-enhancing rebates as anticompetitive: "[T]he fidelity rebate, unlike quantity rebates exclusively linked with the volume of purchases from the producer concerned, is designed through the grant of a financial advantage to prevent customers from obtaining their supplies from competing producers."[75] This formalistic categorization has prevailed from initial cases characterized by the superdominant position of the incumbents –upon which the inference of market foreclosure was built–up until recent cases involving more controversial findings of dominance.[76] In 2003, the General Court categorically stated that "it may be inferred generally from the case-law that any loyalty-inducing rebate system applied by an undertaking in a dominant position has foreclosure effects prohibited by Article [102 of the TFEU]."[77]

This position presents a problem of over-all coherence as it leads to two different standards for the assessment of rebates depending on the Article under which they will be tackled. Thus, while the effects-based assessment performed under Article 101 takes into account the efficiencies associated to rebate systems in the framework of single branding vertical restraints–hold-up, adverse selection, and moral hazard problems[78]–the inference of foreclosure in *Michelin II* was based upon the assumption that, other than a strict cost-related justification, no efficiencies can come from such a system when enabled by a dominant undertaking. Proving cost justification is extremely difficult,[79] which means that dominant firms face a nearly irrebutable presumption that certain practices foreclose and lack any efficiency justification.

The second source of analytical confusion arises from the interaction between the categorization inherent to the form-based approach under

[75] Case Joined cases 40 to 48, 50, 54 to 56, 111, 113 and 114-73 *Coöperatieve Vereniging "Suiker Unie" UA and others v Commission of the European Communities* [1975] ECR-1663 ¶ 518.

[76] Chronological table of the market shares of the incumbents in cases of rebates defended before the European Community Courts:

Suiker Unie	Hoffmann	Michelin	BPB	Hilti	Tetra Pak	Portuguese Airports	Irish Sugar	Michelin II	BA
90-95%	47-100%	57-65%	90-96%	70-80%	90%	Legal Monopoly	90%	>50%	±40%

[77] Case T-203/01 *Michelin v Commission (Michelin II)* at para 65

[78] The GVR establish that single branding obligations of up to 80% of a customer's requirements will be lawful if no longer than five years.

[79] This defense has never held yet as the European Community Courts have consistently considered the cost-related justification put forward by the firms as too vague. See Case T-203/01 *Michelin v Commission (Michelin II)* at para 108; Case T-219/99 *British Airways v. Commission* [2003] ECR II-5917at para 285.

Article 102 and the effects-based analysis under Article 101. When a joint assessment of the same practice is performed under both norms, the divergences become apparent, thus ultimately leading to the application of different standards within Article 102 itself to practices having very similar economic effects. The General Court provided an example of this internal lack of coherence through two decisions delivered within less than one month but adopting a dissimilar methodology for the assessment of single branding obligations, one in the form of price-based conduct (rebates) and another in the form of non-price-based conduct (exclusive dealing).

In the *Michelin II* case previously discussed, the court found that loyalty-inducing rebates categorically have foreclosure effects when undertaken by dominant firms. In *Van den Bergh Foods*[80], however, the court faced a firm with an even greater market share than in *Michelin II* and yet applied a foreclosure-based effects analysis. The apparent difference was that the *Van den Bergh* restraint did not directly involve price. The largest producer of ice cream in Ireland (HB) held a 75% market share of the impulse ice cream market and distributed its product through 40% of ice cream retailers. The producer made available freezer cabinets free of cost but specified that rivals' ice cream could not be stored in its freezers. The General Court found that this constituted a common practice in the industry[81] that did not foreclose competitors in an absolute way, as retailers could in theory sell other brands of ice cream, but acted as an entry barrier that made rivals' access to the market difficult[82] because of the limited space available in the outlets and the 'unavoidable trade partner' status of HB. The Commission had condemned the practice both under Article 101 and 102 as, on the one hand, the exclusivity clause contained in the agreements could not be exempted on the grounds of Article 101.3, and, on the other, it also constituted an abuse of its dominant position in as far as it induced retailers not to have other freezers in their outlets by offering them HB's for free. The Court upheld the Commission Decision but, to do so, it carried out a detailed analysis of the market structure as well as of the possible efficiencies of HB's strategy in order to establish the foreclosure effects associated with it. Even if the Court accepted that an untied demand of 60% of retailers did not allow it to automatically assume the existence of anticompetitive foreclosure in the market, the analysis of the economic and legal context of the agreement in the sense of *Delimitis* as well as the presence of cumulative effects of similar contracts to which HB's agreements contributed significantly, were considered likely to foreclose actual or potential competitors from the market of impulse ice cream.

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[80] Case T-65/98 Van den Bergh Foods v Commission [2003] ECR II-4653 para 86 and 104

[81] Id. at ¶ 18. Only 17% of Irish retailers had non-exclusive freezers opposed to 83% of outlets where a supplier had provided freezers with an exclusivity clause. HB had provided 67% of these freezers. The 40% tied demand accounted for those retailers that only had HB freezers meaning that the extra 27% referred to retailers with more than one exclusive freezer.

[82] Id. at ¶ 63.

The inconsistencies relating to the treatment of unilateral conduct made clear that there was a need for reassessing the application of Article 102.[83] In 2005, former European Commissioner Neelie Kroes announced the intention to evolve from the traditional form-based approach to dominance towards a case-by-case analysis of the actual or likely effects of dominant firm conduct. The main tool for its implementation was to be the construction of a specific theory of foreclosure in order to evaluate whether a given practice had indeed a distorting effect in the market, rather than simply foreclosing one or two less efficient competitors.[84] Subsequently, DG Competition published a discussion paper[85] calling for a reinterpretation of the definition provided by the ECJ in *Hoffmann* that had served to substantiate the previous form-based approach.

The Guidance Paper[86] announced that the Commission's Article 102 enforcement priorities would be the assessment of "Anticompetitive Foreclosure" as its central element. This concept is defined as "a situation where effective access of actual or potential competitors to supplies or markets is hampered or eliminated as a result of the conduct of the dominant undertaking whereby the dominant undertaking is likely to be in a position to profitably increase price to the detriment of consumers."[87] The factors taken into account by the Commission to assess the existence of Anticompetitive Foreclosure will be (1) the strength of the incumbent's position; (2) the conditions of the relevant market, particularly the conditions of entry and expansion; (3) the position of the competitors, customers and input suppliers; (4) the extent of the allegedly abusive conduct; and (5) possible evidence both of foreclosure as well as direct evidence of any exclusionary strategy developed by the incumbent.[88] Furthermore, these factors will be supplemented by more detailed criteria governing different species of exclusionary conducts.

Overall, the paper makes a good deal of progress by granting similar treatment to price and non-price based conduct, thus recognizing their similar economic effects. Although it continues to deals with single and multi-product rebates under the respective headings of exclusive dealing and tying and margin squeeze as a instances of refusal to deal, it lays down cost-based analyses for price-based conduct. For example, the predatory pricing, single and multi-product rebates and margin squeeze tests, all focus

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[83] 'EAGCP Report on An economic approach to Art. 82 (July 2005)', in.

[84] NEELIE KROES, 'SPEECH/05/537 Preliminary Thoughts on Policy Review of Article 82', (2005) Speech at the Fordham Corporate Law Institute,

[85] DG COMPETITION, 'Discussion Paper on the application of Article 82 of the Treaty to exclusionary abuses', in 2005).

[86] EUROPEAN COMMISSION, 'Guidance on the Commission's Enforcement Priorities in Applying Article 82 EC Treaty to Abusive Exclusionary Conduct by Dominant Undertakings', in,Official Journal C 045 , 24/02/2009 P. 0007 - 0020 2009).

[87] Id. at ¶ 19 (citing ¶ 11 for the intended meaning of "to increase prices": the expression "increase prices" includes the power to maintain prices above the competitive level and is used as shorthand for the various ways in which the parameters of competition - such as prices, output, innovation, the variety or quality of goods or services - can be influenced for the profit of the dominant undertaking and to the detriment of consumers.").

[88] Id. at in. para 20

on the potential for excluding equally efficient competitors by forcing such competitors to price below cost in order to compete. Departing from the methodology applied by the ECJ to predatory pricing in the *AKZO* case,[89] the Commission has moved to cost benchmarks more suitable to tackle the peculiarities of formerly regulated markets and new high-tech industries.[90]

Alas, despite the Guidance Paper's progress in moving vertical restraints towards a more consistent economic framework, analytical difficulties and confusions persist. For one, it is uncertain how the European courts will receive the Commission's new approach.[91] More fundamentally, there remains significant doubt as to the consistency of the Guidance Paper's central concept—anticompetitive foreclosure.

The trouble arises from the Commission's insistence in the Guidance Paper that its approach to anticompetitive foreclosure is not really new but was already used in prior cases such as *Microsoft*.[92] In *Microsoft,* the Commission conceded that it needed to prove foreclosure[93] and the General Court upheld its decision.[94] The problem, however, was the construction given to the foreclosure requirement. Microsoft argued that the claim of foreclosure was entirely speculative, indeed, belied by a factual record showing an increase in the number and use of alternative media players.[95] The Court, however, countered that this "practice allowed Microsoft to obtain an unparalleled advantage with respect to the distribution of its product and to ensure the ubiquity of Windows Media Player on client PCs throughout the world, thus providing a disincentive for users to make use of third-party media players and for OEMs to pre-install such players on client PCs."[96] Far from requiring proof of actual foreclosure, the court simply assumed it from the nature of the practice. Should the Guidance Paper result in an approach akin to that employed by the General Court in

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[89] Case C-62/86 *AKZO v Commission* [1991] ECR I-3359 at para 71 and 72: Prices below Average Avoidable Costs (AAC) will presumably be illegal while Prices above Average Avoidable Costs but below Average Total Costs (ATC) will be illegal if they are part of a plan to exclude competitors.

[90] The cost benchmarks used refer to in the paper are Average Avoidable Cost (AAC) rather than AVC and Long Run Average Incremental Costs (LRAIC) rather than ATC.

[91] See GIORGIO MONTI, 'Article 82 EC: what future for the effects-based approach?', (2010) 1(1), 2-11 Journal of European Competition Law & Practice,

[92] EUROPEAN COMMISSION, 'Antitrust: Guidance on Commission enforcement priorities in applying Article 82 to exclusionary conduct by dominant firms – frequently asked questions ', in MEMO 08/761 2008) at Part 1 *(Why this Guidance Paper?).*

[93] Case COMP/C-3/37.792 *Microsoft* Commission Decision [2004] at ¶¶ 841.

[94] Case T-201/04 Microsoft v Commission [2007] ECR II-3601 at ¶¶ 866-867.

[95] Id. at ¶ 1006 ("Microsoft claims that the average number of media players per person used each month rose from 1.5 at the end of 1999 to 2.1 in 2004. The Commission's contention that the number of users of Windows Media Player is increasing is irrelevant; what matters is whether the number of users of other formats is sufficient for content providers to find it worthwhile to encode their products in those formats. Microsoft also disputes the relevance of the analogy which the Commission draws with Netscape Navigator.").

[96] Id. at ¶ 1054.

Microsoft, little progress would have been made in transitioning away from a formalistic approach toward an economically functionalist approach.

That would be regrettable, because good economic tools for evaluating foreclosure questions already exist within the praxis of EU competition law, specifically in the EC's Guidelines on non-horizontal mergers. In the section on non-coordinated anticompetitive effects of vertical integration, the Guidelines analyze anticompetitive foreclosure under a two-part test consisting of a definition of *foreclosure* as well as its *anticompetitive* component:

> A merger is said to result in foreclosure where actual or potential rivals' access to supplies or markets is hampered or eliminated as a result of the merger, thereby reducing these companies' ability and/or incentive to compete. Such foreclosure may discourage entry or expansion of rivals or encourage their exit. Foreclosure thus can be found even if the foreclosed rivals are not forced to exit the market: It is sufficient that the rivals are disadvantaged and consequently led to compete less effectively. Such foreclosure is regarded as anti-competitive where the merging companies—and, possibly, some of its competitors as well—are as a result able to profitably increase the price charged to consumers.[97]

Significantly, the Guidelines distinguish between two types of foreclosure entailing different competitive problems: input foreclosure and customer foreclosure. While input foreclosure might result in raising rivals' costs by restricting the access of downstream competitors to some necessary input, customer foreclosure will occur when upstream rivals' access to customers is precluded. However, in terms of consumer harm, both scenarios require balancing of the efficiencies associated with the merger and their possible anticompetitive effects. In both cases, the three factors to be considered simultaneously will be (1) the ability and (2) the incentives to foreclose –up or downstream– competitors, as well as (3) the likelihood of this foreclosure to have a "significant detrimental effect on competition"[98] where pro and anticompetitive effects will be balanced.

In the case of input foreclosure, upstream market power, while being a pre-condition for establishing the ability to foreclose of the merged firm, will not necessarily imply an associated incentive to foreclose the downstream market. This follows from the fact that the incentives to foreclose will depend on the over-all profitability of the merged firm, as there will be a trade-off between the profits lost in the upstream market by not selling to downstream competitors and those gained in the downstream market from expanding sales or increasing prices.[99] High margins in the upstream market and low ones downstream would disincentivize the firm to

[97] EUROPEAN COMMISSION, 'Guidelines on the assessment of non-horizontal mergers under the Council Regulation on the control of concentrations between undertakings', in,Official Journal C 265 , 18/10/2008 P. 0006 - 0025 2008). At para 29
[98] Id. at ¶ 32.
[99] Id. at ¶ 40-41.

enact any input foreclosure and vice versa. Therefore, an upstream monopolist already extracting all available profits will lack the incentive to foreclose downstream competitors regardless of its market power. On the other hand, a firm with high downstream market shares, particularly in combination with high margins, will be likely to benefit form increasing rivals' costs. Furthermore, the presence of exclusivity commitments may represent an ambiguous factor to assess. While exclusive contracts between the downstream merging firm and other independent input suppliers can enhance the latter's ability to foreclose the downstream market, the fact that vertical integration may help to realign purchase patters freeing other input suppliers should also be considered.

For the assessment of customer foreclosure the main concerns will also be related with rising input prices but, in this case, as a consequence of the incapacity of upstream actual or potential rivals to achieve minimum efficient scale of production. This might be a result, for instance, of the insufficient economies of scale or scope –should these be relevant– associated with a larger client base. Moreover, the lack of expected returns can further reduce the upstream competitor's willingness to invest in becoming more efficient. Nevertheless, this possible foreclosure may lead upstream rivals to counter-strategies such as more aggressive pricing in order to maintain sales in the downstream market. In this sense, the incentives to engage in customer foreclosure will again depend on its over-all profitability. Accordingly, a less efficient upstream division of the integrated firm will entail higher costs of diverting input from other suppliers. Further, the higher the market share of the downstream division, the more the benefits to be captured from an increase in downstream prices as a result of the raise of upstream rivals' costs.[100]

In sum, the Guidelines represent a comprehensive functionalist analysis of the conditions and effects of anticompetitive foreclosure. This implies not only that all associated efficiencies are specifically recognized by and generally referred to in the framework of vertical integration, but also that the positive effects of practices such as tying and bundling are taken into account in analyzing conglomerate mergers.[101]

Unfortunately, the Guidelines' approach ends with mergers. In principle, nothing prevents the application of the economically rigorous Guidelines approach to the question of likely foreclosure from vertical or conglomerate integration, but then the subsequent application of very different analytical criteria under either Article 101 or 102 to the question of whether the recently merged firm is engaging in exclusionary vertical restraints. Under current EU principles, analytically indistinct foreclosure questions may be analyzed very differently depending on the happenstance of whether they are classified as mergers, anticompetitive agreements, or an abuse of dominance.

[100] Id. at ¶ 69-70.

[101] Id. at ¶ 93 ("Tying and bundling as such are common practices that often have no anticompetitive consequences. Companies engage in tying and bundling in order to provide their customers with better products or offerings in cost-effective ways.").

Like its US analogue, EU competition law already contains most of the analytical resources necessary for a coherent exclusionary vertical restraints policy. Also as in the US, EU law applies these analytical resources sporadically and inconsistently. Both systems stand in dire need of economic systematization.

III. A NORMATIVE FRAMEWORK FOR EVALUATING EXCLUSIONARY VERTICAL RESTRAINTS

Properly understood, all instances of exclusionary vertical restraints—whatever their form—are anticompetitive because they foreclose the opportunity of some rival of one of the contracting parties—whether the party granting or receiving the discount—to operate efficiently in the relevant market. At its core, all exclusionary vertical restraints analysis should converge upon a simple pairing of concepts: foreclosure and substantiality. The first question to be answered is whether the contractual practice at issue forecloses *any* portion of the relevant market. If it does not, the analysis should be at an end and the contractual practice lawful. If the contractual practice does foreclose some share of the relevant market, the next question is whether the share of the market foreclosed is substantial. Here, substantiality should be given an economic, functional definition: foreclosure is "substantial," and hence prima facie unlawful, if it denies rivals a reasonable opportunity to compete for resources (whether customers or inputs) that would be necessary for the rival's efficient operation in the market.

A. Foreclosure

We take as our point of departure an oft-cited observation from then-Judge Breyer's opinion in *Barry Wright v. ITT Grinnell*[102] that "virtually every contract to buy 'forecloses' or 'excludes' alternative sellers from *some* portion of the market, namely the portion consisting of what was bought."[103] Since all contracts "foreclose," "we are to take into account both the extent of the foreclosure and the buyer's and seller's business justifications for the arrangement."[104] The apparent import of such an analytical approach would be to eliminate any independent importance for the foreclosure element of exclusionary vertical restraints cases and reduce the analysis to the substantiality prong.

Such was surely not Judge Breyer's intention. In an earlier part of the opinion, Breyer rejected the plaintiff's claim that Pacific Scientific's discounts were below-cost and therefore predatory.[105] Once Breyer found the discounts to be above cost (both incremental and total), he concluded

[102] Barry Wright Corp. v. ITT Grinnell Corp., 724 F.2d 227 (1st Cir. 1983).
[103] *Id.* at 236.
[104] *Id.* at 236-37.
[105] *Id.* at 231-36.

that the price cut could "not be found anticompetitive or exclusionary,"[106] regardless of how much of the market was affected. In other words, Breyer refused to perform a substantiality function on the price discounting claim unless it was first found to "foreclose" some share of the market by making it impossible for competitors to match the defendant's prices.

Properly understood, the foreclosure prong of "substantial foreclosure" analysis should serve an independent threshold function. It should serve to make potentially unlawful only those vertical restraints that prevent competitors from competing on the merits. To state it somewhat more formally, a contract or contractual provision should be deemed to "foreclose" some share of the market only when it prevents an equally efficient competitor from profitably offering its own set of contractual terms that the customer reasonably might chose in lieu of the defendant's terms for some increment of the market's output. We shall refer to this interpretation of "foreclosure" as the "reasonable sales opportunity" test.

Under our formulation of the test, unlike in the above-quoted language from *Barry Wright*, most run-of-the-mill contracts would not foreclose at all. Suppose that the defendant offers to sell a customer 100 tons of coal, which constitute the customers' coal requirements for the next year. Following the *Barry Wright* formulation, one could say that the contract, once accepted, "forecloses" rivals' ability to makes sales to that customer for the year, since it will not care to purchase any further coal once it has satisfied its requirements. But if other sellers in the market had a reasonable opportunity to bid for the same business and simply lost the bid because their own bids were less attractive to the buyer, then it is not sensible to speak of the contract as "foreclosing" any business at all. Under our reasonable sales opportunity test, since every other seller in the market was reasonably able to compete for the same business, there is no foreclosure.

Under our interpretation of foreclosure, not even every exclusive dealing contract forecloses a portion of the market. If an exclusive dealing contract covers a sufficiently small, and hence contestable, share of the market such that any rival in the market could reasonably offer its own exclusive dealing contract, there is no foreclosure. Suppose, for example, that defendant offered an exclusive supply relationship for all of the buyer's requirements for a two year period. The buyer's share of the market is 2%. If even small rivals of the competitor are able to offer a competitive exclusive deal for a two-year period that has a reasonable chance of being accepted, then we would not deem the contract to foreclose any of the market.

As just discussed, a vertical relationship such as a contract or sale may not foreclose rivals if the rivals had a reasonable opportunity to compete for the customer's business before the consummation of the contract or sale. The "every contract forecloses" maxim is also capable of confusing things in another sense—with respect to the rival's opportunities after its

[106] *Id.* at 236.

competitor has contracted with, or sold to, the customer. The "every contract forecloses" maxim assumes a circumstance where the customer is willing to purchase only a fixed unit of the good or service from a single seller, as might be the case of a commuter shopping for an automobile or a retiree looking for a lawyer to prepare her will. But, in many circumstances, the customer may be willing to purchase generally substitutionary goods from multiple suppliers, assuming that the goods are not perfect substitutes and the marginal utility provided by each purchase exceeds the customer's reservation price. In such circumstances, the first contract of sale may diminish the likelihood that the customer will purchase the second good, but not foreclose it altogether since the second seller may still have an opportunity to demonstrate that the marginal utility of the second purchase makes it worth the customer's while.

It is important to keep this latter qualification in mind, since exclusionary vertical restraints challenges often occur in markets where a dominant incumbent has longstanding relationships with most of the major customers in the market and a new entrant is unlikely quickly to persuade customers to abandon their dealing with the incumbent. If the new entrant has a reasonable opportunity to make sales to customer that do not replace the incumbent sales—and, hence, to expand the market—the incumbent's vertical relationships have no foreclosing effect. To give an illustration, Nielsen Media Research is at present the sole supplier of syndicated television audience ratings in most local television markets. However, until its exit from the business in 1993, Arbitron (which currently supplies radio ratings) competed with Nielsen in local television ratings.[107] During much of the time that the two companies competed in local television ratings, substantially over half of all local television stations purchased ratings from both Arbitron and Nielsen.[108] As to these customers, at least, neither supplier's vertical relationship had even an *ex post* foreclosing effect on the other supplier since the customers were willing to purchase both companies' offering.

Of course, exclusive contracts entered into by dominant firms often do foreclose competitors. For example, suppose that customers view it as indispensable to carry at least some of the dominant firm's products on their shelves. In that context, small rivals may not have a reasonable opportunity to match the dominant firm's exclusive offer, since they cannot compete over the non-contestable portion of the dominant firm's sales.[109] Or, the dominant firm's exclusive offer may be for such a very large piece of business that smaller rivals are unable to offer a comparable supply commitment. Or the dominant firm may have locked up the market in long-

[107] H.M. BEVILLE, JR., AUDIENCE RATINGS 64-66 (1988); Business Wire, *Arbitron Discontinues Syndicated Television & Ratings Service*, (Oct. 18, 1993).
[108] Broadcasting & Cable, *Ailing Oligopoly: TV Station Ratings Business* (April 23 1990) (reporting that in top 50 markets percentage of stations subscribing to both Nielsen and Arbitron had declined from 80 to 60 percent);
[109] We return to the idea of "non-contestable" shares and "unavoidable trading partners" with our discussion of the *Intel* case in Part IV(A).

term exclusive contracts before the new rivals entered the market, in which case they did not have a reasonable chance of entering into ex ante competition for the contract. These are all examples of circumstances where a rival might be able to demonstrate the absence of a reasonable sales opportunity for a particular portion of the market, and hence some degree of foreclosure.

Foreclosure can arise from a wide variety of vertical contractual practices. In particular, both price and non-price contractual terms can deny rivals reasonable sales opportunities. We have already seen examples of non-price contractual terms—such as exclusivity commitments—that foreclose. Similarly, some tying arrangements—where the buyer must purchase from the defendant a product that it otherwise might purchase from another supplier if the customer wishes to purchase a monopoly product sold by the defendant—foreclose equally efficient rivals. But a wide variety of predatory or discriminatory discounting and rebating functions can have similar effects.

The most obvious example of a "foreclosing" pricing policy is a predatory price. When a dominant firm offers buyers a below-cost price, equally efficient rivals are unable to compete for sales to any customers offered the predatory prices. The same is true of bundled discount schemes that do not result in a predatory price on the package, but would require a competitor that sold only one of the products covered by the bundle to offer a below-cost price in order to make the customers willing to accept the rival's offer and thereby forego the package discounts.[110] Conversely, if the rival is able to match the bundled discounts by giving an equivalent discount in the competitive market and doing so without having to price below cost, then the rival is not foreclosed from making a sale.[111] Thus, although single-product predatory pricing and bundled discounting require somewhat different computations to determine whether the equally efficient rival would be foreclosed from selling above cost in response to the dominant firm's pricing offer,[112] the foreclosure question to be asked in both cases is analytically identical.

The same observation should also hold for secondary line price discrimination. If a manufacturer charges different wholesale prices to two competitor retailers, the discriminatory price could make it impossible for the disadvantaged firm profitably to meet its competitor's price to downstream customers. In such a circumstance, the reasonable sales opportunity test would hold that the discriminatory price resulted in foreclosure of a percentage of the market corresponding with the volume of the goods sold to the advantaged retailer. Conversely, if the discriminatory price merely made sales more profitable for one retailer than another, it

[110] *See, e.g.*, Cascade Health Solutions v. PeaceHealth, 515 F.3d 883 (9th Cir. 2008).
[111] *Id.*
[112] *See* Daniel A. Crane, *Mixed Bundling, Profit Sacrifice, and Consumer Welfare*, 55 Emory L. J. 423 (2006).

would not foreclose the retailer's sales opportunity in the downstream market.

Tying arrangements can also create foreclosure, as the general test for tying already recognizes.[113] If the seller has market power in the tying product and requires the seller to purchase the tied product if it wants to purchase the tying product, then rivals who make only the tying product may be denied a reasonable opportunity to compete for some segment of sales in the tied market. Conversely, where all firms selling in the tied market also make sales in the tying market, the tying practice results in no foreclosure since firms can respond to the tying firm's tied demand by offering their own package sales of both products.

We have focused thus far on foreclosure of customers, but the same test can be applied—with only a slightly different form of words—to input foreclosure.[114] Instead of a reasonable sales opportunity test, we would ask whether the practice—whether exclusive input acquisition, predatory overbidding, or other input-oriented restraint—denied rivals a reasonable purchase opportunity. For example, an output agreement that commits a supplier to sell all of its output to a particular buyer should not be deemed to foreclose if rivals had a reasonable opportunity to compete for the output contract. Conversely, if rivals could not reasonably compete for the output contract, for example because their own requirements were likely to be smaller than the seller's output, then we would find the presence of foreclosure and move to the substantiality prong.

B. Substantiality

Foreclosure is not, by itself, concerning. Although we disagree with Judge Breyer's broad dictum that every contract forecloses, many forms of ordinary commercial contract meet our reasonable sales opportunity test and hence foreclose. Nonetheless, foreclosure should not be considered problematic unless it is "substantial," or "anticompetitive" in EU terms. Substantiality in this context should be given a functional, economic definition.

Once a plaintiff has identified practices that "foreclose" competitors, it is necessary to ascertain whether the foreclosure accounts for such a large percentage of the market that the survival of rivals is threatened. The foreclosure percentage may arise from a single practice or from the cumulative effect of several foreclosing practices. For example, a dominant firm might use a combination of tying contracts covering 20% of the market, predatory prices covering another 30% of the market, and exclusive dealing contracts covering yet another 10% of the market to foreclose 60% of the market.[115] In such a case, the same substantiality question should be

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[113] *Jefferson Parish*, 466 U.S. at 16 (discussing foreclosure requirement).

[114] Michael A. Salinger, *Vertical Mergers and Market Foreclosure*, 103 Q.J. ECON. 345, 346 (1988).

[115] *See generally* Daniel A Crane, *Does Monopoly Broth Make Bad Soup?*, 76 Antitrust L. J. 663, 670-72 (2010).

asked as in a case where a single practice foreclosed 60% of the market. The form of foreclosure should not affect the determination of substantiality.

Extant case law provides little economically useful analytical tools on the meaning of substantiality. Take, for example, the leading articulation in the seminal *Tampa Electric* case:

> To determine substantiality in a given case, it is necessary to weigh the probable effect of the contract on the relevant area of effective competition, taking into account the relative strength of the parties, the proportionate volume of commerce involved in relation to the total volume of commerce in the relevant market area, and the probable immediate and future effects which pre-emption of that share of the market might have on effective competition therein.[116]

US and EU courts and competition authorities typically fall back on percentages, holding for example that "foreclosure levels of less than 30 or 40 percent are not a substantial share."[117] But such market share numbers, picked from the air, are utterly arbitrary from an economic perspective. Whether foreclosure is "substantial" in an economic sense depends on whether the quantity of the foreclosure prevents rivals from functioning efficiently in the market. Ten percent foreclosure might be enough to drive competitors out of one market whereas foreclosure of seventy percent might be perfectly consistent with vibrant competition in another.

In keeping with our reasonable sales opportunity definition of foreclosure, we propose a "reasonable survival opportunity" test for substantiality. Under this test, market foreclosure is not problematic unless an equally efficient rival would lack a reasonable opportunity to obtain a sufficient share of the non-foreclosed portion of the market to reach minimum viable scale.

The first step in the substantiality analysis is to identify the minimum viable scale necessary to compete in the market. Minimum viable scale, a familiar concept from horizontal merger analysis,[118] equals the total sales a

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[116] *Tampa Elec.*, 365 U.S. at 329. Under EU law very similar elements are suggested to evaluate anticompetitive foreclosure. *See supra* footnote xxx.

[117] *E.g.*, *Midwest Agency Servs., Inc. v. JP Morgan Chase Bank, NA*, No. 09-165-DCR, 2010 WL 935450, at *6 (E.D. Ky. March 11, 2010). On the European side, see the recent decision of the European Commission on the Case COMP 39.386—Long Term Electricity Contracts France (2010).

[118] In the U.S., minimum viable scale has also been used in telecommunications regulation. *See Comcast Corp. v. FCC*, 579 F.3d 1, 4 (D.C. Cir. 2009). In Europe several instruments use the concept of minimum efficient scale in order to perform a foreclosure assessment. See the Commission Communication—Notice—Guidelines on the Application of Article 81(3) of the Treaty, ¶ 76; Commission Guidelines on the Assessment of Non-Horizontal Mergers Under the Council Regulation on the Control of Concentrations Between Undertakings ¶ 63; Commission Guidance on the Commission's Enforcement Priorities in Applying

new entrant would need to reach its hurdle rate (a sufficient rate of return to justify the investment) on its invested capital.[119] So long as a firm is operating at or above minimum viable scale, foreclosure of some percentage of the market does not threaten its market participation, even if it frustrates its ability to expand. However, partial market foreclosure strategies can eliminate a competitor's presence from the market altogether, particularly where fixed costs account for a very large percentage of total costs and firms therefore need a significant share of the market in order to cover their fixed costs.[120] For example, the computer operating systems market is characterized by increasing returns to scale and high fixed costs, hence by foreclosing even just a portion of the market, Microsoft may have been able to prevent new entry by equally (or more) efficient rivals.[121]

It should be noted that the relationship between minimum viable scale and the non-foreclosed share of the market depends on whether sales in the market are static, expanding, or shrinking. In an expanding market, minimum viable scale expressed as a percentage of the market will shrink over time whereas in a contracting market it will expand. Further, the entrant of a new firm into the market may have effects on the size of the market, to the extent that it is measured by revenues rather than units.[122] The entry of a new brand often evoke a drop in the equilibrium prices of existing brands in the market,[123] which means that the new entrant may have to fight for a piece of a shrinking pie.

Once a plaintiff identifies minimum viable scale and translates the revenue required into a market share percentage, the next substantiality question is to identify the probability that an equally efficient competitor in head-to-head competition with the defendant or other rivals in the market would secure a sufficient amount of business in the contestable (i.e., non-

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Article 82 EC Treaty to Abusive Exclusionary Conduct by Dominant Undertakings, ¶ 16. *See also* Case C-209/07, Competition Authority v. Beef Indus. Dev. Society Ltd. and Barry Bros. (Carrigmore) Meats Ltd. (2008), ECRI-0837 ¶ 32.

[119] *See* Steven C. Salop, *Measuring Ease of Entry*, 31 Antitrust Bull. 551, 563 (1986).

[120] See, e.g., Christodoulos Stefanadis, *Selective Contracts, Foreclosure, and the Chicago School View*, 41 J. L. & Econ. 429, 445-46 (1998); see also Willard K. Tom, David A. Balto & Neil Averitt, *Anticompetitive Aspects of Market-Share Discounts and Other Incentives to Exclusive Dealing*, 67 Antitrust L. J. 615, 625-26 (2000) (offering examples of foreclosure strategies that deny rivals ability to reach minimum viable scale).

[121] *Id.*

[122] U.S. Department of Justice & Federal Trade Commission, *Horizontal Merger Guidelines* § 1.41 (1992) (explaining that market share is to be measured by "[d]ollar sales or shipments . . . if firms are distinguished primarily by differentiation of their products" and by "[u]nit sales . . . if firms are distinguished primarily on the basis of their relative advantages in serving different buyers or groups of buyers").

[123] Suman Basroy & Dung Nguyen, *Multinomial Logit Market Share Models: Equilibrium Characteristics and Strategic Implications*, 44 Mang. Science 1396, 1396 (1998).

foreclosed) portion of the market to meet its minimum viable scale. Sometimes, the rival or rivals are already operating at minimum viable scale despite the foreclosure, in which case the answer to the substantiality question is easy. But many vertical restraints cases concern markets with a longstanding dominant incumbent and a new entrant that has not yet reached minimum viable scale. Such cases require making some assessment about an equally efficient competitor's likelihood of success in the non-foreclosed segment of the market.

In most case, that analysis requires an assessment of the probability that customers will switch from the incumbent supplier to the new entrant. Even in the non-foreclosed portion of the market, new entrants often face a considerable disadvantage in competing for business given entrenched brand preferences, loyalty to existing suppliers, and switching costs.[124] These incumbency advantages could potentially result in even small amounts of foreclosure excluding new entrants, since the new entrant's chances of winning business in the non-foreclosed segment of the market are low.

Suppose, for example, a market in a defendant monopolist has exclusive contracts foreclosing 60% of the market. Let minimum viable scale be equal to a 10% market share. Is the market substantially foreclosed to an equally efficient new entrant? In order to enter efficiently, a new firm must secure 10% of the market's business out of an available 40%. Put that way, it seems that the foreclosure is not substantial, because if we assign an equal probability to bidding success by the incumbent and the equally efficient new entrant, the new entrant should expect to obtain a 20% market share. But the new entrant's prospects for winning business in head-to-head competition with the incumbent may very well be less than 50%. For one, even in the non-foreclosed segment of the market, buyers may have strong loyalties to the incumbent firm or aversion to experimenting with a new supplier. If, for example, the new entrant's likelihood of winning new business in head-to-head competitive bidding is only 20%, then the new entrant should not expect that it will be able to reach minimum efficient scale upon entry. In that case, the foreclosure might be said to be substantial.

But it would be a mistake to find the presence of substantial foreclosure simply by focusing on the new entrant's probable market share following the first round of competition in the non-foreclosed portion of the market. Very few new entrants achieve minimum viable scale immediately upon entry.[125] Incumbency advantages erode over time, often quite rapidly.

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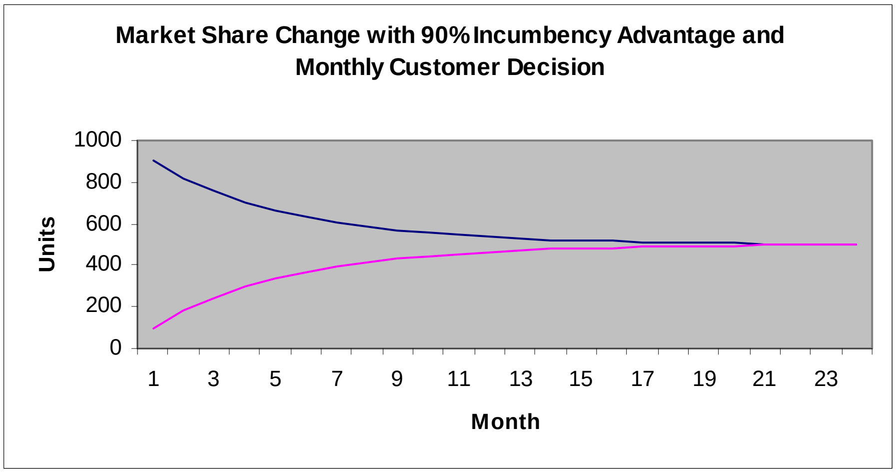
[124] *See* LEE G. COOPER & MASAO NAKANISHI, MARKET SHARE ANALYSIS 56-57 (1988).

[125] For example, in developing vertical integration rules for the cable television industry, the Federal Communications Commission defined the minimum viable scale of a television network based on the number of subscribers a network must have after five years in the market in order to have a 70 percent chance of survival. *In re Comm'n's Cable Horizontal & Vertical Ownership Limits*, Fourth Report and

Assume, for example, a market for widgets with a single monopolist, minimum viable scale equal to twenty percent of the market, a 90% incumbency advantage, and monthly purchase decisions by customers. Further assume that the market is stable, consists of 2,000 units, and that fifty percent of the market is foreclosed. The chart below reflects the market share change in the non-foreclosed portion of the market on a monthly basis. Even with the strong incumbency advantage and foreclosure of half the market, the new entrant reaches minimum viable scale by eight months and essential market share parity in the non-foreclosed segment by the end of the first year.



As a general rule, we would propose that foreclosure should not be deemed substantial if the minimum viable scale is less than the units or revenues[126] in the non-foreclosed segment of the market divided by the number of competitors. Thus, for example, in our earlier example of a market with 50% foreclosure, minimum viable scale equal to 20%, and an incumbent monopolist and one new entrant, there would be no substantial foreclosure as a matter of law.

Our proposed rule has the effect of disregarding incumbency advantages and assuming that, over time, the new entrant has an equal chance of winning business as every other competitor. Several important qualifications are necessary.

First, a generic application of this rule might lead to a false positive—an erroneous finding of substantial foreclosure—if the new entrant's actual probability of winning exceeds its generic probability of winning. Indeed, far from arguing that the incumbent has an incumbency advantage, new entrants often argue that, but for the foreclosure, they would quickly gain market share since they would enter the market with a superior product or lower price than the incumbent. In private damages cases, the plaintiff's

Order and Further Notice of Proposed Rulemaking, 23 FCC Rcd. 2134, ¶¶ 55-57 (2008).

[126] *See supra* n. xxx.

damages model often assumes that, but for the foreclosure, the plaintiff would have rapidly gained a large market share.[127] Courts and agencies should take into account—perhaps with a grain of salt—the rival's often self-serving claims about its product's superiority in determining the necessary space for competition.

Second, in markets with very long intervals between competitive cycles, for example because there are few customers or long-term contracts, incumbency advantages may take a long time to wear off. In such cases, it may be necessary to relax the assumption that the new entrant has an equal probability of winning business in the unforeclosed segment of the market. Nonetheless, the analysis should remain bounded by realistic assumptions about the rival's probability of winning and the time-frame necessary for a new entrant to reach its hurdle rate on capital.

Third, partially foreclosed markets with multiple competitive firms raise a number of special issues. In the *Standard Stations* case,[128] Standard Oil's exclusive dealing contracts amounted to only 6.7% of retail sales in the relevant gasoline distribution market, yet the aggregate effect of the all of the seven "majors'" exclusive dealing contracts may have been to foreclose 67% of the overall market.[129] None of the seven majors was foreclosed from the market, of course, but perhaps the exclusives presented entry barriers to new entrants who could not reasonably expect to achieve minimum viable scale given the opportunity to compete for 23% of the market's business.

Although we are skeptical that the exclusive contracts in *Standard Stations* diminished the market's competitiveness, we would cautiously recognize the possibility of cumulative foreclosure in other cases. In such cases, the baseline principle of substantiality—that foreclosure should not be deemed substantial if the minimum viable scale is less than the units or revenues in the non-foreclosed segment of the market divided by the number of competitive firms in the market—should continue to apply. Although increasing the denominator could lead to excessively liberal findings of substantiality, markets that already exhibit a number of competitive firms should be characterized by low minimum viable scales, thus limiting the potential size of the numerator. In *Standard Stations*, for example, the seven majors amounted to about 67% of all retail sales, but the remainder was fragmented between seventy small companies.[130] The presence of a number of smaller firms in the market will often provide market-tested data on minimum viable scale and discipline plaintiffs' claims that a large scale is necessary to compete in the market.

[127] *See* Richard C. Hoyt, Dale C. Dahl, and Stuart D. Gibson, *Comprehensive Models for Assessing Lost Profits to Antitrust Plaintiffs*, 60 Minn.L.Rev. 1233 (1976).
[128] Standard Oil Co. v. United States, 337 U.S. 293 (1949).
[129] *See* Friedrich Kessler & Richard H. Stern, *Competition, Contract, and Vertical Integration*, 69 Yale L. J. 1, 29-30 (1959).
[130] 337 U.S. at 295.

Further, where multiple firms in the market employ similar vertical restraints—such as exclusive dealing contracts or other types of loyalty-inducing provisions—the vertical restraints are more likely to be manifestations of competition than exclusion. While a pattern of vertical restraints by separate firms may be anticompetitive, that is most likely to be the case when the vertical restraints are being used to cartelize an industry, in which case a separate analytical framework should come into play.[131] It would be very unusual to observe firms in an oligopolistic market employing vertical restraints to exclude new entrants without also colluding with each other. Individually, the firms would lack market power and therefore could not foist undesirable restrictions on customers. So if the firms individually sought to induce their customers to agree to terms that would exclude new entrants, they would have to pay the customers to agree to such terms, for example by giving discounts or other inducements. The firms would be spending money to exclude new entrants, and each dollar they spent in the campaign would redound to the benefit of their existing competitors as well.[132] A far more likely interpretation in such a situation is that vertical restraints are part of the currency of competition.

As with the foreclosure element, the substantiality element applies equally in customer foreclosure and input foreclosure cases. Input foreclosure can raise a rival's costs, for example by forcing the rival to purchase inferior or more expensive resources.[133] Such effects threaten the competitiveness of the market when they threaten to prevent the rival from selling profitably at a scale necessary to remain a competitive force. Hence, in input foreclosure cases, we would ask whether the foreclosure is so severe that rivals lack a reasonable opportunity to survive in the market, as determined by their ability to cover their hurdle rate on capital.

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It bears repeating that we have articulated a two-part prima facie test for exclusionary vertical restraints, not a comprehensive framework for assessing legality in every vertical restraints case. In particular, we have not dealt with efficiencies defenses, which are generally considered an affirmative defense by the defendant after the plaintiff has made out an

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[131] *See supra* Part IA.

[132] Even in a fairly concentrated oligopoly, it is relatively unlikely that an individual firm would expend resources to exclude or marginalize a rival if any benefit would be widely shared with the other oligopolists. In *Brooke Group*, for example, the Supreme Court found it implausible that a firm with an 11-12% share would engage in predatory pricing, since it would have to generate $9 of market-wide supracompetitive profits during the recoupment stage for every dollar invested in the predation stage in order to recover its predatory investment. 509 U.S. at 228.

[133] *See generally* Thomas G. Krattenmaker & Steven C. Salop, *Raising Rivals' Costs to Achieve Power Over Price*, 96 Yale L. J. 209 (1986).

affirmative case of foreclosure.[134] The twin principles of foreclosure and substantiality should serve as an overarching screen in the full variety of exclusionary vertical restraints cases. Where the plaintiff fails to demonstrate substantial foreclosure—as will be true in many vertical restraints challenges—there is no call to analyze efficiencies.[135]

IV. THREE ILLUSTRATIONS

In the previous section, we proposed a unified prima facie test for all exclusionary restraints that requires a showing that the restraint forecloses a substantial share of the relevant market. In this section, we illustrate our proposed test with three recent cases in which application of our framework could have improved the agency or court's analysis. The three cases illustrate three sorts of vertical restraint circumstances: (1) customer foreclosure; (2) input foreclosure; and (3) multi-product foreclosure.

A. Customer Foreclosure: *Intel/AMD*

On August 4, 2010 Intel and the Federal Trade Commission announced the settlement of the FTC's antitrust enforcement action.[136] The FTC settlement was the final major chapter in Intel's decade-long antitrust war with Advanced Micro Devices ("AMD") its major rival in the global microprocessor market. Prior episodes included a settlement with the Japanese Fair Trade Commission,[137] an approximately $20 million fine by the Korean Fair Trade Commission,[138] a $1.25 billion dollar payment by Intel to settle AMD's private antitrust lawsuit,[139] and a € 1.06 billion

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[134] *See* U.S. v. Microsoft, 253 U.S. 34, 59-59 (D.C. Cir. 2001) (en banc) (setting out mutli-part test for monopolization offenses, in which pro-competitive justifications are an affirmative defense to be proven by the defendant).

[135] There is a substantial literature on the efficiencies justifications for various kinds of vertical restraints. *See, e.g.*, Benjamin Klein & Kevin M. Murphy, *Exclusive Dealing Intensifies Competition for Distribution*, 75 Antitrust L. J. 433, 437 (2008) (examining role of exclusive shelf space contracts in elasticizing demand facing manufacturers and hence in driving down consumer prices); David S. Evans & Michael Salinger, *Why Do Firms Bundle and Tie? Evidence from Competitive Markets and Implications for Tying Law*, 22 Yale J. Reg. 37 (2005) (explaining bunding and tying practices as manifestations of product-specific scale economies); Jan B. Heide, Shantanu Dutta & Mark Bergen, *Exclusive Dealing and Business Efficiency: Evidence from Industry Practice*, 41 J.L. & Econ. 387 (1998) (arguing that business efficiency factors play a significant role in firms' decisions regarding exclusive dealing).

[136] *In re Intel Corp.*, No. 9341 (FTC Dec. 16, 2009), http://www.ftc.gov/os/adjpro/d9341/091216intelcmpt.pdf.

[137] http://www.jftc.go.jp/404.html.

[138] Corrective Measures Against Intel's Abuse of Market Dominance, http://eng.ftc.go.kr/files/bbs/2008/Intel%20Case(08.6.)1.pdf.

[139] Steve Lohr & James Kanter, *A.M.D.-Intel Settlement Won't End their Woes*, New York Times (Nov. 12, 2009), http://www.nytimes.com/2009/11/13/technology/companies/13chip.html.

(almost $1.5 billion) fine by the European Commission,[140] the highest it had ever imposed.[141] Intel continues to challenge the EC decision in the European General Court. The EC decision is notable for its length—518 pages—although the publicly available version has redacted confidential facts. For all its detail, however, the EC analysis omits an essential ingredient of an exclusionary vertical restraints case—evidence that the relevant restraints "substantially" foreclosed the relevant market by denying AMD the opportunity to reach minimum viable scale.

Intel and AMD produce microprocessors and compete to supply Original Equipment Manufacturers (OEMs), companies like (Dell, Hewlitt Packard, NEC, Acer and Lenovo) that produce personal and business computers. Their corporate history is at the origin of multiple disputes concerning intellectual property rights.[142] In the early 1980s, IBM chose Intel to manufacture the Central Processing Units (CPUs) for IBM's Personal Computers (PCs). However, it only did so on the condition that Intel would license its technology to a second source provider—AMD. The IBM agreement resulted in Intel's CPU (x86) becoming the *de facto* industry standard. Shortly after the IBM agreement, AMD began to complain that Intel was not providing the information necessary for AMD to manufacture its new generation of microprocessors, which allegedly allowed Intel to consolidate its power in the market.[143] After years of litigation, Intel was obliged to provide AMD with its x86 technology.

1995, AMD started to move beyond merely copying Intel's microprocessors, attempting to compete on both technology and price. On the innovation front, AMD designed the first 64-bit microprocessor.[144] On the price front, Intel has a historic higher Average Selling Price (ASP) per unit, which it justifies as the result of better quality and performance.[145] The companies have followed significantly different investment strategies. Intel invested heavily in new billion-dollars manufacturing facilities (called "fabs") with a view to expanding output in order to meet its market share objectives. AMD opted to concentrate its capital investments in research and development, and outsourced the manufacture of its microprocessors.[146] In the market for x86 microprocessors, Intel has had a market share around 80 for the last decade whereas AMD's has usually hovered between 15 and 20%.[147]

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[140] COMP/C-3/37/990 Intel (2009).
[141] James Kanter, *Europe Fines Intel $1.45 Billion in Antitrust Case*, New York Times (May 13, 2009), http://www.nytimes.com/2009/05/14/business/global/14compete.html.
[142] *Advanced Micro Devices, Inc. v. Intel*, Complaint, 2005 U.S. Dist. Ct. Pleadings 441A, at 5 (D. Del. June 27, 2005).
[143] *Id.* at 6
[144] COMP/C-3/37.990 Intel, ¶ 146 (reporting that Intel launched its own 64-bit CPU five months later).
[145] *Id.* at 136 et seq.
[146] *Advanced Micro Devices, Inc. v. Intel*, Answer, 2005 U.S. Dist. Ct. Pleadings 441A, at 2-4 (D. Del. Sept 1, 2005).
[147] Joshua D. Wright, *An Antitrust Analysis of the Federal Trade Commission's Case Against Intel*, ICLE Antitrust and Competition Policy White Paper Series, June 8, 2010, at 7.

AMD alleged that, beginning in the late 1990s, Intel employed a variety of exclusionary contractual practices with OEMs and retailers to slow AMD's market share growth. Intel's granted the major OEMs all-unit rebates and marketing payments in order to promote Intel based computers. It also directly or indirectly granted important retailers (such as Mediamarkt, in Europe), promotional payments for the promotion of its products.[148] These rebates were allegedly associated with different degrees of exclusivity commitments. AMD also accused Intel of imposing "naked restrictions" consisting of payments to major OEMs for delaying or cancelling the launching of AMD based computers or as establishing certain restrictions on their distribution.[149]

Building upon these facts, the European Commission's decision provided an unofficial application of its new economic approach to dominance[150] that unfortunately failed to solve the ambiguities and inconsistencies identified in the previous section.[151] The Commission got off to a bad start. As in the only previous decision dealing with similar practices in the framework of the new economic approach to Article 102, *Tomra*,[152] the Commission started by denying any need to show market foreclosure in Article 102 cases, in general, and in loyalty rebate cases, in particular, on the authority of prior case law including *Hoffmann-LaRoche*.[153] Despite tipping its hat to the old form-based approach, the Commission then declared that it would perform an economically oriented anticompetitive foreclosure analysis after all.

For simplicity, we focus here on the Commission's treatment of Intel's *de facto* exclusivity rebates. Early in its decision, the Commission seemed to express categorical hostility to exclusivity rebates noting that "customers which, on the basis only of competition on the merits, may have awarded a part of their purchases to a competing supplier, may prefer to source all or nearly all of their inputs from the dominant company in order to obtain the

[148] COMP/C-3/37.990 Intel, ¶¶ 177-181
[149] Commission, Summary of Commission Decisions of 13 May (Case COMP/C-3/37.990—Intel) ¶ 37.
[150] Commission, Antitrust: Commission Imposes Fine of € 1.06 bn on Intel for Abuse of Dominant Position; Orders Intel to Cease Illegal Practices, at 2 and Case COMP/C-3/37/990—Intel at ¶ 916.
[151] Damien Geradin, *The Decision of the Commission of 13 May 2009 in the Intel Case: Where is the Foreclosure and Consumer Harm?*, (2009) SSRN eLibrary, at 3-4.
[152] Case COMP/E-1/38.113—Prokent—Tomra [2006] OJ 734, ¶ 285, 332.
[153] Case COMP/C-3/37.990—Intel, ¶¶ 919-920 and footnote 1225: "*Case 85/76 Hoffmann-La Roche v Commission [1979] ECR 461, paragraph 89. See also Case C- 62/86 AKZO v Commission [1991] ECR I-3359, paragraph 149; Case T-65/89 BPB Industries and British Gypsum v Commission [1993] ECR II-389, paragraphs 71 and 120; Case C-393/92 Municipality of Almelo and others [1994] ECR I-1477, paragraph 44; Joined Cases T-24/93, T- 25/93, T-26/93 and T-28/93 Compagnie Maritime Belge and Others v Commission [1996] ECR II- 1201, paragraphs 182 to 186; Case T-203/01 Michelin v Commission (Michelin II) [2003] ECR II- 4071, paragraph 56; and Case T-219/99 British Airways v Commission [2003] ECR II-5917, paragraph 244, confirmed on appeal in Case C-95/04 P British Airways v Commission [2007] ECR I-2331, paragraphs 62 and 65.*"

benefit of the discount."[154] Later, however, the Commission discussed the possibility of using a test proposed by the Guidance Paper and popular in the US: "one possible way of examining whether exclusivity rebates are capable or likely to cause anticompetitive foreclosure is to conduct an as efficient competitor analysis."[155] The "equally efficient competitor" test is intended to assess whether the dominant firm itself would survive, given its cost-structure, if it had to respond to the challenged pricing structures.[156]

Since most the challenged rebating practices were single-product (*i.e.*, bundling claims were not a issue), the Commission could not take the position that AMD was unable to compete with Intel over the full range of CPU sales. Thus, in order to find that Intel's rebate foreclosed AMD, the Commission made a finding that Intel was an "unavoidable trading partner" for most of the major OEMs.[157] In other words, since some core group of the OEM's customers demanded Intel microprocessors in their computers, the OEM had to do at least some of its business with Intel. This meant that less than 100% of these OEM's purchases were "contestable" in a competition between Intel and AMD. Hence, found the Commission, when Intel offered a loyalty rebate spread over all of the OEM's CPU requirements, AMD could only attempt to match that rebate over some fraction of the OEM's requirements.[158] If, in order to match Intel's loyalty rebate, AMD would be forced to price below cost in the contestable segment, then an equally efficient competitor to Intel would be foreclosed from selling to that customer.

Much of the disagreement between Intel and the Commission on the application of the equally efficient competitor test concerned what constitutes an avoidable cost within the measurement of Average Avoidable Costs (AAC) i.e. the measure of cost used for to use in assessing whether would have to price below cost in order to match Intel's rebates.[159] That controversy is beyond the scope of this paper. The Commission found that, as to a number of OEMs, at least some portion of the OEM's business was foreclosed to AMD by Intel's rebates, and we accept that finding as legitimate for the sake of argument.

The problem with the Commission's analysis is that it essentially stopped at foreclosure and failed to consider whether the foreclosure was substantial in an economically meaningful sense. Significantly, there was no finding that AMD was shut out of the market—indeed, from the late 1990s to 2009 its market share grew from about ten percent to about twenty percent.[160] Further, the Commission could not have found that Intel's

[154] *Id.* at Case COMP/C-3/37.990—Intel, ¶ 938.
[155] *Id.* at 1002
[156] Commission, Guidance on the Commission's Enforcement Priorities in Applying Article 82 EC Treaty to Abuse Exclusionary Conduct by Dominant Undertakings, ¶¶ 24-46. *See also* Posner, *supra* n. xxx at 215.
[157] EC Decision, at ¶¶ 870, 886, 892, 894.
[158] *Id.* at ¶¶ 1002-1154.
[159] *Id.*
[160] Wright, *supra* n. xxx at 7.

rebates foreclosed AMD's access to even the major OEMs, since AMD made significant sales to most of the major OEMs.[161]

What sort of evidence, then, should have sufficed to show that whatever sales were foreclosed to AMD were sufficiently important that they affected AMD's viability in the market? The Commission stressed that the microprocessor industry is characterized by output expansion, rapid innovation, falling prices,[162] and high barriers for entry and expansion[163] as a result of the necessary R&D investments, brand image, and fabs.[164] From this, the Commission believed that high net margins and economies of scale are crucial for survival.[165] Recently, several smaller competitors exited the market.[166] In combination, these factors provided evidence that the market was susceptible to monopolization, but they did not show that any foreclosure of AMD from a particular segment of the market threatened AMD's viability. Indeed, for much of the relevant period, AMD reported positive operating income.[167] Although we are unable to reach a firm conclusion from the publicly available data, it seems unlikely that a generally profitable and innovative company with a growing market share could claim that it was substantially foreclosed from the market.

Rather than attempting to prove that the foreclosure was substantial insofar as it threatened AMD's ability to remain a viable and innovative presence in the market, the Commission focused on the impact of Intel's loyalty rebates on customer choice.[168] The Commission believed the foreclosure of AMD from a segment of an OEM's business harmed consumers because it diminished the variety of purchasing options they faced, even if it did not increase their prices.[169] Thus, some computer users who would have preferred an AMD microprocessor to an Intel microprocessor would find their preference thwarted by virtue of the fact that the retailer they visited would offer them only an Intel microprocessor.

This argument fails to give sufficient weight to the interests of consumers in lower prices and the incentives of the OEMs to promote the consumer interest. As long as AMD remains a viable presence in the market, the OEMs must weigh Intel's discount and rebate offers as a trade-off between a real price reduction (as opposed to a temporary predatory price cut to be followed by supracompetitive monopoly prices following AMD's ouster from the market) and diminution in the variety they can offer their customers. Assuming a competitive computer market, the OEM's profit-maximizing strategy will be to select the decision—lower price or

[161] In 2006, Dell added AMD's opteron microprocessor for use in servers. *See Dell Hooks Up with AMD*, http://www.theregister.co.uk/2006/05/18/dell_picks_amd/. Hewlitt Packard offered a business desktop with an AMD microprocessor in 2002. EC Decision at¶ 952.

[162] Defendant, at 2.

[163] Case COMP/C-3/37.990—Intel ¶ 881.

[164] *Id.* ¶ 866

[165] *Id.* ¶ 875

[166] *Id.* ¶ 882

[167] Wright, *supra* n. xxx at 10.

[168] *Id.* ¶¶ 1598-1616.

[169] *Id.*

greater variety—that increases its market share by satisfying customer demand. If the OEM decides to forgo variety for price, this will usually be because customers, in the aggregate, would prefer lower prices to greater variety. Examples of similar trade-offs abound in the economic literature. For instance, Klein and Murphy have shown that retailers, by giving manufacturers exclusive shelf-space deals, are able to elasticize the demand facing the manufacturer by eliminating idiosyncratic variety preferences and hence exact lower wholesale prices from the manufacturers.[170] While some customers with strong variety preferences may face net welfare losses, consumers as a class generally gain from the lower prices.[171]

Throughout the period relevant to the Intel/AMD saga, microprocessor prices to final consumers plummeted. According to the Bureau of Labor Statistics, in recent years prices relative to performance have dropped more precipitously for microprocessors than for any other of the 1,200 product categories the Bureau tracks.[172] This evidence is at odds with a finding that Intel impaired AMD's ability to function in the market.

The Commission's *Intel* decision shows significant progress by engaging in a rigorous foreclosure analysis. Alas, it stops with the first half of the story. Foreclosure in our sense—the denial of a reasonable sales opportunity—is endemic in many highly competitive markets. Without analysis of substantiality, however, it fails to provide a satisfactory answer to the questions competition policy is meant to address.

B. Input Foreclosure: *Apple/Orange France*

A good example of the need to systematize the European approach to exclusionary vertical restraints and anticompetitive input foreclosure appears in the French Competition Authority's recent enforcement action against Apple and Orange France.[173] Apple, the manufacturer of the iPhone, and Orange France—a provider of phone services in France and several other European countries—agreed that Orange France would be the exclusive distributor of the iPhone to the French market for a five-year

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[170] Benjamin Klein & Kevin M. Murphy, *Exclusive Dealing Intensifies Competition for Distribution*, 75 Antitrust L. J. 433, 437 (2008).
[171] *Id.* at 451-54.
[172] *See* Robert E. Cooper, *AMD v. Intel: An Assault on Price Competition*, Global Competition Policy 8 (March 2008), available at http://www.intel.com/pressroom/legal/docs/Cooper_GCP_Mar08.pdf. The relevant data charts appear in *FTC v. Intel Corp.*, Intel's Motion Under Rule 3.36 for Leave to Take a Deposition of the Bureau of Labor Statistics Under Rule 3.33(c)(1), at Exhibit 2 (May 27, 2010) available at http://www.ftc.gov/os/adjpro/d9341/100527intelmoleavedeposebls.pdf.
[173] Council Regulation (EC) No. 1/2003 of 16 December 2002 on the Implementation of the Rules on Competition Laid Down in Articles 81 and 82 of the Treaty, in OJ L 1, 4.1.2003, at 1. Article 3(1): "Where the competition authorities of the Member States or national courts apply national competition law to agreements, decisions by associations of undertakings or concerted practices within the meaning of Article 81(1) of the Treaty which may affect trade between Member States within the meaning of that provision, they shall also apply Article 81 of the Treaty to such agreements, decisions or concerted practices."

period.[174] On the surface, the relevant market shares seemed to make the deal unproblematic. iPhones enjoy a share of 5.3% of all Smartphones, and Smartphones amount to only 10-13% of the mobile phones sold worldwide. Orange had a 43.5% market share in French mobile phone distribution market, which under the non-horizontal merger Guidelines would have made the exclusive deal arguably unproblematic.[175] Further, it is hard to see how exclusive channeling of a relatively small market share item would foreclose rivals from the market.

The French Competition authority, however, believed that the iPhone's unique "attractiveness" made it a larger competitive presence than its currently small market share. Rivals of Orange like SFR were signing their own exclusive distribution deals for other attractive smartphones like the Blackberry and HTC, but rather than considering the rivals' exclusive deals as likely to mitigate any foreclosing effects of the Apple-Orange deal, the French Competition Authority worried about cumulative foreclosure by a series of manufacturer-distributor deals.[176] Faced with the French enforcement action, Apple and Orange agreed to suspend any pact of exclusivity for the iPhones already in the market and to limit any exclusive agreement concerning the distribution of future versions of this product[177] to a maximum of three months.

Under our substantial foreclosure test, the Apple/Orange exclusive might not present even foreclosure, much less substantial foreclosure. The fact that rival distributors were negotiating their own exclusive deals for marquee brands suggests the existence of an active auction process for exclusive distribution rights. If Orange foreclosed SFR by signing up Apple, then SFR foreclosed Orange by signing up Blackberry and HTC. More likely, the cellular phone distribution market is characterized by "competition for the brand" rather than competition within the brand.[178] To be sure, winner-takes-all auctions for exclusive distribution rights might reduce the number of distributor firms or marginalize the fringe firms, but a mere reduction in the number of distributors does not necessarily signal a general diminution in the competitiveness of the distribution function.

Assuming that the exclusivity deal foreclosed some rival by denying it a reasonable input-acquisition opportunity, there remains the question of whether carriage of the iPhone was so important to the foreclosed distributors that its denial threatened their existence in the cell phone distribution market—the substantiality question. We do not dispute that current market share numbers may sometimes be a poor proxy for the

[174] Autorité de la Concurrence, Décision 10-D-01 rélative à des Pratiques Mises en Oeuvre dans la Distribution des iPhones [Decision 10-D-01 concerning the practices related to the distribution of iPhones (Jan. 11, 2010).
[175] *Supra* n. xxx.
[176] *Id.* at 15
[177] *Id.* 16-17
[178] *See* Paddock Publn's, Inc. v. Chicago Tribune Co., 103 F.3d 42, 45 (7th Cir. 1996) (Easterbrook, J.) ("Competition-for-the-contract is a form of competition that antitrust laws protect rather than proscribe, and it is common.").

competitive importance of an input, but it is unlikely that access to the iPhone was indispensable for survival in the market. Again, the example of the SFR/Blackberry and HTC deals suggests the contrary.

Further, it would not be in Apple's interests to grant exclusive distributorship rights that would weaken the competitiveness of the distribution market.[179] To Apple, distribution is merely a cost that it prefers to cover as inexpensively as possible. A monopolist distributor would raise prices and diminish sales, which would mean that Apple would sell fewer iPhones without sharing in the distributor's higher prices.[180] We do not mean to suggest that exclusive distributorship agreements can *never* be anticompetitive since the manufacturer's interests on the question of distributor power are aligned with those of the consumer.[181] However, in the case of a strong and sophisticated manufacturer like Apple, the prospect that the exclusive agreement would diminish the distribution segment's long-run competitiveness seems remote.

The Apple/Orange France episode provides an opportunity to reiterate a point made earlier—that secondary line price discrimination is just a species of input foreclosure. Suppose that instead of granting Orange exclusivity, Apple had simply given it preferential pricing terms, which had made it difficult for rival distributors to carry the iPhone. In that case, the same analytical questions—did the discount structure deny rivals a reasonable input purchase opportunity and was it so substantial that it denied them a reasonable survival opportunity—should be addressed.

C. Multi-Product Foreclosure: *Masimo/Tyco*

As noted at the outset, one of the key sources of confusion in vertical restraints cases has been the treatment of contractual terms that span multiple product lines, particularly those that involve the grant of a price concession in exchange for purchase commitments across multiple product categories.[182] Courts have struggled to categorize such terms analytically, analogizing or disanalogizing them to tying, exclusive dealing, bundling, and predatory pricing.[183] This focus on legal categorization rather than economic analysis has led to inconsistent and confused decisions.

A good example appears in the recent private litigation between Masimo and Tyco, competitors in the production of pulse oximetry

[179] *See*, *e.g.*, *Leegin*, 551 U.S. at 896 (observing that "the interests of manufacturers and consumers are aligned with respect to retailer profit margins"); Francine Lafontaine & Margaret Slade, *Empirical Assessment of Exclusive Contracts*, in HANDBOOK OF ANTITRUST ECONOMICS (Paolo Buccirossi ed., 2008).
[180] *Leegin*, 551 U.S. at 896.
[181] *See* Robert Pitofsky, *In Defense of Discounters: The No-Frills Case for a Per Se Rule Against Vertical Price Fixing*, 71 Geo. L.J. 1487, 1491 (1983) (questioning assumption that manufacturer interests are aligned with those of retailer).
[182] *See* supra text accompanying notes xxx-xxx.
[183] *Id.*

systems, which measure a patient's lung function.[184] Masimo claimed that Tyco attempted to exclude it from the pulse oximetry market through a variety of vertical contractual practices including "loyalty discounts," sole-source exclusive dealing contracts, bundled rebates, and exclusionary financing terms.[185] A jury returned a verdict for Masimo on several of the challenged practices, but the district judge set aside the verdict insofar as it predicated liability on the bundled rebates.[186] Masimo challenged that holding on appeal to the Ninth Circuit.

During the course of the appeal, the Ninth Circuit decided another bundled discounting case—*Cascade v. PeaceHealth*.[187] In that case, the Ninth Circuit held that "a plaintiff who challenges a package discount as anticompetitive must prove that, when the full amount of the discounts given by the defendant is allocated to the competitive product or products, the resulting price of the competitive product or products is below the defendant's incremental cost to produce them."[188] On appeal, Masimo resisted application of the *PeaceHealth* discount attribution standard, arguing that "Tyco's bundling practices were actually illegal market-share discounts, rather than general bundled discounts."[189] The court of appeals credited Masimo's argument:

> There is truth to Masimo's argument. Tyco's bundling contracts gave customers a price discount for purchasing a number of unrelated products together, one being pulse oximetry. However, receipt of the discount was conditioned upon customers purchasing 90-95% of their requirements of those products from Tyco. If a customer bought less than the required minimum, the discounts would be lost or decreased. That is conditioning the discount on the requirement of near complete exclusivity. This effectively prevents customers from dealing in the goods of competitors, if the customers want to obtain Tyco's discount. That is the hallmark of exclusive dealing.[190]

Despite agreeing in principle with Masimo's argument, the court affirmed the district court's vacatur of the jury verdict because there was insufficient evidence that the foreclosure was substantial.[191] Also, Masimo had litigated the case under a bundled discount theory and should not be allowed to change its position on appeal.[192]

[184] Masimo Corp. v. Tyco Health Care Group, L.P., No. CV 02-4770 MRP, 2006 WL 123666 (C.D. Cal. March 22, 2006).
[185] *Id.* at *1.
[186] *Id.* at *15.
[187] Cascade Health Solutions v. PeaceHealth, 515 F.3d 883 (9th Cir. 2008).
[188] 515 F.3d at 909.
[189] Masimo Corp. v. Tyco Health Care Group, L.P., 350 Fed. Appx. 95, 97 (9th Cir. Oct. 28, 2009).
[190] Id.
[191] Id.
[192] Id.

The court of appeals' reasoning illustrates the continued confusion caused by form-based approach to vertical restraints. Under the court's approach, the initial decision was categorize the restraint as either bundled discounting or tying/exclusive dealing. If the former, the practice would be subject to a discount reallocation exercise for the purpose of establishing whether an equally efficient rival that made only one of the products covered by the bundled discount would be foreclosed from competing for that product. If the practice were categorized as tying, foreclosure would be assumed and the analysis would shift immediately into whether the foreclosure was substantial.

Under our proposed framework, the foreclosure and substantiality questions should be asked in succession regardless of any initial categorization of the practice as bundled discounting, tying, exclusive dealing, or something else. Failure to ask both questions could result in false positives. Categorization of the practice as predatory pricing could result in a finding of liability even though the number of effectively below-cost contracts was insufficient to deprive Masimo of a reasonable opportunity to reach minimum viable scale. Categorization of the practice as tying could result in a finding of liability even if Masimo was effectively able to dissuade customers from accepting Tyco's bundled offer by offering its own above-cost price concessions.

The lynchpin of the court's categorization decision was its belief that the conditioning of the discount on a market share commitment "effectively prevents customers from dealing in the goods of competitors, if the customers want to obtain Tyco's discount."[193] But suppose that the discounts on non-competitive products (*i.e.*, products that Masimo did not sell) were small enough that Masimo could profitably offer its own discounts on pulse oximeters sufficient to neutralize the effect of Tyco's bundled offer. In that case, the fact that the bundled offer required a minimum market share commitment from the customer would have no foreclosing effect. Masimo apparently recognized this, since it claimed that it would only have been able to match the discounts by pricing substantially below cost.[194] If the converse were true, there would be no foreclosure.

CONCLUSION

The law of exclusionary vertical restraints is in dire need of overall systematization. Courts and agencies on both sides of the Atlantic frequently stumble over apparent differences between commercial practices that are similar in their exclusionary potential. Instead of seeking to understand whether the practices in fact diminished the market's competitiveness, the courts or agencies often fall back on categorical formalisms that lead to dramatically different treatment of economically indistinguishable practices.

[193] 350 Fed. Appx. at 97.
[194] 2006 WL 123666, at * 9.

Fortunately, both US and EU legal and administrative structures contain sufficient resources to emerge from the present muddle without radical reimagination of either system's principles or precedents. The twin principles of foreclosure and substantiality that we have outlined in this paper have sufficient roots in both systems to justify their incremental elevation to a generalized test for exclusionary vertical restraints.

Merely recognizing substantial foreclosure as a meta analytical matrix will not eliminate many difficulties in implementing vertical restraints policy. Thorny issues—such as the appropriate measure of cost to use in assessing foreclosure—will persist. Still, unifying the first principles would establish a solid foundation for progressing toward a more coherent and consistent vertical restraints policy.