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Competition Issues in Aftermarkets - Note from the United States

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More documents related to this discussion can be found at

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United States

1. Introduction

1. The U.S. Federal Trade Commission ("FTC") and the Antitrust Division of the U.S. Department of Justice ("DOJ") (together, "the antitrust agencies") submit this paper to describe the evolution of federal caselaw and antitrust analysis in the United States regarding aftermarkets. Modern U.S. antitrust law centers on protecting the competitive process, applying sound economic analysis, and focusing on the facts of the case at issue.[1] As described below, this current approach to antitrust is demonstrated by the evolution in U.S. courts' antitrust analysis of aftermarkets.

2. Products with aftermarkets are very common. Examples range from simple products and services like razors and razor blades to operationally or technically complex products and services like software and software updates.[2] And approaches to aftermarket sales are just as diverse, which leads to a range of competitive dynamics and participants in different markets. In some instances, original equipment manufacturers ("OEMs")[3] participate in aftermarket sales, often in competition with independent suppliers of aftermarket products.[4] In other instances, the OEM has no presence in the sale of aftermarket parts or service.[5]

3. Consumers often use durable goods with aftermarket complements, and aftermarket complements can account for a significant proportion of the lifecycle cost of owning and using the durable good. In such circumstances, sellers of durable goods compete not only on price of the foremarket product, but also on total lifecycle cost. If customers cannot turn elsewhere for aftermarket complements sold separately from the foremarket good, a manufacturer might elect to price the foremarket good low and its complement high. For durable goods in competitive markets with transparency on aftermarket complements, total lifecycle pricing is generally competitive, with durable-goods competition limiting aftermarket market power.

[1] See Maureen K. Ohlhausen, Acting Chairman, Federal Trade Commission, "What Are We Talking About When We Talk About Antitrust?" Remarks at the Concurrences Review Dinner, September 22, 2016, https://www.ftc.gov/system/files/documents/public_statements/985823/concurrence_dinner_speech_092216.pdf.

[2] Other examples include, but are not limited to, coffee makers and capsules; printers and ink cartridges; flights and luggage fees; hotels and Wi-Fi access; autos and parts or maintenance. These products and practices involve "a multitude of industries and hundreds of billions of dollars of sales." Joseph P. Bauer, *Antitrust Implications of Aftermarkets*, 52 ANTITRUST BULL. 31, 31 (2007).

[3] The antitrust agencies use the term "OEM" in this paper to describe any means by which a company may manufacture or supply foremarket products and do not limit their analysis to durable goods. For example, a company may design and sell computer operating systems, which have an aftermarket for software updates and patches. That company would be an "OEM" for purposes of this paper.

[4] A simple example is smartphone charging cables. Many smartphone companies sell cables under their own brand name—some even provide a cable with each new phone—but many other sellers offer compatible smartphone charging cables that compete on price, durability, or other features.

[5] For example, most lamp manufacturers do not also manufacture and sell aftermarket light bulbs for their lamps.

4. Suppliers use a variety of methods to extend sales from their primary products into aftermarkets for those products. A company's primary good and its aftermarket good typically are complements; therefore selling the two goods together (or at least obtaining an agreement to purchase both) can enhance efficiency. The methods by which companies attempt to influence aftermarket sales are varied, and this paper does not attempt to catalog all of them. For the sake of clarity, however, the antitrust agencies use the following definition for purposes of the discussion in this paper: "aftermarket restrictions" include any method by which a company providing a product or service (whether by sale, lease, license or other form of agreement or transaction) limits the freedom of its customers to obtain aftermarket items.[6] Such restrictions may arise in a number of ways. For example, the OEM may design the technical characteristics of its product to allow replacement of aftermarket items only of a predetermined type or from one or more specified suppliers (the OEM itself, in some cases). Other examples may include conditioning the supply of the OEM's product on the customer's contractual agreement to obtain aftermarket items or warranty service only from the OEM or from sources it approves. Sometimes the characteristics of the product or other relevant circumstances may render switching to a different source of aftermarket products or services prohibitively expensive or inconvenient for the customer. Such restrictions may also relate to the price, territory or field of use, or quality or other characteristics of the aftermarket products or services in question. This paper focuses only on the competitive effects of such unilaterally imposed restrictions. For completeness, however, the antitrust agencies note that other conduct and transactions have the potential to harm competition in aftermarkets and thus can trigger antitrust liability, such as mergers between aftermarket parts providers,[7] price-fixing,[8] or other collusion between such providers.[9]

5. In recent years, the U.S. antitrust agencies have not challenged OEM use of unilateral aftermarket restrictions on products or services, in the absence of actual lessening of competition for locked-in customers. This approach aligns with jurisprudence in the United States, which has narrowed the scope of liability for aftermarket restraints since the U.S. Supreme Court's most-recent consideration of aftermarket issues in its 1992 *Kodak* decision, as discussed in detail below.[10]

[6] See Bauer, *supra* n.2 at 32.

[7] For example, DOJ challenged GE's 2015 acquisition of Alstom, including a subsidiary that was an aftermarket supplier of parts for GE gas turbines, which would have given GE control of 92 percent of that aftermarket. See *United States v. General Elec. Co.*, 80 Fed. Reg. 57, 205 (Sept. 22, 2015) (complaint). DOJ required GE to divest the aftermarkets subsidiary before it consented to allowing the transaction to proceed. See 80 Fed. Reg. 57,212, 57,213 (Sept. 22, 2015) (proposed final judgment).

[8] See Press Release, Dept. of Justice, California Aftermarket Auto Lights Distributor Agrees to Plead Guilty in Price-Fixing Conspiracy (Aug. 30, 2011), https://www.justice.gov/opa/pr/california-aftermarket-auto-lights-distributor-agrees-plead-guilty-price-fixing-conspiracy.

[9] Accordingly, this paper does not focus on the application of section 1 of the Sherman Act or section 7 of the Clayton Act to aftermarkets.

[10] See William K. Kovacic, *The Intellectual DNA of Modern U.S. Competition Law for Dominant Firm Conduct: The Chicago/Harvard Double Helix*, 2007 COLUM. BUS. L. REV. 1, 19-20 (noting that the "Supreme Court's post-Kodak decisions have emphasized principles discouraging intervention … and imposed significant burdens on plaintiffs . . . seeking to challenge dominant firm conduct," and that "[s]ince 1970, dominant firms generally have faced less exposure at the end of each decade … than they did at its beginning").

2. U.S. Legal Framework

6. The U.S. antitrust agencies enforce a number of statutes; of particular relevance to this discussion is section 2 of the Sherman Antitrust Act.[11] Section 2 prohibits monopolization or attempted monopolization by a single entity, as well as by combination or conspiracy.[12] Liability for monopolization requires proof that the defendant possesses monopoly power in a relevant market and has engaged in "the willful acquisition or maintenance of that power as distinguished from growth or development as a consequence of a superior product, business acumen, or historic accident."[13]

7. To the extent unilateral restraints imposed by an OEM on aftermarket parts or services implicate U.S. antitrust concerns, it typically is because such restraints are alleged to be (and in some cases might qualify as) exclusionary conduct. Exclusionary conduct may take many forms, of which tying is another, related, example. Tying is the provision by a firm of one product (the tying product) only on condition that the customer also obtains a second product (the tied product) from the same firm.[14] Though tying is analytically similar to the practices discussed in this paper, this paper does not address tying in depth, as it is beyond the scope of the roundtable discussion.[15] This paper focuses

[11] 15 U.S.C. § 2.

[12] "Every person who shall monopolize, or attempt to monopolize, or combine or conspire with any other person or persons, to monopolize any part of the trade or commerce among the several States, or with foreign nations shall be deemed guilty of a felony …." *Id.*

[13] *United States v. Grinnell Corp*., 384 U.S. 563, 570-71 (1966); s*ee also Verizon Comm. v. Law Offices of Curtis v. Trinko, LLP*, 540 U.S. 398, 407 (2004). A recent FTC decision provides an extended analysis of these requirements. See *In re McWane*, 155 F.T.C. 903, 1374-1428 (2013), *affirmed McWane, Inc., v. F.T.C.*, 783 F.3d 814 (2015), *cert den.* 136 S.Ct. 1452 (2016).

[14] See *N. Pac. Ry. Co. v. United States*, 356 U.S. 1, 5-6 (1958).

[15] U.S. law allows a plaintiff to bring a tying claim under any of several U.S. antitrust statutes, including sections 1 and 2 of the Sherman Act and section 3 of the Clayton Act. Sherman Act § 1 provides that "[e]very contract, combination in the form of trust or otherwise, or conspiracy, in restraint of trade or commerce … is declared to be illegal." 15 U.S.C. § 1.

Clayton Act § 3 applies only when both the tying and tied products are "goods, wares, merchandise, machinery, supplies, or other commodities," and thus does not apply when tying arrangements involve intangibles such as services, trademarks, or franchises, among other things. 15 U.S.C. § 14.

The FTC also may bring a tying claim under the Federal Trade Commission Act, 15 U.S.C. §§ 41-58. This statute empowers the FTC (and only the FTC), among other things, to prevent unfair methods of competition and unfair or deceptive acts or practices in or affecting commerce. Similarly, U.S. states may have enforcement power with regard to such conduct under their own state laws. See *also infra* ¶ 33.

In many cases prior to the Supreme Court decision in *Eastman Kodak Co. v. Image Technical Servs., Inc.*, 504 U.S. 451 (1992), plaintiffs alleged violations of Sherman Act § 1 and/or Clayton Act § 3 when tying conduct was involved, and courts applied a *per se* rule of liability. See *N. Pac. Ry. Co. v. United States*, 356 U.S. 1 (1958); *Int'l Salt Co. v. United States*, 332 U.S. 392, 396 (1947) ("It is unreasonable, *per se*, to foreclose competitors from any substantial market."). Since then, however, courts have imposed a number of limits on the availability of the *per se* rule against tying restraints, reflecting the U.S. Supreme Court's elimination of *per se* analysis for all other vertical restraints. See, *e.g., Illinois Tool Works v. Independent Ink, Inc.*, 547 U.S. 28, 34 (2006) ("Over the years, this Court's strong disapproval of tying arrangements has substantially diminished."). Even where the rule of reason applies and there is no requirement of proving market power over the tying product, courts require a showing of cognizable harm in the tied product market, even when the analysis seems to resemble monopolization

solely on the narrower issues related to unilateral restrictions imposed by OEMs on aftermarkets and does not address the broader issue of the legality and analysis of tying under U.S. law.

8. Behavior involving aftermarket products and markets can be thought of as a subset of tying behavior, distinguished by the existence of a "foremarket" for a product or service and a complementary aftermarket for products or services used in connection with that product or service. Some courts have applied a general tying framework to cases involving aftermarkets, while others have treated aftermarket issues as a sub-category of tying issues. U.S. courts are not always precise in their analysis.[16]

9. In addition to the antitrust authority discussed above, the Federal Trade Commission enforces the Magnuson-Moss Warranty Act, a consumer protection law passed in 1975 to clarify how written warranties may be used when marketing products to consumers. This law, limited in scope to consumer products, bars manufacturers from conditioning warranty coverage on use of manufacturers' parts or services, unless the parts or services are provided without charge.[17] Companies may seek a waiver from this prohibition if: (1) the warrantor satisfies the Commission that the manufacturers' parts or services are necessary for the product to function, and (2) the waiver is in the public interest. As the FTC has explained, the anti-tying provision of the Act "prohibits tying arrangements in warranties that effectively restrict the consumer's ability to choose among competing brands of products or services that can be used in conjunction with the warranted product."[18]

10. In October 2015, the FTC approved a complaint and settlement against BMW for violations of the Magnuson-Moss Warranty Act.[19] The FTC alleged that BMW violated the tying provision of the Act by conditioning the warranty it offered on MINI cars on the use of MINI dealers and genuine MINI parts without providing such parts and services for free or seeking a waiver.[20]

3. Market Definition and Monopoly Power

11. Market definition is an important component of many antitrust cases in the U.S. Courts have held that proof of a relevant market is essential to a claim of monopolization

standards for section 2 of the Sherman Act. See, *e.g., Town Sound & Customer Tops, Inc. v. Chrysler Motors*, 959 F.2d. 468, 487-94 (3d Cir. 1992); See *also Leegin Creative Leather Products, Inc. v. PSKS, Inc.*, 551 U.S. 877, 906 (2007) (holding that "[v]ertical price restraints are to be judged according to the rule of reason"); *Jefferson Parish Hosp. Dist. No. 2 v. Hyde*, 466 U.S. 2, 26 (1984) (holding that analysis of a tying claim still requires inquiry into market power and economic effects of the arrangement).

[16] See, *e.g., Virtual Maintenance, Inc. v. Prime Computer, Inc.*, 957 F.2d 1318 (6th Cir. 1992) (reversing district court determination that contract provision requiring the purchase of hardware maintenance with software support service amounted to illegal tie).

[17] 15 U.S.C. § 2302(c). To encourage compliance with the Magnuson-Moss Warranty Act, the Commission has published a business guide to U.S. warranty law. See https://www.ftc.gov/tips-advice/business-center/guidance/businesspersons-guide-federal-warranty-law#intro.

[18] 42 FR 36112, 36114.

[19] See https://www.ftc.gov/system/files/documents/cases/151022bmwcmpt.pdf.

[20] See *id*.

or attempted monopolization.[21] Defining markets and assessing the market positions of competitors also are frequently important in understanding the competitive dynamics that provide the background for assessment of allegations of other types of anticompetitive conduct. A relevant market has both product and geographic dimensions, each of which must be proven before reaching the question of whether monopoly power exists.

12. Agencies and courts in the U.S. use the "hypothetical monopolist" test to define relevant markets. This test asks whether a profit-maximizing hypothetical monopolist would likely impose at least a small, but significant and non-transitory, increase in price in the product market as proposed. If "yes", then the candidate market is a relevant product market, and, if "no," then the market should expand to include the next most effective substitute product or products. An analogous procedure is followed to determine the relevant geographic market. The result is a defined relevant market, consisting of those products and the associated geographic area that satisfy both criteria.

13. In the context of aftermarkets, a key question regarding product market definition is whether the aftermarket constitutes a relevant product market separate from the foremarket. The hypothetical monopolist test can answer this question—if a profit-maximizing hypothetical monopolist of an aftermarket (that is not a monopolist in the foremarket) would raise prices by at least a small but significant and non-transitory amount, then foremarket competition is not sufficient to prevent against anticompetitive behavior in the aftermarket; thus it is appropriate to analyze competition in a separate relevant market comprising the aftermarket.

14. Whether the product of a single manufacturer can constitute a relevant product market frequently arises in cases alleging aftermarkets for the servicing of a single manufacturer's products or parts for those products. Application of the hypothetical monopolist test to market definition very rarely leads to a conclusion that a relevant market is limited to the product of a single manufacturer, which is consistent with the Supreme Court's discussion of the issue.[22]

4. *Kodak* and Subsequent U.S. Caselaw

15. *Eastman Kodak Co. v. Image Technical Servs., Inc.* is the U.S. Supreme Court's most recent consideration of unilateral refusals to deal in aftermarkets under Section 2 of the Sherman Act.[23] The Court's opinion allowed for the possibility that an OEM could in some instances be a monopolist in aftermarkets related to its products. Since the *Kodak* case, however, few plaintiffs have prevailed on aftermarket claims, and the legacy of the *Kodak* decision has been modest.

16. The claim challenged Kodak's policies restricting the ability of independent service organizations (ISOs) to service and provide replacement parts for Kodak copiers

[21] See, *e.g.*, *Spectrum Sports v. McQuillan*, 506 U.S. 447, 459 (1993) (stating that absent proof of a relevant market, a court could not determine that a defendant violated § 2 of the Sherman Act).

[22] See *United States v. E.I. du Pont de Nemours & Co.*, 351 U.S. 377, 393 (1956); *accord United States v. Grinnell Corp.*, 384 U.S. at 571 (analyzing method of defining a relevant market).

[23] 504 U.S. 451 (1992); See *also* Kenneth L. Glazer and Abbott B. Lipsky, Jr., *Unilateral Refusals to Deal Under Section 2 of the Sherman Act*, 63 ANTITRUST L.J. 749, 761-62 (1995). The *Kodak* court also analyzed the case using a more traditional tying analysis, but given the context of the OECD request for submissions, that topic has not been analyzed here. See *supra* ¶ 7.

and micrographics equipment. The ISOs provided parts and service for Kodak equipment in competition with Kodak itself. Decided on summary judgment in the district court,[24] the case focused on the allegation that Kodak refused to sell parts to equipment owners that obtained service from ISOs. Because Kodak refused to sell parts directly to ISOs, many ISOs found it impossible to stay in business. Many equipment owners who preferred ISO service were also forced to obtain service from Kodak. In their suit, ISOs alleged that Kodak unlawfully tied the availability of Kodak parts to the purchase of Kodak service and that Kodak had monopolized a service aftermarket.

17. The U.S. Supreme Court considered whether Kodak's high share of parts sales gave it the market power required to support a tying claim and whether it could monopolize a market limited to the service of its own brand of equipment. Kodak argued that intense competition from other suppliers in the foremarket for equipment precluded a finding of monopoly power in any associated aftermarket.[25] It further argued that it could not raise prices for aftermarket parts and service because such an increase would be offset by lost equipment sales as customers purchased equipment with more attractive service costs.[26]

18. The Court rejected Kodak's proposed rule, holding that "legal presumptions that rest on formalistic distinctions rather than actual market realities are generally disfavored in antitrust law."[27] The Court noted that Kodak's service prices had risen and identified several "lock-in" factors, including the cost of switching from Kodak equipment to competing equipment and imperfect information about total system costs.[28] The *Kodak* dissent noted with specificity that Kodak had changed its policy during the relevant period and argued that the case would have been decided differently had Kodak's policy remained the same throughout the relevant period.[29]

19. Despite the Supreme Court's decision in plaintiff's favor in *Kodak*, subsequent decisions have construed *Kodak* narrowly and have relied on the *Kodak* dissent to find that there can be no aftermarket claim absent a manufacturer's change in policies after it has locked in its customers. This also is generally true of the antitrust agencies' enforcement, although the agencies have brought at least one case involving exclusionary conduct in an aftermarket since *Kodak*.[30]

20. Courts generally narrowly interpret *Kodak* in one of two related ways. First, courts have applied the *Kodak* holding to a situation where a manufacturer has changed a

[24] *Image Technical Servs. v. Eastman Kodak Co.*, No. C-871686-WWS, 1988 WL 156332 (N.D. Cal. Apr. 18, 1988), *rev'd*, 903 F.3d 612 (9th Cir. 1990).

[25] 504 U.S. at 466.

[26] *Id*. at 465-66.

[27] *Id*. at 466-67.

[28] *Id*. at 474-80.

[29] *Id*. at 491 (Scalia, J., dissenting). The majority conceded that, had customers been aware of Kodak's policy prior to their purchases, a question of fact, it might have decided the case differently. See *id*. at 477 n.24.

[30] In 1998, DOJ challenged contracts between GE and hospitals that prevented hospitals from competing with GE in servicing GE medical imaging equipment at other hospitals. See Competitive Impact Statement, *United States v. General Electric Co.*, Civ. No. 96-121-M-CCL (July 14, 1998), https://www.justice.gov/atr/case-document/competitive-impact-statement-109.

policy, injuring customers who are locked in and thus cannot switch to the primary market product sold by a different OEM. Second, aftermarkets will not be analyzed independently from primary markets absent a compelling reason to do so, such as the ability to exercise market power in the aftermarket without fear of offsetting commercial consequences in the primary market. The discussion below highlights some cases in which U.S. courts have construed *Kodak*.

21. The Third Circuit Court of Appeals explained in *Brokerage Concepts v. United States Healthcare*[31] that switching costs can be an important avenue for exploration when determining relevant markets in an aftermarkets case. In *Brokerage Concepts*, the court rejected the argument that the market was limited to a single brand – members of defendant's health care plan and prescription benefits – because the plaintiff failed to demonstrate that a pharmacy had high enough switching costs to lock it in to using the health care plan.[32]

22. The First Circuit Court of Appeals narrowly applied *Kodak's* holding in 1999 when it determined that competition in the market for the product's original sale disciplined aftermarket pricing.[33] The court noted that reputation is important to firms that constantly compete for new customers and that a firm's reputation for aftermarket parts or service can influence purchases in the primary market.[34] The court held that "the aftermarket is the relevant market for antitrust analysis only if the evidence supports an inference of monopoly power in the aftermarket that *competition in the primary market appears unable to check*."[35]

23. The Fifth Circuit Court of Appeals distinguished *Kodak* in 1999 when it decided a similar case.[36] The *Alcatel* court affirmed the district court's grant of judgment as a matter of law dismissing plaintiff's monopolization claim. The court affirmed the district court's finding that the plaintiff had not proved that defendant's "customers face[d] substantial information and switching costs."[37] To the contrary, evidence showed that customers did in fact engage in lifecycle pricing.[38] Further, defendant did not change pricing, warranty, or other important terms after customers' initial purchase decision.[39] Finally, the court

[31] 140 F.3d 494 (3d Cir. 1998).

[32] *Id*. at 515. Courts have followed similar rationales outside the context of aftermarket parts like those in *Kodak*; in particular, some U.S. courts have rejected claims brought by franchisees where the franchisor did not change its policies after signing up the franchisee. See, *e.g.*, *Queen City Pizza v. Domino's Pizza*, 124 F.3d 430, 439 (3d Cir. 1997) (distinguishing *Kodak* because Domino's franchisees could assess potential costs and risks at time of contracting and there was no change in policy).

[33] *SMS Sys. Maint. Servs. v. Digital Equip.*, 188 F.3d 11 (1st Cir. 1999); See *also Parts & Elec. Motors, Inc. v. Sterling Elec., Inc.*, 866 F.2d 228, 236 (7th Cir. 1988) (Posner, J., dissenting) (describing the exploitation of aftermarket customers as a "suicidal" business practice).

[34] See 188 F.3d at 17.

[35] *Id*. (emphasis added).

[36] *Alcatel USA, Inc. v. DGI Technologies*, 166 F.3d 772 (5th Cir. 1999).

[37] *Id*. at 783.

[38] See *id.*

[39] See *id*. See *also Harrison Aire, Inc. v. Aerostar Int'l*, 423 F.3d 374 (3d Cir. 2005), *cert. den.*, 126 S. Ct. 1581 (2006); *PSI Repair Servs. v. Honeywell Inc.*, 104 F.3d 811 (6th Cir. 1997).

found that plaintiff had tried to define the product market "as narrowly as possible" to support its contention that the defendant had market power, a contention not supported by market realities.[40] These two factors combined to lead the Fifth Circuit to affirm the district court's finding that plaintiff's aftermarket monopoly claim failed as a matter of law.[41]

24. The Third Circuit again weighed in on an aftermarkets issue in 2006 when it affirmed a district court grant of summary judgment for the defendant, finding that a seller of hot air balloons and aftermarket replacement fabric permissibly restricted the sale of aftermarket replacement fabric to its own brand.[42] Importantly, however, the Third Circuit last year clarified its interpretation of *Kodak* and its own previous caselaw when it held that it interprets *Kodak* to stand for two propositions: "(1) that firms operating in a competitive primary market are not … categorically insulated from antitrust liability for their conduct in related aftermarkets; and (2) that exploitation of locked-in customers is one theory that courts will recognize to justify such liability."[43] It affirmed the district court's grant of summary judgment in defendant's favor because plaintiff did not introduce evidence that defendant restrained competition in the relevant aftermarket.[44]

25. In cases involving aftermarkets, some U.S. courts have found little room to impose antitrust liability for a unilateral refusal to deal when intellectual property rights such as patent or copyright protect the aftermarket goods. Patent owners enjoy exclusive rights to their inventions.[45] Intellectual property protections can be one method sellers use to expand the market for secondary products or services,[46] though a full consideration of the interaction of intellectual property law and antitrust law with respect to aftermarkets exceeds the scope of this paper.[47]

26. In addition, the U.S. Court of Appeals for the Federal Circuit has held that a company does not violate U.S. antitrust law when it refuses to sell or license its copyrighted works as an aftermarket product.[48] In this regard, the court held that it is inappropriate to inquire into an intellectual property holder's intent.[49] Thus, in the United

[40] See 166 F.3d at 783.

[41] *Id*.

[42] *Harrison Aire, Inc. v. Aerostar Int'l, Inc.*, 423 F3d 374, 385 (noting that defendant's "aftermarket policy was transparent and known to [plaintiff] at all relevant times" and that nothing prevented plaintiff from engaging in lifecycle pricing analysis).

[43] *Avaya Inc., RP v. Telecom Labs, Inc.*, 838 F.3d 354, 404 (3d Cir. 2016).

[44] See *id*. at 413.

[45] U.S. CONST. art. I, § 8, cl.8 (giving Congress the power "[t]o promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries"); 35 U.S.C. § 154(a).

[46] See *generally, Illinois Tool Works Inc. v. Indep. Ink, Inc.* 547 U.S. 28 (2006) (holding that in tying cases involving a patented product, plaintiff must prove that defendant has market power in the tying product).

[47] See *generally*, Robin Feldman, *Patent and Antitrust: Differing Shades of Meaning* (2008), http://repository.uchastings.edu/cgi/viewcontent.cgi?article=2046&context=faculty_scholarship

[48] *In re Indep. Serv. Org. Antitrust Litig.*, 203 F.3d 1322, 1328 (Fed. Cir. 2000).

[49] See *id*. at 1327; See *also Data Gen. Corp. v. Grumman Sys. Support Corp.*, 36 F.3d 1147, 1187-88 (1st Cir. 1994).

States, a manufacturer is unlikely to face antitrust liability for unilaterally refusing to supply its aftermarket parts when patent or copyright protect those parts. Among the arguments posited by companies holding intellectual property rights over technology or software is the position that they rely on aftermarket revenues to fund ongoing investments in research and development; *i.e.*, that intellectual property protection stimulates innovation.

27. Synthesizing current U.S. aftermarkets caselaw after the Supreme Court's *Kodak* decision illuminates several principles. First, when a purchaser signs a contract containing aftermarket obligations regarding parts or servicing at the time of an initial sale, U.S. courts are unlikely to find antitrust liability where the manufacturer lacked market power in the foremarket and consumers had other pre-purchase choices. Second, if aftermarket costs are clear to customers at the time of their initial purchase, purchasers have likely engaged in rational "lifecycle" pricing analysis and courts are unlikely to intervene. On the other hand, if aftermarket costs or the availability of such parts or services are hidden or difficult for customers to acquire, antitrust liability is not precluded. Third, where there is no change in policy or where any changes are predictable to customers, U.S. courts are unlikely to impose antitrust liability.[50] Fourth, manufacturers whose aftermarket parts are protected by patent or copyright may obtain dismissal of antitrust claims at an early stage.

28. These post-*Kodak* decisions reflect lessons learned from the economic analysis that followed the *Kodak* decision and show that "significant or long-lived consumer injury based on monopolized aftermarkets is likely to be rare, especially if equipment markets are competitive."[51] Even where the original equipment market is a monopoly, however, if buyers understand that they are locked in (hence vulnerable to hold up), there will be no additional harm from hold up in the aftermarket – the monopolist cannot charge more in total than the buyer's reservation price for the services generated by the equipment over its lifetime. Harm is most likely in situations where the manufacturer can make unexpected changes in aftermarket policies in order to extract money from locked-in buyers or when uninformed buyers fail to take account of the aftermarket costs when making their original purchases. The lower the switching costs, the less significant this harm can be. High switching costs alone are not indicative of a problem, however, if for instance, as noted in the *Alcatel* decision, buyers engage in lifecycle pricing analysis at the time of the initial purchase.[52]

[50] See, *e.g.*, *Digital Equipment Corp. v. Uniq Digital Technologies*, 73 F.3d 756 (7th Cir. 1996); See *also PSI Repair Servs. v. Honeywell, Inc.*, 104 F3d. 811 (6th Cir. 1997) (holding that absence of policy change was fatal to plaintiff's claims because policy change was crucial component of decision in *Kodak*).

[51] Carl Shapiro, *Aftermarkets and Consumer Welfare: Making Sense of* Kodak, 63 ANTITRUST L.J. 483, 485 (1995). The article also provides a detailed economic analysis of theories of antitrust harm from aftermarket power.

[52] See Joseph Farrell & Paul Klemperer, *Coordination and lock-in: Competition with switching costs and network effects.* HANDBOOK OF INDUSTRIAL ORGANIZATION 3, 1967-2072 (2007) (noting that "with (large) switching costs firms compete over streams of goods and services rather than over single transactions. So one must not jump from the fact that buyers become locked in to the conclusion that there is an overall competitive problem. Nor should one draw naïve inferences from individual transaction prices, as if each transaction were the locus of ordinary competition. Some individual transactions may be priced well above cost even when no firm has (ex-ante) market power; others may be priced below cost without being in the least predatory.")

29. Aftermarkets have continued significance in today's economy.[53] Competition in aftermarkets may yield benefits for consumers, including decreased prices, increased access to certain goods and services, and increased innovation. Therefore, as a matter of antitrust law and competition policy, it remains important to assess the purpose and effects of limits on aftermarkets.

30. Aftermarket policies and practices discussed in this paper and elsewhere may, but do not always, lead to increased prices. Depending on how they are structured and implemented, a seller's unilateral aftermarket strategies may enhance efficiency and offer procompetitive benefits. In particular, companies may rely on certain unilateral aftermarket strategies as a quality control function that protects a seller's reputation and brand. For example, a franchisor may want to ensure that franchisees use its chosen ingredients only when selling food items under its brand.[54] Franchisor and franchisee have a shared interest in offering uniform quality across all franchise outlets, and an inferior offering by one outlet negatively affects the reputation of all. Moreover, in some situations, a manufacturer's policies requiring downstream use of manufacturer parts could be justified in order to avoid actual or threatened consumer injury.

31. Economic theory also suggests that some aspects of unilateral aftermarket restrictions additional may benefit consumers.[55] First, when the equipment or service works as part of a system—i.e., is interoperable with the relevant aftermarket parts or service—an integrated foremarket and aftermarket benefit the consumer, who could otherwise struggle to use a different aftermarket part or service. For example, consumers might find it difficult to switch to a new software program when their historical data already reside in an existing program. The new software might not provide access to the historical data, whereas an updated version of the existing software would allow access. Second, the purchase of foremarket and aftermarket equipment or services from the same supplier reduces double marginalization, which can occur when different firms at different levels of a supply chain each apply their own markups. Relatedly, aftermarket sales also can enhance efficiency because manufacturers or service providers can compete on the sale of "systems" rather than on the sale of individual components or services.

5. Conclusion

32. Aftermarkets connected to the sale of long-lasting products or services remain relevant. The antitrust agencies analyze aftermarkets in a similar fashion to other antitrust issues before them, applying economic analysis to determine likely competitive effects. Consideration of such issues requires a fact-intensive analysis grounded in protection of the competitive process and an understanding of the potential procompetitive nature of such behavior.[56] Antitrust analysis of these issues has evolved since the U.S. Supreme

[53] See *supra* n.2 and accompanying text.

[54] See, *e.g.*, *Queen City Pizza v. Domino's Pizza*, 124 F.3d 430 (3d Cir. 1997).

[55] See *generally*, Shapiro, *supra* n.51.

[56] See Acting Chairman Maureen K. Ohlhausen, *The FTC's Path Ahead*, February 3, 2017 (noting that "[a]ntitrust enforcers guard the competitive process" and emphasizing the importance of knowing "when *not* to intervene") (emphasis in original), https://www.ftc.gov/system/files/documents/public_statements/1070123/gcr_the-ftc_path_ahead.pdf.

Court considered the issue in *Kodak*, which evolution the antitrust agencies have described in this paper.

33. Consumer demand, whether revealed through market demand or complaints to companies about their aftermarket policies, also can change supplier behavior. For example, the coffee maker company Keurig altered its policies and sales practices due to consumer complaints that its redesigned coffee makers were incompatible with previously existing aftermarket coffee pods.[57] Moreover, common law in U.S. states may offer remedies to consumers harmed by a manufacturer's conduct. For example, in appropriate circumstances a consumer or a company might bring a private action that alleges breach of contract or tortious interference in state court.

34. Other laws in the United States may apply to unilateral conduct related to aftermarkets. For example, most U.S. states have unfair competition laws that may be broader than the federal antitrust statutes, and state attorneys general may enforce those laws related to conduct in their own states.

35. Policymakers also should be mindful that the regulatory process may be used to establish rules limiting aftermarket competition, sometimes in response to the influence of financially interested market participants. They should be cautious of regulatory approaches that impose overly broad restrictions on aftermarket competition, or that are not narrowly tailored to address legitimate public policy concerns.

[57] See http://www.consumerreports.org/cro/news/2015/05/after-consumer-backlash-keurig-brings-back-my-k-cup/index.htm (quoting Keurig CEO as saying "we were wrong").