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Vertical Control

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Antitrust litigation often involves challenges to vertical "control," and in a variety of situations.[1] The problems are driven by one question: how does a firm injure competition by limiting the behavior of vertically related entities? Competitive injury includes harm to consumers, labor, or other suppliers from reduced output and higher prices. The affected entities are either "upstream" firms and persons, including labor, that supply the firm in question, or else "downstream" firms or persons that purchase from it. After an early period of antagonism toward vertical control, antitrust courts subsequently shifted to a very benign position.[2] Even today, however, antitrust law lacks a unified theory about how vertical relationships can harm competition.

For horizontal combinations such as cartels or mergers of competitors, the competitive threats have been robustly theorized. Horizontal agreements or mergers reduce the number of effective rivals in a market, making collusive outcomes including higher prices more likely. In extreme cases they may even create a monopoly. By contrast, a vertical merger or contract does not reduce the number of firms in any market or give any participant a larger market share. For example, if five firms manufacture shoes and ten firms retail them, a vertical merger or exclusive selling agreement between one

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[1] On antitrust policy concerning vertical integration by dominant firms, *see* 3B PHILLIP E. AREEDA & HERBERT HOVENKAMP, ANTITRUST LAW ¶¶755-769 (4th ed. 2016); on vertical mergers, see 4A *Id.*, Ch. 10 (4th ed. 2016); on vertical contractual restraints by firms that are not necessarily dominant, see 8-11 *Id.*, Chs. 16, 17, & 18 (4th ed. 2017-2018).

[2] *See* HERBERT HOVENKAMP, THE OPENING OF AMERICAN LAW: NEOCLASSICAL LEGAL THOUGHT, 1870-1970, at 220-242 (2015).

manufacturer and one retailer still leaves all five manufacturers and ten retailers remaining and may not even change their market shares.

Vertical "control" refers to situations in which a firm does more than simply purchase from or sell to someone else in a one-off transaction that leaves the parties free to engage in all other business. Among the possibilities are vertical mergers, in which one firm acquires a vertically related firm,[3] or vertical integration by contract, in which the parties agree to longer term relationships that come with other restrictions. The contractual relationships come in a large variety, and this has complicated legal analysis. Among the varieties are arrangements in which one firm agrees to deal exclusively in the other's products (exclusive dealing),[4] one firm agrees to take combinations of two or more products from the other firm (tying),[5] a firm promises that the terms it offers others will be less favorable, or at least no more favorable, than the terms given to the contracting party (most-favored-nation, or MFN, agreements).[6] There are also variations or combinations of these, including several that involve conditional discounts or rebates rather than outright prohibitions.[7]

Many earlier antitrust decisions involving vertical market control exhibited deep suspicion of vertical ownership or contractual devices that a firm operating at one market level might use to control

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[3] *See* 4A AREEDA HOVENKAMP, *id*..

[4] 11 HERBERT HOVENKAMP, ANTITRUST LAW, Ch. 18 (4th ed. 2018).

[5] 9 & 10 PHILLIP E. AREEDA & HERBERT HOVENKAMP, ANTITRUST LAW, Ch. 17 (4th ed. 2018).

[6] 3B PHILLIP E AREEDA & HERBERT HOVENKAMP, ANTITRUST LAW ¶768a6 (4th ed. 2015) (monopolistic MFN clauses); 11 *id*., ¶1807b1 (as a form of quasi-exclusive dealing).

[7] Section 3 of the Clayton Act, which applies to exclusive dealing and tying, expressly includes discounts and rebates. 15 U.S.C. §14 (2018) (applying to "discount from, or rebate upon" the prohibited condition).

output or dealing at a second, upstream or downstream, level.[8] Some decisions feared monopolistic "leveraging," or the idea that a firm that had a monopoly in one product could use a vertical agreement such as tying to extract additional monopoly profits in a second product.[9]

More recently the emergent theory of competitive harm has been some version of "foreclosure," or the idea that a restrictive vertical agreement can exclude competitors or at least severely limit their opportunities. Under this model vertical practices are often considered to involve distinct upstream and downstream markets.[10]

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[8]For vertical mergers and ownership, *see* United States v. Paramount Pictures, 334 U.S. 131 (1948) (considering vertical integration between movie production companies and movie theaters, ultimately resulting in consent decree); United States v. Yellow Cab Co., 332 U.S. 218 (1947) (condemning acquisitions by Checker a taxicab manufacturer, and taxicab operating companies); United States v. American Tobacco Co., 221 U.S. 106, 170 (1911) (divesting vertical ownership between producers of tobacco and wrapping foil for tobacco products); United States v. Corn Prods. Ref. Co, 234 F. 964 (S.D.N.Y. 1916) (condemning corn sugar makers' control of candy market). On contractual vertical restraints, see Dr. Miles Medical co. v. John D. Park & Sons Co., 220 U.S. 273 (1911) ("The right of alienation is one of the essential incidents of a right of general property in movables, and restraints upon alienation have been generally regarded as obnoxious to public policy, which is best subserved by great freedom of traffic in such things as pass from hand to hand."). Fifty years later, see United States v. Arnold, Schwinn & Co, 388 U.S. 365, 378 (1967) ("…the decree should be revised to enjoin any limitation upon the freedom of distributors to dispose of the Schwinn products, which they have bought from Schwinn, where and to whomever they choose. ").

[9]*E.g.*, Carbice Corp. of Amer. v. American Patents Development Corp., 283 U.S. 27, 33-34 (1931) (tying as patent misuse); International Salt Co. v. United States, 332 U.S.392 (1947) (tying as antitrust violation).

[10]*E.g.*, Pacific Bell Tel. Co. v. linkLine Comm'n, Inc., 555 U.S. 438 (2009) (vertical price squeeze: "upstream market" for wholesale

Foreclosure typically occurs when the restraint covers a large enough percentage of one of these markets to make the entry or survival of independent competitors less likely.

Foreclosure analysis focuses on two questions about potential harms to competition: first, does the defendant have sufficient power in one of the markets to create and enforce this restraint?,[11] and second, does the challenged practice tend to cut off, or foreclose, a sufficient amount of competition in the vertically related market?[12]

A much more benign theory of vertical control, developed by Chicago School writers such as Robert Bork and Richard Posner, severely limited foreclosure concerns. For them, vertical agreements were almost always competitively harmless and should be legal.[13] Their thinking was heavily influenced by Ronald Coase's idea that a vertical contract is nothing more than a substitute for an internal production decision.[14] For example, the automobile maker could either manufacture its own engine blocks or else buy them from someone else. While that decision had no consequences for

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production of digital services and "downstream market" for retail sales); Paladin Assocs., Inc. v Montana Power co., 328 F.3d 1145 (9th Cir. 2003) (tying involving upstream market for tying product and downstream market for tied product); Alaska Airlines, Inc. v. United States, Inc., 948 F.2d 536 (9th Cir. 1991) (vertical refusal to deal, upstream market for airline flight reservation systems controlled by airlines in downstream market).

[11] *E.g.*, Jefferson Parish Hosp. Dist. No. 2 v. Hyde, 466 U.S. 2 (1984) (30% not enough).

[12] Tampa Electric Co. v. Nashville Coal co., 365 U.S. 320 (1961) (foreclosure too small when considering the entire geographic market for coal). On *Tampa*, *see* discussion *infra*, text at notes __.

[13] ROBERT H. BORK, THE ANTITRUST PARADOX: A POLICY AT WAR WITH ITSELF, CHS. 11, 14-15 (1978); Richard A. Posner, *The Next Step in the Antitrust Treatment of Restricted Distribution: Per Se Legality*, 48 UNIV. CHI. L. REV. 6 (1981).

[14] Ronald H Coase, *The Nature of the Firm*, 4 ECONOMICA 386 (1937).

competition, self-production might lead to lower transaction costs. Further, when firms do things internally, they usually do so exclusively. If Ford decides to build its own engine blocks rather than purchase them, it typically will not go into the business of selling them to rivals. So why should an exclusive contract be treated any differently?

Harm to competition from a vertical merger or exclusive contractual restraint is not automatic. As one extreme it might do no more than re-align buyers and sellers after subtracting out those firms that are removed by an exclusive arrangement. At the other extreme, a vertical merger or exclusive contract could completely cut off producers of the vertically related product. For example, if the only hospital in a town used a merger or exclusive contract to procure anesthesiology services through a single firm, the effect could be to dry up that town's remaining market for anesthesiology services. As a general matter one cannot practice anesthesiology without a hospital and there are no alternatives left. By contrast, if the same hospital should enter an exclusive agreement with a plowing company for snow removal, the arrangement would simply remove one customer from the snow removal market. Here, however, the hospital makes up only a small part of the market for snow removal and the remaining plowing firms would go right on competing for everyone else.

The Vertically Related "Market"

Antitrust analysis has historically estimated market power by reference to the market share of a defined "relevant market," from which it draws inferences about a firm or cartel's ability to charge a monopoly price.[15] In vertical cases courts also assess "foreclosure" at the upstream or downstream level by considering the range of buyer or seller alternatives to the contracting firms.

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[15]*See* 2B PHILLIP E. AREEDA & HERBERT HOVENKAMP, ANTITRUST LAW, Ch. 5 (5th ed. 2021) (in press).

This "foreclosure" question differs from the market power question, however. Its focus is not on the power to set high prices, but rather on the number of firms who can act as alternatives to the allegedly foreclosed firm. While courts considering vertical practices sometimes speak of upstream and downstream "markets," they do not mean the same thing in the two contexts. The Government's 2020 Vertical Merger Guidelines acknowledge this difference by changing the terminology. They speak of a primary market but a "related product" to refer to the vertically related firm or firms.[16] The fear is of higher prices in the primary market, which is facilitated by some form of foreclosure or other injury that occurs in the related product.

As a general matter, the threat in the level containing the related product is not higher prices. Often it is just the opposite. For example, when a dominant firm merges with or enters an exclusive contract with a downstream firm the resulting foreclosure may enable the dominant firm to increase its prices. But the remaining rivals in the downstream market will often end up earning less or in some cases be excluded from the market altogether. For this reason, foreclosed rivals are often the plaintiffs in private antitrust challenges to vertical restraints or mergers.[17]

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[16]U.S. Dept. of Justice & Federal Trade Commission, Vertical Merger Guidelines §3 ("VMG") (June 30, 2020), available at https://www.ftc.gov/system/files/documents/reports/us-department-justice-federal-trade-commission-vertical-merger-guidelines/vertical_merger_guidelines_6-30-20.pdf ("A related product is a product or service that is supplied to or controlled by the merged firm and is positioned vertically or is complementary to the products and services in the relevant market.")

[17] E.g., Jefferson Parish Hosp. Dist. No. 2 v. Hyde, 466 U.S. 2 (1984) (tying; challenge to hospital's exclusive contract with anesthesiologist, brought by competing anesthesiologist); ZF Meritor, LLC v. Eaton Corp., 696 F.3d 254 (3d Cir. 2012) (exclusive dealing; foreclosed competitors' challenge to exclusive agreement in market for heavy duty transmissions). *See also* Brunswick Corp. v. Pueblo

The Supreme Court confronted the question of available alternative trading opportunities, or foreclosure, in its *Tampa Electric* decision.[18] An electric utility located in northern Florida built a new generation facility that burned coal. It entered into a traditional common law requirements contract to purchase all of its coal needs for 20 years from Nashville Coal at an agreed upon price. The market price of coal later increased, making the price in the requirements contract unfavorable to the coal company. In order to get out of it, the coal company filed a declaratory judgment action claiming that the agreement, which bound the coal company to provide the utility with all of its coal needs, foreclosed competing coal producers.[19] As a result, the coal company argued, the contract violated the Clayton Act's prohibition on exclusive dealing contracts that anticompetitively preclude a selling firm from dealing with competitors.[20] Today an antitrust lawsuit under that theory would be dismissed under the "antitrust injury" doctrine. Whatever its status under the state law of requirements contracts, as far as competition policy was concerned, Nashville Coal was the beneficiary rather than the victim of the exclusive coal agreement.[21] It was the *other* coal producers who were being injured.

The Supreme Court ruled against the coal company, but not on that ground. Rather it looked at the geographic range over which Nashville and other coal companies sold coal. While the coal covered by the contract was a significant percentage of coal sales in Tampa Electric's purchasing area (Florida and Georgia), Nashville Coal and its predecessors were located in Kentucky and Tennessee.[22]

Bowl-O-Mat, Inc., 429 U.S. 477 (1977) (vertical merger challenge by competitor of acquired downstream firms).

[18]Tampa Elec. Co. v. Nashville Coal Co., 365 U.S. 320 (1961).

[19]*See id*. at 321.

[20]15 U.S.C. §14 (2018).

[21]On "antitrust injury," *see* 2 PHILLIP E. AREEDA & HERBERT HOVENKAMP, ANTITRUST LAW ¶¶335, 337 (5th ed. 2021).

[22]*See* Tampa Elec. Co. v. Nashville Coal Co., 168 F. Supp. 456 (M. D. Tn. 1958).

If one looked over the entire area between the buyer and seller there were many coal producers and many coal purchasers. Of these, the challenged utility contract covered less than 1 percent of sales.[23]

Since *Tampa Electric* the courts have tended to measure foreclosure by looking at the entire range of potential trading partners who might be plausible alternatives to the entity for which foreclosure is claimed.[24] They have settled on foreclosure percentages in the range of 30%-40% as the minimum needed for illegality.[25] But this narrow focus misses a variety of possible competitive harms from vertical exclusion. In some cases, the exclusive agreement may not exclude a firm altogether, but may raise

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[23]*Tampa*, 365 U.S. at 333 (finding maximum foreclosure of .77 percent).

[24]*E.g.*, Collins v. Associated Pathologists, Ltd., 844 F.2d 473 (7th Cir.), *cert. denied*, 488 U.S. 852 (1988) (pathologist's objection to hospital's exclusive dealing arrangement with another pathologist should be tested in a national market in which hospitals recruit pathologists, not the market into which the hospital sold its own services); Balaklaw v. Lovell, 14 F.3d 793 (2d Cir. 1994) (relevant market is area in which anesthesiologists competed for jobs; here, hospital solicited contracts from anesthesiologists in several states); Ryko Mfg. Co. v. Eden Servs., 823 F.2d 1215, 1233–35 (8th Cir. 1987), *cert. denied*, 484 U.S. 1026 (1988) (in contract for provision of car washing equipment to service stations, relevant market for determining foreclosure was the entire national market for car wash equipment of various types).

[25]*See* Stop & Shop Supermarket Co. v. Blue Cross & Blue Shield of Rhode Island, 373 F.3d 57, 68 (1st Cir. 2004) ("For exclusive dealing, foreclosure levels are unlikely to be of concern where they are less than 30 or 40 percent"); United States v. Microsoft Corp., 84 F. Supp. 2d 9 (D.D.C. 1999), 87 F. Supp. 2d 30, 97 F. Supp. 2d 59 (D.D.C. 2000), aff'd in part, rev'd in part, and remanded, 253 F.3d 34, 70 (D.C. Cir.), cert. denied, 534 U.S. 952 (2001) (roughly 40% to 50% foreclosure necessary under §1). *See* 11 HERBERT HOVENKAMP, ANTITRUST LAW ¶1821 (4th ed. 2019) (summarizing case law on minimum requisite shares for unlawful exclusive dealing).

its costs in a way that facilitates monopoly pricing.[26] In other cases it may make a price increase profitable by changing bargaining relationships.[27]

Proper analysis of vertical control arrangements has unfortunately been hindered by the Supreme Court's conclusion in the *AmEx* case that if a vertical practice is involved market power can be established only by reference to a relevant market.[28] Although there are some workarounds, this can make the competitive effects question much more difficult to answer, particularly in markets for differentiated producers or products.[29]

Notwithstanding *AmEx*, antitrust analysis is increasingly moving away from methodologies for assessing power that require a market definition, and toward alternatives that look directly at output responses to price changes, or at the effect of certain practices on bargaining relationships.[30] The problem with market definition is its utter inability to deal with any degree of differentiation in either products or geography. Once we have defined a relevant market, all of the firms inside that market are treated as if they are perfect competitors, which means that they are regarded as having infinitely

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[26] *See* discussion *infra*, text at notes __.
[27] *See* discussion *infra*, text at notes __.
[28] Ohio v. American Express, 138 S.Ct. 2274, 2285 n.7 (2018). On methodologies for assessing market power, including market definition and alternatives, *see* discussion *infra*, text at notes __. In *Amex*, the government had sought to prove market power both indirectly, by reference to a relevant market, and directly by reference to price-volume relationships. The district court had found a relevant market for general purpose credit and charge card purchases, in which AmEx had 26.4%, as against Visa's 45% and MasterCard's 23.3%. It also found direct evidence. *See* United States v. American Express Co., 88 F.Supp.3d 143, 188-189 (E.D.N.Y. 2015).
[29] *See* Herbert Hovenkamp, *The Looming Crisis in Antitrust Economics*, B. U. L. REV. (2021) (forthcoming), available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3508832.
[30] See *Id*.

high substitutability from one to another. By contrast, if a market is defined so as to exclude a particular firm, that firm is treated as if it does not compete at all. This approach cannot begin to pick up the complex array of situations in which firms bargain with one another.

Metering Foreclosure

Foreclosure occurs when a vertical merger or exclusive contract provision denies market opportunities to rivals. For example, if a city has ten appliance retailers and an appliance manufacturer either purchases or enters an exclusive dealing agreement with one of them, there are still nine remaining retailers through which competing appliance manufacturers can sell. If the manufacturer should make such deals with all ten, however, then competing manufacturers could not retail in that town, except perhaps by building their own retail stores. Several factors are relevant to determining foreclosure, including the number of sellers of the related product, their relative sizes, the number that have been made inaccessible by a vertical restriction, and the difficulty of establishing new ones.

Consistent with the theory of relevant markets, the traditional approach to foreclosure would treat the ten retail stores in the example above as identical in product offerings, although not in size, which is essential for computing overall foreclosure as a percentage of the market. This approach subjected foreclosure theory to a criticism popularized by the Chicago School that the profit maximizing price of a good does not change simply because one firm also comes to own the retailers.[31] That would do no more than force manufacturer substitution from one store to another. But that classical foreclosure theory ignores many lessons from marginalist economics, one of which is that in equilibrium only the marginal retailer earns competitive returns. Other retailers have lower costs and will earn more. Yet others may have had higher costs, but they will have exited from the market.

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[31] *See* Robert H. Bork, *Vertical Integration and the Sherman Act: The Legal History of an Economic Misconception*, 22 UNIV. CHI. L. REV. 157 (1954) (criticizing "leverage" theory of tying and exclusive dealing). *See* Herbert Hovenkamp, *Robert Bork and Vertical Integration: Leverage, Foreclosure, and Efficiency*, 79 ANTITRUST L.J. 983 (2014).

This rather conventional observation about marginal market participants drives the rationale for theories of RRC, or raising rivals' costs. As a result, it is difficult to see why some people objected to it.[32] The 2020 Vertical Merger Guidelines acknowledge the theory and supply some illustrations.[33]

Traditionally, the foreclosure resulting from a vertical merger (or other arrangement) was measured against the full range of firms selling in the market where foreclosure was feared. That was the procedure that the Supreme Court followed in the *Tampa Electric* case.[34] It counted up all the coal sellers in the geographic range covered by the transaction and concluded that the challenged contract covered less than one percent of this. Significantly, the market was coal, a commodity, and the Court did not trouble itself with questions about product differentiation, differences in quality, or differential production costs.

Once we consider the role of marginal and inframarginal firms, the "market definition" question changes, or at least acquires a change in focus. It is no longer particularly important to know the full range of vertically related sellers. For example, suppose the related product is differentiated from one firm to the next, or that the firms that produce it have different costs or are more or less desirable for some other reason. In that case it is much less important to know all of the firms in the market than it is to know whose behavior is constrained by the challenged arrangement, and who are that firm's closest rivals.

Suppose, for example, that the ten retailers in the allegedly foreclosed market have markup costs ranging from 20 to 30. In competitive equilibrium the higher cost firms will just barely stay in business while the lower cost ones will earn a profit. In that case a vertical merger or exclusive contract with the lowest cost firm could

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[32]E.g., RICHARD A. POSNER, ANTITRUST LAW 196 (2d ed. 2001) (RRC "not a happy formula").

[33]VMG, *supra* note __, §4a.

[34]*See* discussion *supra*, text at notes __. *See* Herbert Hovenkamp, *Competitive Harm from Vertical Mergers*, __ REV. INDUS. ORG. (2021) (forthcoming), available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3683386.

relegate rival manufacturers to dealing with the higher cost retailers. With the lower cost firm taken out of the mix, the equilibrium price charged by the remaining sellers would be higher.

In order to perform this analysis, we would not have to define the market for the retailers. We would merely need to identify those that were the most desirable from the upstream parties' point of view. Both the Vertical Merger Guidelines and some of the case law permit this approach.[35] The better placed trading partners could be those that are geographically closest if transportation costs are important, or it could be those that employ superior and more cost-effective technologies or produce more desirable products.

In *Qualcomm*, for example, the district court observed that Qualcomm, a dominant producer of modem chips for cellular phones, procured an exclusive agreement to supply chips to Apple, thus excluding Intel. Apple was the most desirable customer and Qualcomm did not wish for Apple to be purchasing from two different suppliers.[36] Apple, by contrast, wanted the two modem chip suppliers to be competing with one another so that it could obtain more favorable terms.[37] Qualcomm responded by refusing to supply chips to Apple's newest devices unless it obtained an exclusive

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[35]*See, e.g.*, VMG, *supra* note __, Example 2 (vertical merger obtaining the best sources of oranges and relegating others to more costly oranges). *See also* United States v. Microsoft Corp., 253 F.3d 34, 70 (D.C. Cir. 2001) (Microsoft's actions foreclosed Netscape's access to the most efficient distribution channels); United States v. Dentsply Intl., Inc., 399 F.3d 181, 191-192 (3d Cir. 2005) (exclusive dealing imposed on dealers relegated rivals to more costly and less effective distribution channels). *See also* Novell, Inc. v. Microsoft Corp., 505 F.3d 302 (4th Cir. 2007), *cert. denied*, 552 U.S. 1276 (2008) (refusing to dismiss claim that Microsoft's exclusivity practices relegated plaintiff to inferior distribution channels). By contrast, *see* Omega Env'l, Inc. v. Gilbarco, Inc., 127 F.3d 1157, 1162-1163 (9th Cir. 1997) (treating all distribution channels alike; dismissing complaint).

[36]FTC v. Qualcomm, Inc., 411 F.Supp.3d 658, 736 (N.D.Cal. 2019), rev'd, 969 F.3d 974 (9th Cir. 2020).

[37]411 F.Supp. 3d at 736.

deal.[38] The District Court found this conduct unlawful, but the Ninth Circuit reversed, concluding that the only serious competition for Apple's business was with Intel. It even conceded that the result of its exclusive arrangement with Apple was very likely higher prices. It faulted the district court for identifying the relevant harm as accruing to Qualcomm's customers, "resulting in higher prices to consumers," rather than Qualcomm's competitors.[39] The Ninth Circuit apparently believed that injury to customers fell outside of the relevant market and that only injury to competitors counted.[40]

What the Ninth Circuit should have seen is that this dispute involved two well-placed suppliers (Qualcomm and Intel) with a single large customer (Apple) who was naturally attempting to force competition between them. Instead, Qualcomm took advantage of its dominant position to insist on exclusive dealing. Affirming liability should have been straightforward, particularly given the fact finding that prices were higher as a result.

Already in the 1916 *American Can* case the defendant, who was a dominant maker of metal food cans, bought up or acquired exclusive deals covering all of the superior can making machinery. This relegated rivals to inferior technologies:

> [F]or a year or two after defendant's formation it was practically impossible for any competitor to obtain the most modern, up-to-date, automatic machinery, and the difficulties in the way of getting such machinery were not altogether removed until the expiration of the six years for which the defendant had bound up the leading manufacturers of [can-making] machinery.[41]

When considering foreclosure from a vertical practice a fact finder must focus less on the overall range of alternatives and more on the relative placement and quality of the acquired or contracting firm vis-à-vis the most closely competing alternatives. It is not

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[38] Id. at 737-738.
[39] *Qualcomm*, 969 F.3d at 992-993.
[40] Id. at 1002.
[41] United States v. American Can Co., 230 F. 859, 875 (D. Md. 1916), appeal dismissed, 256 U.S. 706 (1921).

necessary to define the "market" for these firms overall, but the fact finder must identify the closest rivals. To the extent the defendant's vertical practice ties up the lowest cost or best of the related producers, rivals will be relegated to those that are inferior. As a theory of harm, raising rivals' costs is more likely than complete market exclusion, although the latter is possible too. Optimally, the fact finder could use expert testimony to determine the equilibrium price effects on the defendant and the vertically related firm, and also of rivals attempting to compete with it.

Market Definition and Direct Measurement: "Recapture"

Whenever a firm raises its price it will, *ceteris paribus*, lose some sales. Whether the price increase is profitable depends on the size of the price increase, the firm's margins, and the number of sales that it loses. If the firm can recapture some of these lost sales, then a price increase of any given magnitude will be more likely to be profitable.

The idea of "recapture" has become an essential component of modern economic analysis of market definition, as well as more direct measures of market power. The theory depends on observed differences in cost, quality, or other attributes among alternative firms. Beyond that, it is relatively straightforward: firm A will lose a certain number of sales if it increases its own product price. Considering A alone, that price increase could be unprofitable. But suppose that a high percentage of those lost sales go to firm B, which produces a reasonably close substitute. If these B sales were added back in ("recaptured") the price increase could be profitable. For purposes of market definition, we would express that conclusion by saying that A and B are essential components of a "hypothetical monopolist,"[42] which means that A standing alone is not a

[42]Some courts and writers speak of a "hypothetical cartel," which confers the same meaning. *See, e.g.*, FTC v. Wilh. Wilhelmsen Holding ASA, 341 F.Supp.3d 27, 47 (D.D.C. 2018). *See also* David Glasner and Sean P. Sullivan, *The Logic of Market Definition*, 83 ANTITRUST L.J. 293, 314 n. 95 (2020).

monopolist but A plus B together might be.[43] As a result, A and B are in the same relevant market.[44] If the two were owned by the same firm or organized into a cartel their joint price increase might be profitable even though A's price increase acting alone was not. Depending on the substitution differences between AB and other firms in the market, as well as the two firms' margins, this could also warrant challenging a merger of A and B under the theory of "unilateral effects."[45]

A vertical merger can work the same way: it can facilitate a price increase when it enables revenues that might otherwise be lost from a price increase to be recaptured through the increased sales of the acquired firm.[46] Indeed, one of the approaches taken in the

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[43]On this reasoning in the 2010 Horizontal Merger Guidelines, see Carl Shapiro, *The 2010 Merger Guidelines: from Hedgehog to Fox in Forty Years*, 77 ANTITRUST L.J. 49, 90-91 (2010). *See also* Daniel P. O'Brien and Steven C. Salop, *Competitive Effects of Partial Ownership: Financial Interest and Corporate Control*, 67 ANTITRUST L.J. 559, 573 (2000). For evaluating mergers, the theory goes back at least forty years. *See, e.g.*, Gregory J. Werden, *The 1982 Merger Guidelines and the Ascent of the Hypothetical Monopolist Paradigm*, 71 ANTITRUST L.J. 253 (2003). However, it would work equally well for antitrust practices other than mergers.

[44]For explanation of the antitrust Agencies' approach, see U.S. Department of Justice and FTC, Horizontal Merger Guidelines §4.1.3 (2010), available at https://www.justice.gov/atr/horizontal-merger-guidelines-08192010. *See also* Joseph Farrell & Carl Shapiro, *Recapture, Pass-Through, and Market Definition*, 76 ANTITRUST L.J. 585 (2010)

[45]*See, e.g.*, United States v. H & R Block, Inc., 833 F.Supp.2d 36 (D.D.C. 2011) (applying this theory). *See also* 4 PHILLIP E. AREEDA & HERBERT HOVENKAMP, ANTITRUST LAW ¶¶913-915 (4th ed. 2017); Shapiro, *supra* note __; O'Brien and Salop, *supra* note __.

[46]*See* Steven C Salop, *Invigorating Vertical Merger Enforcement*, 127 YALE L.J. 1962 (2018); Serge Moresi and Steven C. Salop, *VGuppi: Scoring Unilateral Price Incentives in Vertical Mergers*, 79 ANTITRUST L.J. 185 (2018).

Vertical Merger Guidelines is as a variant of the hypothetical monopolist test used for market definition.

For example, suppose an automobile manufacturer acquires a firm that produces automobile bodies and sells them to several automobile producers.[47] After the acquisition the automobile body firm, now owned by the automobile manufacturer, raises the price of bodies. As a result, some competing automobile manufacturers switch away and purchase automobile bodies from another supplier.

Assume that prior to the acquisition this price increase would have been unprofitable to the body manufacturer alone – the number of lost sales was too great in comparison with the price increase. Subsequent to the merger, however, some customers respond to the autobody price increase by switching to the acquiring automobile manufacturer. In that case some of the losses that would have accrued to the body manufacturer as an independent entity are recaptured in increased sales of automobiles. This recapture may be sufficient to make the price increase profitable.

The government used this theory in its unsuccessful challenge to AT&T's acquisition of Times-Warner (TW).[48] AT&T is a distributor of cable and satellite TV services to its various subscribers. It owns DirecTV as well as some smaller cable television companies. TW is a very large owner of digital media, which it licenses to digital programming distributors such as AT&T. Digital programming is non-rivalrous, which means that each digital

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[47]The facts are hypothetical but are adopted loosely from the General Motors/Fisher Body merger, which occurred in 1926. For opposing views of the acquisition, *see* Benjamin Klein, *Fisher-General Motors and the Nature of the Firm*, 43 J. L. & ECON. 105 (2000); Ronald H. Coase, *The Acquisition of Fisher Body by General Motors*, 43 J. L. & ECON. 15 (2000). One difference between the hypothetical and the real situation is that prior to their merger Fisher and GM apparently dealt only with one another.

[48]United States v. AT&T, Inc., 310 F.Supp.3d 161 (D.D.C. 2018), *aff'd*, 916 F.3d 1029 (D.C.Cir. 2019).

copy can be licensed out an indefinite number of times. It is also subject to significant product differentiation and there are large differences in marginal value among content suppliers. TW owns titles such as the *Harry Potter* movie series and *Wonder Woman* that are not only highly desirable, but no one else has them. An independent TW would have no incentive to deny programing to anyone willing to pay its price, which would be the profit-maximizing rate for free standing TW. In that case TW's profit maximizing strategy would be to license to all takers, perhaps with some price discrimination to the extent that its customers had differing demand elasticities.[49]

After the merger things change, however. The new owner of TW, AT&T, also owns distribution assets. If AT&T/TW raises the license price for some of its media or simply blocks licensing to some third-party carriers TW will still lose sales, but some of that lost revenue would be recaptured to the extent that it induces customers to switch to an AT&T firm as distributor. TW is not like one out of ten appliance stores in an area that might be reasonably good substitutes for one another. Rather, for many of its titles there are no good alternatives. Current customers of Dish Network might respond to higher fees or a blackout of desirable TW titles by switching to DirecTV, which AT&T owns.[50] Whether that tradeoff is profitable and by how much is an empirical question, and depends on the diversion rate at which subscribers will switch; but it also indicates

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[49]The cost of licensing is virtually zero and supply is unlimited. As a result the optimal strategy would be to license to every potential customer at a price equal to the inverse of its elasticity of demand. *E.g.*, W. Michael Hanemann, *Willingness to Pay and Willingness to Accept: How Much Can They Differ*?, 81 AM. ECON. REV. 635 (1991).

[50] *See, e.g.*, Final, Corrected Brief of Appellant, United States v. AT&T, No. 18-5214, 2018 WL 5099066 (D.C.Cir. Oct. 18, 2018), *16, *48 (after the merger AT&T could use blackouts to switch subscribers to DirecTV or other AT&T outlets); *id.* at 68 (speaking of these switchers as the "diversion rate").

that AT&T/TW's profit-maximizing price following the merger would be higher than it had been prior to the merger. The "where the effect may be substantially to lessen competition" language of §7 of the Clayton Act is triggered by a probable price increase caused by the merger.[51]

This theory also works for some contractual relationships as well, although to the best of my knowledge no court has applied it. One of Ronald Coase's contributions to law and economics was the insight that anything that can be accomplished within a firm can be specified with a properly designed contract.[52] A vertical control agreement can harm competition when it enables a firm to "recapture" revenues from a price increase that it would otherwise have lost. In order to work, a contractual arrangement would have to force a price increase (or quality decrease) that would ordinarily be unprofitable, but that the firm would be able to recapture as a result of its contractual relationship with another firm.

One contractual tool for this purpose is most-favored-nation (MFN) clauses, which are contractual provisions that specify the minimum price that a contracting partner must charge to third parties in competition with the principal firm.[53] For example, the automobile manufacture in the previous illustration might enter a long-term contract with the automobile body manufacturer that also requires the body manufacturer to charge higher prices to the automobile manufacturer's competitors. This could induce customers to switch to the automobile manufacturer's automobiles, thus

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[51]*See* Moresi & Salop, *supra* note __.

[52]*See* Ronald H. Coase, *The Nature of the Firm*, 4 ECONOMICA 386 (1937); and steven N.S. Cheung, *The Contractual Nature of the Firm*, 26 J.L. & ECON. 1 (1983).

[53]*See, e.g.*, Silverman v. Amazon, Inc., No. 1:21-cv-01256 (S.D.N.Y. Feb. 11, 2021), 2021 WL 528598 (class action complaint alleging Amazon's unlawful use of MFN clauses in ebook sales). *See* iId., ¶3 (result of MFN clauses is that the plaintiff class must pay more for ebooks purchased on alternative platforms).

recapturing lost profits elsewhere. The body manufacturer would have to be compensated for its lost profits from the high prices charged to the rivals, but to the extent the strategy is profitable to the auto manufacturer it will be able to share its profits and the two will reach a joint maximizing solution.[54]

In a case involving a firm such as Amazon and ebooks,[55] an MFN agreement might force prices to be higher on non-Amazon ebook sites. This would serve to protect Amazon's own higher margins and, if necessary, enable Amazon to compensate the publishers for losses of revenue on other sites. While this outcome could be accomplished by means of a vertical merger between Amazon and ebook publishers, it could also be accomplished through a sufficiently specified contract.

Power and Effects

The metered foreclosure and recapture strategies outlined here depend on rates of substitution or response to price changes that traditional market definition approaches to power fail to capture. That is not surprising. The tools of market definition were developed

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[54]*See* Ronald H. Coase, *The Problem of Social Cost*, 2 J. L. & ECON. 1 (1960).

[55]*See* Amazon Compl., *supra* note __, ¶3 (alleging that the MFNs make it more difficult for rival book sellers to compete with Amazon); ¶¶82-83:

> Because of Amazon's market power in the Relevant Market, these contractual requirements prevent Amazon's actual and potential rivals from offering lower prices or promotions, introducing different business models, or developing innovative products. One competitor told the Committee that the effect of Amazon's MFN and related provisions is that publishers "raise the price on competitor sites to match Amazon's price." In other words, Amazon uses the MFN and related provisions to raise prices not only on its own platform, but also on platforms that it does not control.

prior to the time that empirical methodologies for measuring marginal substitution rates, or elasticities, came into vogue.[56]

Because of its binary nature, traditional tools that estimate market power by reference to a relevant market work very poorly for this purpose. They can count something as inside the market or outside but cannot meter gradations. For example, if several potential vertically related trading partners have different costs or other measures of desirability, any approach that depended on placing them in a relevant market for measurement of foreclosure would put them either inside or outside, but it could not meter anything in between. Of course, a court might conduct a separate fact finding to the effect that the acquired or obligated firms were better placed than rivals, but this alone would not enable it to quantify the results.

The better approach is to start out with the pair of firms subject to a merger, or whose conduct is governed by an exclusionary contract provision. The question whether this pairing will result in a price increase depends on how the arrangement limits the opportunities of alternative firms, whether upstream or downstream. This is a function of the extent to which a merger or contracting partner has cost or placement advantages over the next best placed firms. If we can produce these numbers for a small number of best placed firms, the definition of a broader relevant market adds nothing.

If we cannot produce them with any degree of reliability, then defining markets and measuring shares is a poorer alternative, although at that point we may have no choice. That is, market definition approaches should be the fall back when more direct measures are unavailable.

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[56]For pioneering work in this area, *see* RICHARD S. MARKOVITS, ECONOMICS AND THE INTERPRETATION AND APPLICATION OF U.S. AND E.U. ANTITRUST LAW (2014). *See also* Louis Kaplow, *On the Relevance of Market Power*, 130 HARV. L. REV. 1303 (2017).

Other Practices that Obscure Market Boundaries

Vertical practices are not the only ones that jump traditional market boundaries, although the facts are often buried in questions about market definition, which incidentally also distorts the analysis.

Consider the *Continental Can* decision, which condemned the merger of a manufacturer of metal food cans with a maker of glass jars.[57] After finding that there were some markets in which cans and bottles competed, including baby food, soft drinks, and beer, the Court lumped cans and bottles into one market and condemned the merger in an aggregated can/bottle market. In a different legal context, and with a different outcome, the decision in the *DuPont (Cellophane)* case declined to condemn DuPont of monopolization after lumping cellophane, waxed paper, wrapping paper and metal foil together into a single market for "flexible packaging materials."[58]

In both of these cases, simply lumping the diverse products into a single market was mistaken. The issue in *DuPont* was more difficult than the one in *Continental Can*, however. Both would have done better to apply a version of the recapture analysis described previously. The question in *Continental Can* was whether there was some grouping of sales for which the merger would have led to a price increase. For example, standalone Continental's ability to raise its price to beer producers[59] may have been limited by the competition of Hazel-Atlas' glass bottles. Continental would lose too many sales. To the extent those purchasers defected to Hazel-Atlas, however, the merger would enable Continental to recapture them, perhaps making its price increase profitable. This process may have to be repeated for other uses for which cans and bottles were viable alternatives.

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[57] United States v. Continental Can Co., 378 U.S. 441 (1964).
[58]United States v. E.I. du Pont de Nemours & co., 351 U.S. 377 (1956). *See* 2B AREEDA & HOVENKAMP, *supra* note __, ¶539.
[59] For this analysis we assume that Continental had the power to price discriminate between different types of can customers.

The issue in *DuPont* is more difficult to address for two reasons. First, in a monopolization case the substitution query may have to be applied to a larger number of firms than a single merger partner. Whether cellophane enjoyed substantial market power depended on its substitutability with multiple candidates. These included all of the proffered alternatives – namely, wax paper, glassine, brown wrapping paper, tin foil, and so on, starting with the closest rival. Each alternative that met the hypothetical monopolist requirement should be included in the market until the alternatives were exhausted or the defendant's share was too small to sustain a monopolization charge.

Second, the Court would have to be satisfied that substitution was not observed because DuPont was *already* selling cellophane at a significant markup above its costs – the well-known "Cellophane fallacy" problem.[60] Answering that question will involve econometrics rather than market definition. Measurement tools are available for determining the extent to which a firm's prices exceed its costs.[61] Addressing the markup question directly may dispense with the need to define a relevant market. That is, a high price/cost margin is itself evidence of significant market power. That may be all that is needed in situations where the legal standard does not insist on a market definition as a mechanism for establishing power.

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[60] On the problem, *see* HERBERT HOVENKAMP, FEDERAL ANTITRUST POLICY: THE LAW OF COMPETITION AND ITS PRACTICE §3.4 (6th ed. 2020).

[61] *See* Steven Berry, Martin Gaynor, and Fiona Scott Morton, *Do Increasing Markups matter? Lessons from empirical Industrial Organization*, 33 J. ECON. PERSP. 44 (2019) (noting recent improvements in the theory for measuring price/cost margins). *See also* Chad Syverson, *Macroeconomics and Market Power: Context, Implications, and Open Questions*, 33 J. ECON. PERSP. 23 (2019) (comparing various approaches). *And see* Carl Shapiro, *Antitrust in a Time of Populism*, 61 INT'L J. INDUS. ORG. 714 (2018) (emphasizing study of individual markets in order to assess market power).

Conclusion

Evaluating vertical control mechanisms requires an understanding of how a challenged structure (whether in property or contract) changes the constraints under which parties bargain. In a well-functioning market two bargaining partners will maximize any value that is jointly available. While that proposition is naturally associated with the Coase Theorem,[62] it is in fact far broader and covers all situations in which contracting parties are able to reach an agreement.[63]

An important corollary, however, is that agreements may be joint maximizing precisely because they create monopoly. Cartels are the most visible example of this, but there are others.[64] Legal rules sometimes constrain firms' ability to make profit-maximizing deals because those deals, once made, injure competition.[65] In such cases, understanding how a restraint or acquisition affects particular bargaining relationships can tell us much more than any information concerning the overall relevant market in which the firms operate.

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[62]E.g., Joseph Farrell, *Information and the Coase Theorem*, 1 ECON. PERSP. 113, 123 (1987); Robert Cooter, *The Cost of Coase*, 11 J. LEG. STUD. 1, 4 (1982)

[63]*E.g.*, Daniel F. Spulber, *Complementary Monopolies and Bargaining*, 60 J. L. & ECON. 29 (2017).

[64]*See* HOVENKAMP, FEDERAL ANTITRUST POLICY, *supra* note __, Ch. 4.

[65]In the context of patent law, *see* Erik Hovenkamp, *Competition, Inalienability, and the Economic Analysis of Patent Law*, 21 STAN. TECH. L. REV.33 (2018).