CHAPTER 5

TYING

I. Introduction

Tying occurs when a firm "sell[s] one product but only on the condition that the buyer also purchases a different (or tied) product, or at least agrees that [it] will not purchase that product from any other supplier."[1] As panelists observed, nearly every item for sale arguably is composed of what could be viewed as distinct tied products, making tying one of the most ubiquitous business practices from an economic perspective.[2] Under prevailing legal precedent, however, not all items are considered tied products. Case law requires two separate product markets for a tie to exist.[3]

Firms can tie through contracts and by bundling. Contractual ties often concern purchases made at different times. For instance, several cases have addressed contractual requirements ties. With requirements ties, a firm requires "customers who purchase one product . . . to make all their purchases of another product from that firm."[4] Requirements ties often involve a durable product and a complementary product used in variable proportions (i.e., different customers use the complement in different quantities). An example discussed below involves a tie between canning machines (the durable, tying product) and salt (the complementary, tied product used in variable proportions).

Tying through bundling occurs when a firm sells "two or more products" together and does not sell one of the products separately.[5] As several panelists noted, tying through bundling is particularly common.[6] Computer manufacturers, for instance, bundle different components and offer them as an integrated computer system whose components are not all sold individually. That physical integration is sometimes called technological tying, a term some also use to describe the situation where a firm designs its

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[1] N. Pac. Ry. Co. v. United States, 356 U.S. 1, 5–6 (1958); *see also, e.g.*, U.S. DEP'T OF JUSTICE & FED. TRADE COMM'N, ANTITRUST ENFORCEMENT AND INTELLECTUAL PROPERTY RIGHTS: PROMOTING INNOVATION AND COMPETITION 103 (2007), *available at* http://www.usdoj.gov/atr/public/hearings/ip/222655.pdf ("A tying arrangement occurs when, through a contractual or technological requirement, a seller conditions the sale or lease of one product or service on the customer's agreement to take a second product or service."); DENNIS W. CARLTON & JEFFREY M. PERLOFF, MODERN INDUSTRIAL ORGANIZATION 675 (4th ed. 2005) (Tying is conditioning "the sale of one product . . . upon the purchase of another."). Conduct is sometimes analyzed as tying even when the purchase of a second product is not required. In an example discussed below, for instance, a firm prohibited the use of one of its machines with complementary machines made by other manufacturers; no second purchase was required. Some refer to those practices as tie-outs, as opposed to tie-ins. Firms selling more than one product sometimes condition the price of one product on whether other products are also purchased. While some refer to those pricing practices as ties, *see, e.g.*, Michael D. Whinston, *Tying, Foreclosure, and Exclusion*, 80 AM. ECON. REV. 837, 837 (1990), the Department addresses them in this report as bundled discounts, *see infra* Chapter 6.

[2] *See, e.g.*, Sherman Act Section 2 Joint Hearing: Tying Session Hr'g Tr. 13, Nov. 1, 2006 [hereinafter Nov. 1 Hr'g Tr.] (Waldman) ("[A]lmost any good you can find, defined in some sense, is a tying of various goods."); *id.* at 31 (Evans) ("[T]ying is ubiquitous, it is utterly common."); *id.* at 57 (Popofsky) ("Tying . . . is ubiquitous in competitive markets.").

[3] *See, e.g.*, Jack Walters & Sons Corp. v. Morton Bldg., Inc., 737 F.2d 698, 703–04 (7th Cir. 1984) (Posner, J.) (discussing evolution of separate-products requirement); *see also* 10 PHILLIP E. AREEDA ET AL., ANTITRUST LAW ¶¶ 1741–42 (2d ed. 2004).

[4] CARLTON & PERLOFF, *supra* note 1, at 321.

[5] *Id.* at 321, 324; *see also* Dennis W. Carlton & Michael Waldman, *How Economics Can Improve Antitrust Doctrine Towards Tie-In Sales: Comment on Jean Tirole's* "The Analysis of Tying Cases: A Primer," COMPETITION POL'Y INT'L, Spring 2005, at 27, 38.

[6] *See supra* note 2.

products in a way that makes them incompatible or difficult to use with other firms' products.[7]

This chapter reviews tying law, discusses tying's potential anticompetitive, procompetitive, and price-discrimination effects, and sets forth the Department's view on certain legal issues regarding the treatment of ties. To aid the discussion, the following definitions are used in this chapter:

Bundled tie: the simultaneous sale of two or more products, one of which is not sold separately.

Contractual tie: a tie achieved through contract.

Requirements tie: a tie whereby customers that purchase one product must purchase all their requirements of another product from the same seller.

Technological tie: a tie achieved through integration of what could be viewed as two products.

Tied product: the product whose purchase is required to obtain the tying product.

Tying product: the product that is sold only if the tied product is purchased.

II. Background

Tying can be challenged under four provisions of the antitrust laws: (1) section 1 of the Sherman Act, which prohibits contracts "in restraint of trade,"[8] (2) section 2 of the Sherman Act, which makes it illegal to "monopolize,"[9] (3) section 3 of the Clayton Act, which prohibits exclusivity arrangements that may "substantially lessen competition,"[10] and (4) section 5 of the FTC Act, which prohibits "[u]nfair methods of competition."[11] Although the Supreme Court drew a distinction between standards governing tying's legality under the Sherman and Clayton Acts shortly after the latter's enactment, those differences faded to the point where an antitrust expert asserted in 1978 that those standards "have become so similar that any differences remaining between them are of interest to only antitrust theologians."[12] In particular, because courts in tying cases often rely on tying precedent from claims brought under different statutory provisions, tying jurisprudence under the different statutes is indelibly intertwined.[13] Accordingly, significant tying decisions, even if not specifically dealing with section 2, are discussed below.

Judicial treatment of tying has vacillated over time. For instance, in its oft-cited dicta in *Standard Oil Co. of California v. United States* (*Standard Stations*), the Supreme Court stated that "[t]ying agreements serve hardly any purpose beyond the suppression of competition."[14] The Court has since "rejected" that dictum[15] and currently is significantly less hostile to tying arrangements, despite continued reliance on a rule of per se illegality, albeit one subject to conditions. The Court's movement has been informed by economic learning and scholarship that have identified procompetitive rationales for tying.[16]

The Supreme Court's first tying decision under the antitrust laws came in 1918 when it

[7] *See, e.g.*, 1 HOVENKAMP ET AL., IP AND ANTITRUST § 21.5b2, at 21–104.1 (Supp. 2006).

[8] 15 U.S.C. § 1 (2000).

[9] *Id.* § 2.

[10] *Id.* § 14. Among other limitations, section 3 applies only to "goods, wares, merchandise, machinery, supplies, or other commodities." *Id.*

[11] *Id.* § 45(a)(1). This report does not address section 5, which is beyond the scope of this report.

[12] ROBERT H. BORK, THE ANTITRUST PARADOX 366 (1978).

[13] *See, e.g.*, Ill. Tool Works Inc. v. Indep. Ink, Inc., 547 U.S. 28, 34–38 (2006) (noting that tying cases have been brought under "four different rules of law" and discussing tying cases brought under several statutes); Jefferson Parish Hosp. Dist. No. 2 v. Hyde, 466 U.S. 2, 9–18 (1984) (relying on tying precedent involving claims brought under several different statutes).

[14] Standard Oil Co. of Cal. v. United States (*Standard Stations*), 337 U.S. 293, 305–06 (1949).

[15] *Ill. Tool*, 547 U.S. at 36.

[16] *See infra* Part III(B).

affirmed dismissal of an action under the Sherman Act challenging a contractual tie. In that case, United Shoe leased different machines performing different parts of the shoe-making process and prohibited lessees from using United Shoe machines with other manufacturers' machines. The Court upheld the arrangement, partly on the ground that "best results are obtained" when United Shoe machines are used together.[17] The Court went on to assert that "the leases are simply bargains, not different from others, moved upon calculated considerations, and, whether provident or improvident, are entitled nevertheless to the sanctions of the law."[18]

Four years later, in a second tying case involving United Shoe, the Court condemned essentially the same provisions under the Clayton Act, holding that "[t]he Sherman Act and the Clayton Act provide different tests of liability."[19] Acquiring or maintaining a monopoly appeared to be the theory of competitive harm, as the Court held that United Shoe's "tying agreements must necessarily lessen competition and tend to monopoly."[20] Although the Supreme Court did not delineate the markets at issue, the lower court stated that United Shoe leased patented "auxiliary machines" on the condition that they be used only with United Shoe's "principal machines." The principal machines performed the "fundamental operations" of shoe making and faced some low-price competition while the auxiliary machines performed minor roles in the shoe-making process yet were deemed essential by some customers.[21]

After its second *United Shoe* decision, the Court routinely condemned ties for a period of time. In 1936, the Court addressed a requirements tie and affirmed an injunction under the Clayton Act prohibiting IBM from enforcing a lease provision whereby lessees of IBM tabulating machines agreed to buy tabulating cards needed to use the machines only from IBM.[22] The Court held that the tie had been "an important and effective step" in creating "a monopoly in the production and sale of tabulating cards suitable for [IBM's] machines."[23]

In its next significant tying decision, the Court affirmed a judgment enjoining International Salt from enforcing a requirements tie in which lessees of International Salt's canning machines agreed to buy the salt needed to use the machines only from International Salt.[24] As in *IBM*, the Court identified harm to the market for the tied product (salt) as the competitive concern: International Salt was found to have violated the Clayton Act and the Sherman Act by "contracting to close [the] market for salt against competition."[25] The Court rejected International Salt's argument that a trial was needed to determine whether the tie could result in a monopoly in the salt market, finding that the likelihood of a salt monopoly was "obvious" because the "volume of business affected"—annual sales of salt used in the machines were about $500,000 (about $4.5 million in today's dollars)—could not be said "to be insignificant or insubstantial."[26] Significantly, the Court also stated that tying was "unreasonable, per se," when it "foreclose[d] competitors from any substantial market."[27]

The following year, the Court upheld, under sections 1 and 2 of the Sherman Act, an injunction prohibiting movie distributors from

[17] United States v. United Shoe Mach. Co. of N.J., 247 U.S. 32, 64 (1918).

[18] *Id.* at 66.

[19] United Shoe Mach. Corp. v. United States, 258 U.S. 451, 459 (1922); *see also* H.R. REP. NO. 63-627, pt. 1, at 13 (1914) (United Shoe's "exclusive or 'tying' contract made with local dealers becomes one of the greatest agencies and instrumentalities of monopoly ever devised by the brain of man.").

[20] 258 U.S. at 457.

[21] United States v. United Shoe Mach. Co., 264 F. 138, 142–43, 146 (E.D. Mo. 1920), *aff'd*, 258 U.S. 451 (1922).

[22] IBM v. United States, 298 U.S. 131, 140 (1936).

[23] *Id.* at 136.

[24] Int'l Salt Co. v. United States, 332 U.S. 392, 396 (1947).

[25] *Id.*

[26] *Id.*

[27] *Id.*

block-booking—that is, from licensing "one feature or group of features on condition that the exhibitor will also license another feature or group of features"[28]—on the ground that the antitrust laws prohibit "a refusal to license one or more copyrights unless another copyright is accepted."[29] The Court found that the "trade victims of this conspiracy have in large measure been the small independent operators" of movie theaters, which were unable to compete successfully against "large empires of exhibitors,"[30] because block-booking prevented independents from "bidding for single features on their individual merits."[31]

Ten years later, the Court reviewed Northern Pacific Railway's sale of land adjacent to its tracks on the condition that, whenever Northern Pacific's shipping rates were at least as low as its competitors' rates, the purchaser used Northern Pacific to ship "commodities produced or manufactured on the land."[32] Inferring Northern Pacific's "great power"[33] in the market for land (i.e., the tying product) from these preferential shipping provisions, the Court condemned the tie, holding that the Sherman Act does not "requir[e] anything more than sufficient economic power [in the tying market] to impose an appreciable restraint on free competition in the tied product."[34]

In *United States v. Loew's Inc.*, the Court returned to the subject of block-booking, condemning movie distributors' refusal to license individual films to television stations as an impermissible tie that compelled television stations to license "inferior" films to obtain "desirable pictures."[35] The Court identified the underlying harm to competition in the movie-distribution market: "[t]elevision stations forced by appellants to take unwanted films were denied access to films marketed by other distributors who, in turn, were foreclosed from selling to the stations."[36]

Thus, the Supreme Court treated ties harshly for decades. That began to change, however, in the 1970s. In 1977, the Court upheld a tying arrangement on the merits, ending fifteen years of litigation under sections 1 and 2 of the Sherman Act concerning U.S. Steel's extension of favorable credit terms to a housing developer on the condition that the developer use U.S. Steel's prefabricated homes.[37] In an earlier decision, the Court had reversed the trial court's entry of summary judgment in favor of U.S. Steel,[38] and the trial court entered judgment for the developer on remand. The Court subsequently reversed on the ground that the developer had failed to prove that U.S. Steel had "some advantage not shared by [its] competitors" in the credit market.[39]

The Court permitted another tie in 1984 in a section 1 action brought by an anesthesiologist seeking hospital staff privileges.[40] The hospital had denied the anesthesiologist privileges on the ground that it had granted to others the exclusive right to perform anesthesiology services at the hospital. The anesthesiologist sued, claiming that the arrangement resulted in an impermissible tie between anesthesiology services and "other hospital services provided by" the hospital.[41] The Court upheld the arrangement, citing plaintiff's failure to offer "evidence that any patient" was unable to use a competing hospital "that would provide him with the anesthesiologist of his choice."[42]

In reaching that conclusion, the Court set forth a detailed framework for evaluating a tie's

[28] United States v. Paramount Pictures, Inc., 334 U.S. 131, 156 (1948).

[29] *Id.* at 159.

[30] *Id.* at 162.

[31] *Id.* at 156–57.

[32] N. Pac. Ry. Co. v. United States, 356 U.S. 1, 3 (1958).

[33] *Id.* at 8.

[34] *Id.* at 11.

[35] 371 U.S. 38, 40 (1962).

[36] *Id.* at 49.

[37] U.S. Steel Corp. v. Fortner Enters., Inc., 429 U.S. 610, 622 (1977).

[38] Fortner Enters., Inc. v. U.S. Steel Corp., 394 U.S. 495, 500–04 (1969).

[39] 429 U.S. at 620.

[40] Jefferson Parish Hosp. Dist. No. 2 v. Hyde, 466 U.S. 2, 32 (1984).

[41] *Id.* at 23.

[42] *Id.* at 30.

legality. In so doing, the majority rejected the view of the four concurring Justices who asserted that the "time has . . . come to abandon the '*per se*' label and refocus the inquiry on the adverse economic effects, and the potential economic benefits, that the tie may have."[43] The Court stated that tying arrangements were subject to a rule of per se illegality: "It is far too late in the history of our antitrust jurisprudence to question the proposition that certain tying arrangements pose an unacceptable risk of stifling competition and therefore are unreasonable '*per se*.'"[44] Although the action arose under the Sherman Act, the Court noted that its per se rule "reflects congressional policies underlying the antitrust laws," specifically Congress's "great concern about the anticompetitive character of tying arrangements" expressed during deliberations about the Clayton Act.[45]

But the Court stated that the per se rule should only apply in the presence of "forcing," which it defined as "the seller's exploitation of its control over the tying product to force the buyer into the purchase of a tied product that the buyer either did not want at all, or might have preferred to purchase elsewhere on different terms."[46] The court described forcing as "the essential characteristic of an invalid tying arrangement."[47] The Court also stated that the per se rule applied only when "two separate product markets have been linked," an inquiry turning on whether "there is a sufficient demand for the purchase of [the tied product] to identify a distinct product market in which it is efficient to offer [the tied product] separately."[48]

Eight years later, the Court held that a jury should decide whether Kodak violated sections 1 and 2 of the Sherman Act by adopting policies effectively precluding independent service organizations (ISOs) from obtaining parts necessary to service Kodak machines, thereby causing some equipment owners that allegedly wanted to purchase maintenance and repair services from ISOs to purchase those services from Kodak instead.[49] Kodak maintained that its policies were legal because it had valid business reasons for adopting them—namely, (1) avoiding blame for equipment breakdowns "resulting from inferior ISO service," (2) controlling inventory costs, and (3) precluding ISOs from free riding on Kodak's investment in equipment development.[50] Without specifying precisely how Kodak's defenses fit in the per se analysis, the Court concluded that questions of fact existed as to "the validity and sufficiency" of Kodak's business justifications.[51]

In 2006, the Supreme Court addressed Illinois Tool's requirement that purchasers use its patented printing systems only with Illinois Tool ink. Rejecting the lower court's use of a presumption that "a patent always gives the patentee significant market power" in the market for the tying product (here, printing systems),[52] the Court held that "in all cases involving a tying arrangement, the plaintiff must prove that the defendant has market power in the tying product."[53] Significantly, the Court also stated that it had "rejected" its *Standard Stations* dicta that tying serves "'hardly any purpose beyond the suppression of competition.'"[54]

The D.C. Circuit's 2001 *United States v. Microsoft Corp.* decision also is a significant

[43] *Id.* at 35 (O'Connor, J., concurring).

[44] *Id.* at 9.

[45] *Id.* at 10.

[46] *Id.* at 12.

[47] *Id.* Other considerations include whether the tie forecloses "a substantial volume of commerce," *id.* at 16, or whether "the seller has some special ability—usually called 'market power'—to force a purchaser to do something that he would not do in a competitive market," *id.* at 13–14.

[48] *Id.* at 21–22.

[49] Eastman Kodak Co. v. Image Technical Servs., Inc., 504 U.S. 451, 458 (1992).

[50] *Id.* at 465, 483–85.

[51] *Id.* at 483.

[52] Ill. Tool Works Inc. v. Indep. Ink, Inc., 547 U.S. 28, 37 (2006).

[53] *Id.* at 46.

[54] *Id.* at 35 (quoting Standard Oil Co. of Cal. v. United States (*Standard Stations*), 337 U.S. 293, 305–06 (1949)).

tying decision.[55] The court found that Microsoft's "contractual and technological" bundling of its Internet-browsing software to its operating-system software did not necessarily constitute an impermissible tie under section 1 of the Sherman Act.[56] The court held that "the rule of reason, rather than per se analysis, should govern the legality of tying arrangements involving platform software products" because these products involved "novel" characteristics with "no close parallel in prior antitrust cases."[57] Thus, to prevail under their section 1 tying claim, plaintiffs in that case had to "demonstrate that [the tie's] benefits—if any—are outweighed by the harms in the *tied product* market."[58]

These decisions unfortunately do not provide explicit guidance regarding how to distinguish between legal and illegal ties.[59] One treatise, collecting cases and attempting to synthesize them, states that under current law a tie is illegal when four conditions exist:

> (1) two separate products or services are involved, (2) the sale or agreement to sell one product or service is conditioned on the purchase of another, (3) the seller has sufficient economic power in the market for the tying product to enable it to restrain trade in the market for the tied product, and (4) a not insubstantial amount of interstate commerce in the tied product is affected.[60]

The Supreme Court, however, has never expressly adopted this formula, nor has it expressly delineated how a tie's procompetitive effects should affect its legality.

III. Analysis

Tying can harm consumers in some circumstances.[61] For example, a tie may result in a firm with monopoly power in one market acquiring a monopoly in a second market or perpetuating its monopoly in the tying product. Theories of competitive harm, however, often are based on "highly stylized assumptions that are difficult to apply to the factual settings courts confront."[62] Those deficiencies lead some to be concerned that we still "do not understand much about tying" and to question how frequently, if ever, tying harms competition.[63]

Additionally, some of these theories of harm focus almost solely on tying's effect on rivals, potentially obscuring tying's procompetitive benefits. Tying has the potential to benefit consumers by allowing firms to lower costs and better satisfy consumer demand.[64] When firms tie, manufacturing and retailing costs can be lower and purchases for consumers easier than they would be if firms sold the products separately. This practice can benefit consumers overall, even when some consumers prefer buying the products separately.

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[55] 253 F.3d 34, 84 (D.C. Cir. 2001) (en banc) (per curiam).

[56] *Id.*

[57] *Id.*; *see also id.* at 96.

[58] *Id.* at 96 (citations omitted) (emphasis in original).

[59] *See generally* 1 SECTION OF ANTITRUST LAW, AM. BAR ASS'N, ANTITRUST LAW DEVELOPMENTS 172–207 (6th ed. 2007).

[60] *Id.* at 177; *see also id.* n.999 (citing cases).

[61] *See, e.g.*, Nov. 1 Hr'g Tr., *supra* note 2, at 127 (Evans) (noting that tying "can be used anticompetitively only in limited circumstances"); Carlton & Waldman, *supra* note 5, at 30–33.

[62] Keith N. Hylton & Michael Salinger, *Tying Law and Policy: A Decision-Theoretic Approach*, 69 ANTITRUST L.J. 469, 470 (2001); *see also* Nov. 1 Hr'g Tr., *supra* note 2, at 33 (Evans) (stating that "it is very clear from the literature that lots of assumptions need to be true in order for us to find anticompetitive tying").

[63] Alden F. Abbott & Michael A. Salinger, *Learning from the Past: The Lessons of Vietnam, IBM, and Tying*, COMPETITION POL'Y INT'L, Spring 2006, at 3, 8; *see also, e.g.*, Michael D. Whinston, *Exclusivity and Tying in* U.S. v. Microsoft: *What We Know, and Don't Know*, J. ECON. PERSP., Spring 2001, at 63, 79 ("What is striking about the area of . . . tying . . . is how little the current literature tells us about what [its] effects are likely to be.").

[64] *See, e.g.*, Nov. 1 Hr'g Tr., *supra* note 2, at 23, 24 (Evans) (stating that, "in the absence of contrary significant evidence," the "courts and competition authorities should presume that tying is efficient"); HERBERT HOVENKAMP, THE ANTITRUST ENTERPRISE 200 (2005) ("After a half century of economic analysis we know that [tying is] efficient and procompetitive most of the time . . . .").

A. Potential Anticompetitive Effects

1. Monopolizing the Tied-Product Market

In its tying decisions, the Supreme Court often has identified harm to competition in the tied-product market as the concern: tabulating cards in *IBM*, salt in *International Salt*, prefabricated homes in *Fortner*, and maintenance services in *Kodak*. Some commentators question whether monopolization of the tied product was threatened in these cases. Judge Bork's assessment of *International Salt*—where the Court found "the tendency of the arrangement to accomplishment of monopoly . . . obvious"[65]—is typical: "It is inconceivable that anybody could hope to get a monopoly, or anything remotely resembling a monopoly, in a product like salt by foreclosing the utterly insignificant fraction of the market represented by the salt passing through [International Salt's] leased machines."[66]

Commentators also contend that a monopolist may not have any incentive to monopolize a complementary product market. First, a monopolist is likely to prefer competition in the complementary product market because a lower price for the complement will lead to increased demand for the monopoly product.[67] Second, under certain circumstances, a monopolist cannot increase its profits by monopolizing another market through a tie. Specifically, commentators agree that, in certain circumstances, a firm cannot increase its profits by tying a monopoly product and a complement that is always used in fixed proportions with the monopoly product.[68]

In some circumstances, though, a monopolist may have an incentive to use tying to obtain a monopoly in a second market. For instance, a monopolist may have an incentive to use a tie to monopolize a second market if some consumers of the tied product do not purchase the monopoly product.[69] This incentive may arise when production of the tied product exhibits scale economies: using a tie can effectively bar rivals in the tied-product market from selling to many customers that buy the tying product and therefore may deprive those rivals of sufficient sales to achieve scale efficiency in the tied-product market. That may, in turn, induce rivals' exit from the tied-product market (or keep them inefficiently small) and thus create a monopoly in the tied-product market. For instance, the only hotel on an island may tie accommodations and meal packages to its guests. If there are an insufficient number of island residents to support a second restaurant, the hotel may be able to extract greater profit through its tie of accommodations and meals because the tie enables the hotel also to monopolize restaurant services. The hotel thus would extract monopoly profits from not only its guests (the purchasers of the original monopoly product—accommodations) but also island residents (who would buy only the second product—restaurant food).[70] Similarly, a firm may tie to deter entry into the tied-product market; if a potential entrant does not expect sufficient profits, it may decide not to enter because of the tie.[71]

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65 Int'l Salt Co. v. United States, 332 U.S. 392, 396 (1947).

66 BORK, *supra* note 12, at 367.

67 *See, e.g.*, RICHARD A. POSNER, ANTITRUST LAW 199 (2d ed. 2001).

68 Put another way, a firm with monopoly power in the tying-product market can, under certain conditions, maximize its profits without tying, by pricing the tying good appropriately. *See, e.g.*, Schor v. Abbott Labs., 457 F.3d 608, 611–13 (7th Cir. 2006) (Easterbrook, J.); Nov. 1 Hr'g Tr., *supra* note 2, at 16–17 (Waldman); BORK, *supra* note 12, at 373; Aaron Director & Edward H. Levi, *Law and the Future: Trade Regulation*, 51 NW. U. L. REV. 281, 290 (1956); Whinston, *supra* note 1, at 838.

69 *See, e.g.*, Nov. 1 Hr'g Tr., *supra* note 2, at 16–17 (Waldman) (noting the incentive of a monopolist to tie in order to achieve a second monopoly in the market for a "complementary good" that is not consumed with the original monopoly product for "some uses"); Whinston, *supra* note 1, at 840.

70 *See* Dennis W. Carlton, *A General Analysis of Exclusionary Conduct and Refusal to Deal—Why* Aspen *and* Kodak *Are Misguided*, 68 ANTITRUST L.J. 659, 667–68 (2001).

71 *See, e.g.*, Whinston, *supra* note 1, at 844; *cf.* Jay Pil Choi & Christodoulos Stefanadis, *Tying, Investment, and the Dynamic Leverage Theory*, 32 RAND J. ECON. 52, 70 (2001); Barry Nalebuff, *Bundling as an Entry Barrier*, 119

Moreover, even when the monopoly product (i.e., the tying product) and the second product (i.e., the tied product) are always used together, a monopolist may tie to earn monopoly profits in the tied-good market that are not currently available but will be in the future. For example, a monopolist might have an incentive to tie its product to a complementary product if, in the future, consumers would incur costs in switching to a different manufacturer's complementary product. In other words, a monopolist may have an incentive to extract those switching costs. A monopolist also might have an incentive to tie products when the complementary product will be upgraded in the future.[72]

2. Maintaining a Monopoly in the Tying-Product Market

There was consensus at the hearings that tying could allow a monopolist to maintain its monopoly in the tying product to the detriment of consumers.[73] For instance, a monopolist could tie a monopoly product to a complementary product to preclude another firm from entering the complementary-good market, because, under certain conditions, the potential rival will be unable to obtain the scale necessary to make entry worthwhile. Because it does not enter the complementary-good market, the potential rival might then have no incentive to enter the monopoly-good market either. The monopolist would be using ties, in this situation, to maintain its monopoly and its future profits in the monopoly-product market. That appears to have been the theory of harm in the Supreme Court's first decision finding an illegal tie under the antitrust laws: United Shoe's practices may have delayed erosion of United Shoe's monopoly in the shoe-making machinery market.[74]

B. Potential Procompetitive Effects

In early tying decisions, the Supreme Court often noted tying's potentially procompetitive effects, but it quickly dismissed them. IBM, for instance, claimed that it required use of its cards in its tabulating machines because the machines would not work if defective cards were used, causing consumer dissatisfaction with the machine.[75] Without ruling on whether an "exception" to the prohibition against tying could ever be allowed,[76] the Court rejected the defense on the ground that "others are capable of manufacturing cards suitable for use."[77] Likewise, the Court rejected International Salt's claim that use of its salt allowed it to minimize its repair costs on the leased machines on the ground that other salt manufacturers could produce salt meeting the machines' "specifications."[78] In later cases, the Court gradually began incorporating potentially procompetitive effects into its analysis.[79]

Q.J. ECON. 159, 183 (2004).

[72] Nov. 1 Hr'g Tr., *supra* note 2, at 17 (Waldman); *see also, e.g.*, Carlton & Waldman, *supra* note 5, at 32 (noting that a firm may have incentive to obtain a monopoly in tied-product market characterized by "product upgrades and switching costs"); Dennis W. Carlton & Michael Waldman, *Tying, Upgrades, and Switching Costs in Durable-Goods Markets* 3 (Nat'l Bureau of Econ. Research, Working Paper No. 11407, 2005), *available at* http://www.nber.org/papers/w11407.

[73] *See, e.g.*, Nov. 1 Hr'g Tr., *supra* note 2, at 18 (Waldman) (noting that tying can "increase or preserve . . . market power in that initial monopolized market"); *id.* at 65–66 (Feldman) (noting that tying can involve the monopolist "trying to protect its original monopoly from the next generation of products"); *id.* at 87 (Willig) (noting that one theory of harm is "the potential for harm to competition in the market for . . . the tying good"); POSNER, *supra* note 67, at 202; Dennis W. Carlton & Michael Waldman, *The Strategic Use of Tying to Preserve and Create Market Power in Evolving Industries*, 33 RAND J. ECON. 194, 198–212 (2002); Robin Cooper Feldman, *Defensive Leveraging in Antitrust*, 87 GEO. L.J. 2079, 2079 (1999) (noting that tying can "prevent erosion of the primary monopoly"); Nalebuff, *supra* note 71, at 183 (noting that tying may allow a firm with monopolies in two related markets to maintain both monopolies).

[74] *See supra* text accompanying notes 19–21.

[75] IBM v. United States, 298 U.S. 131, 138–39 (1936).

[76] *Id.* at 140.

[77] *Id.* at 139.

[78] Int'l Salt Co. v. United States, 332 U.S. 392, 398 (1947).

[79] *See, e.g.*, Eastman Kodak Co. v. Image Technical Servs., Inc., 504 U.S. 451, 483 (1992) (stating that liability on the section 2 claim "turns . . . on whether 'valid business reasons' can explain Kodak's actions" (quoting

Economists now recognize that tying offers many potential efficiencies.[80] A firm that uses ties can have lower costs—sometimes significantly lower—than if it offered each product separately.[81] As one panelist noted, "[T]here are fixed costs of offering different product combinations, and that necessarily limits the variants offered by firms."[82] For a variety of reasons, only offering two products together may cost less than also offering them separately, and if relatively few consumers strongly prefer to purchase one without the other, it may not be profitable to incur the additional costs of catering to that limited demand.

Tying may also reduce a consumer's costs,[83] including the cost of negotiating terms of sale, transportation costs, and integration costs.[84] Although a tie reduces consumers' options, it may nevertheless make them better off. In addition, tying may benefit consumers by improving or controlling quality.[85]

The existence and magnitude of any procompetitive effects, however, depend on the specific circumstances of the tie at issue. Quantifying any cost savings is "difficult because . . . it is not clear that one could isolate and measure cost savings" from business records.[86] As some have observed, evidence of similar business practices "in industries that resemble the monopolist's but are competitive" may shed light on whether the tie is likely to generate some efficiencies.[87] Examination of other markets in any depth, however, would present significant administrability concerns.

C. Price Discrimination

Different customers typically have different preferences for a firm's products and thus are willing to pay different prices. For instance, one customer might be willing to pay $20 a month for access to a sports television network, while another might be willing to pay only $10. When a firm engages in price discrimination—that is, charging different customers different prices, as opposed to charging a uniform price—it is typically attempting to extract from customers more of what each is willing to pay. When a monopolist is able to engage in perfect price discrimination—that is, to charge each customer the most it is willing to pay—the efficiency loss normally associated with monopoly is eliminated because the monopolist will produce as many units as would be sold in a competitive market; thus, "[t]he perfectly

Aspen Skiing Co. v. Aspen Highlands Skiing Corp., 472 U.S. 585, 605 (1985))); *see also* Jerrold Elecs. Corp. v. United States, 365 U.S. 567 (1961) (mem.) (per curiam) (summarily affirming judgment where trial court found, among other things, that tying cable equipment and a service contract was, at the time of the initial roll-out, reasonable because of the need to ensure adequate service to protect good will), *aff'g* 187 F. Supp. 554, 557 (E.D. Pa. 1960); Times-Picayune Publ'g Co. v. United States, 345 U.S. 594, 623 (1953) (noting an alleged tie's potential cost savings).

[80] *See, e.g.*, Nov. 1 Hr'g Tr., *supra* note 2, at 12 (Waldman) (noting "many efficiency reasons associated with tying").

[81] *See, e.g.*, David S. Evans & Michael Salinger, *Why Do Firms Bundle and Tie? Evidence from Competitive Markets and Implications for Tying Law*, 22 YALE J. ON REG. 37, 83–84 (2005); Roy W. Kenney & Benjamin Klein, *The Economics of Block Booking*, 26 J.L. & ECON. 497, 523 (1983).

[82] Nov. 1 Hr'g Tr., *supra* note 2, at 32 (Evans).

[83] *Id.* at 13 (Waldman) (identifying reduction of consumer "search and sorting" costs as a potential benefit of tying).

[84] *See, e.g.*, 9 PHILLIP E. AREEDA & HERBERT HOVENKAMP, ANTITRUST LAW ¶ 1717b2, at 185 (2d ed. 2004) (explaining how tying can result in "consumers . . . receiv[ing] greater value for the same expenditure as before the tie").

[85] *See* Jerrold Elecs. Corp. v. United States, 365 U.S. 567 (1961) (mem.) (per curiam); *see also* Marius Schwartz & Gregory J. Werden, *A Quality-Signaling Rationale for Aftermarket Tying*, 64 ANTITRUST L.J. 387, 388 (1996) ("[T]ying can make it profitable to offer high-quality durables if the demand for the complement is sufficiently higher when the durable proves to be of high quality.").

[86] Evans & Salinger, *supra* note 81, at 83.

[87] POSNER, *supra* note 67, at 253; *see also, e.g.*, Nov. 1 Hr'g Tr., *supra* note 2, at 29 (Evans); *id.* at 121 (Feldman); *id.* at 122 (Waldman, Willig). *But see id.* at 122 (Russell) (stating that reliance on "similar" tying arrangements in competitive markets is a "fuzzy concept").

discriminating monopoly sells more than the nondiscriminating monopoly."[88] That is, price discrimination can be efficiency-enhancing and allow output to be greater than it otherwise would be.

Assessing each customer's willingness to pay is difficult. For some products, a crude measure of a customer's willingness to pay may be the frequency with which the product is used.[89] A tie to a complementary product that is purchased more as use of the underlying product increases allows a firm to link pricing to the frequency with which customers use the underlying product (a practice referred to as "metering"). As one panelist put it, requirements ties allow firms to price discriminate by "trying to give the higher price to the individuals who use the good more intensively."[90] Thus, a firm may sell a device (e.g., a printer) at a low price to attract as many customers as possible, and then use a tie to extract more revenue from those that use the device frequently by charging high prices for the necessary complementary product (e.g., ink). Under this view, profit from sales of the complement (i.e., ink) flows from the firm's monopoly in the market for the device (i.e., the printer), not from monopolization of the complement market.[91]

Tying may allow a firm to price discriminate in a second way. Consider the example mentioned earlier, the cable television customer who would be willing to pay $20 a month for a sports channel and assume that the customer would pay $10 a month for a movie channel. Further assume a second customer willing to pay $10 a month for the sports channel and $20 a month for the movie channel. By tying the channels and offering both for $30, the firm is able to extract from both customers the most each is willing to pay for both channels.[92] Although both customers in this example pay the same amount, the effect is the same as if they had been charged different amounts based on their preferences. And output is greater than it would have been if the cable company had charged $20 for each channel individually: both customers receive two channels, not just one.

Price discrimination typically has ambiguous effects on both customers and efficiency.[93] The ability to price discriminate often allows firms to increase output. More consumers can be served when firms charge higher prices for customers that value a product highly and lower prices for those that value the product less. In those cases, however, the price paid by some consumers—specifically, those that value the product the most—might be higher than the price they would have paid if the product were sold to every customer at the same price.

Many forms of price discrimination (e.g., offering coupons or limited-time sales) are not illegal under the antitrust laws. Panelists maintained that there is no principled reason to condemn, on the one hand, tying that allows price discrimination and yet condone, on the other hand, other business practices with similar effects.[94] Prohibiting only one of the many ways to price discriminate hurts

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[88] CARLTON & PERLOFF, *supra* note 1, at 300.

[89] Nov. 1 Hr'g Tr., *supra* note 2, at 15 (Waldman).

[90] *Id.*

[91] *See, e.g.*, POSNER, *supra* note 67, at 202–07.

[92] Nov. 1 Hr'g Tr., *supra* note 2, at 14–15 (Waldman) (noting that tying products allows firms to price discriminate when customers value goods differently); *see also, e.g.*, George J. Stigler, *A Note on Block Booking*, *in* THE ORGANIZATION OF INDUSTRY 165, 166 (1968) (suggesting that movie distributors may have used block-booking to price discriminate); R. Preston McAfee et al., *Multiproduct Monopoly, Commodity Bundling, and Correlation of Values*, 104 Q.J. ECON. 371, 372 (1989).

[93] *See, e.g.*, Nov. 1 Hr'g Tr., *supra* note 2, at 15, 20 (Waldman); *id.* at 33 (Evans); *id.* at 109–11 (Willig); *see also, e.g.*, Carlton & Waldman, *supra* note 5, at 35; James C. Cooper et al., *Does Price Discrimination Intensify Competition? Implications for Antitrust*, 72 ANTITRUST L.J. 327, 369 (2005) ("[I]n certain cases price discrimination can cause firms to compete more intensely, leading to lower prices for all consumers and lower profits for all firms."); Warren S. Grimes, Tying: Requirements Ties, Efficiency and Innovation 5 (Nov. 20, 2006) (hearing submission) ("There is some discussion, however, whether the effects of metered pricing are pro- or anticompetitive.").

[94] *See* Nov. 1 Hr'g Tr., *supra* note 2, at 15–16 (Waldman) (questioning "why you would want to eliminate the ability to use tying for price discrimination"); *id.* at 33 (Evans); *id.* at 109 (Willig).

consumers when firms refrain from using ties to price discriminate out of fear of antitrust liability and instead use more expensive ways to price discriminate, thereby raising their costs.[95] Indeed, as one panelist asserted, "price discrimination ought to be very, very presumptively innocent for a wide variety of deep economic reasons as well as just commonplace observations that the most competitive of industries are full of instances of price discrimination."[96]

The Department agrees that tying should not be illegal under section 2 merely because it enables price discrimination.[97] This conclusion does not mean, however, that all ties enabling price discrimination should be permissible under the antitrust laws. As one panelist noted, a tie enabling price discrimination could have anticompetitive effects unrelated to the price discrimination.[98]

The Department agrees that tying should not be illegal under section 2 merely because it enables price discrimination.

D. Technological Ties

One issue deserving special mention concerns technological tying. Incorporating new features into products to increase their value to consumers is a hallmark of innovative competition—even if innovation makes obsolete separate standalone products designed to meet the same consumer needs. Cars and computers are but two examples of products where manufacturers have added features that were once considered separate products. Unduly broad application of a per se prohibition on tying could freeze product innovation and prevent transition to more efficient, integrated products. Computer users might, for example, still be using separate floppy disks on computers rather than integrated hard drives. Rules potentially condemning technological ties thus present a particularly serious threat of chilling innovation and, moreover, raise severe remedial difficulties.[99]

Panelists voiced strong sentiment that using the antitrust laws to mandate product-design choices presents an acute risk of hurting consumers by thwarting innovation. For instance, one panelist asserted that "it makes more sense to intervene on contractual ties rather than product design ties, because in product design ties, you are getting into the . . . internal workings of the firm."[100] Similarly, another panelist noted that "condemning tying through contracts likely poses fewer risks of false positives than condemning . . . product design."[101] Yet another stressed that "a product design decision . . . is far more apt to have an

[95] *See id.* at 16 (Waldman); *id.* at 110 (Willig).

[96] *Id.* at 109 (Willig); *see also* Ill. Tool Works Inc. v. Indep. Ink, Inc., 547 U.S. 28, 44–45 (2006) (observing that, "while price discrimination may provide evidence of market power, . . . it is generally recognized that it also occurs in fully competitive markets").

[97] This chapter does not consider the legality of price discrimination under the Robinson-Patman Act, which prohibits price discrimination that, among other things, "injure[s] competition." Brooke Group Ltd. v. Brown & Williamson Tobacco Corp., 509 U.S. 209, 220 (1993).

[98] *See* Nov. 1 Hr'g Tr., *supra* note 2, at 110 (Willig).

[99] *See, e.g.*, Dennis W. Carlton, *The Relevance for Antitrust Policy of Theoretical and Empirical Advances in Industrial Organization*, 12 GEO. MASON L. REV. 47, 53–54 (2003) ("I find useful the distinction between exclusionary restrictions imposed on others (e.g., dealers) and exclusionary restrictions created by unilateral action (e.g., product design and vertical integration). The antitrust laws have traditionally been much more hostile to restrictions on third parties than to restrictions that result from transactions within the firm (e.g., vertical integration). This is a reasonable approach if one believes that it is more costly to intervene into the activities within a firm than into activities between firms."); Michael J. Meurer, *Vertical Restraints and Intellectual Property Law: Beyond Antitrust*, 87 MINN. L. REV. 1871, 1911 (2003) ("Courts are reluctant to recognize tying claims based on product design choices because they fear they will discourage socially valuable innovation."); Joseph Gregory Sidak, *Debunking Predatory Innovation*, 83 COLUM. L. REV. 1121, 1148 (1983) (noting "the likelihood that desirable incentives for innovation would be jeopardized").

[100] Nov. 1 Hr'g Tr., *supra* note 2, at 22 (Waldman); *see also* Carlton & Waldman, *supra* note 5, at 38 (noting that "[f]ear of antitrust scrutiny could easily prevent an innovator from introducing new desirable products").

[101] Nov. 1 Hr'g Tr., *supra* note 2, at 60 (Popofsky).

efficiency rationale" and that "it is right to give more respect to the implementation of the tie through product design."[102] Another similarly urged that "you are better off not trying to chase this particular business conduct" in light of the threat of "error costs."[103]

Courts have made similar observations. The D.C. Circuit, for instance, has noted that "[a]ntitrust scholars have long recognized the undesirability of having courts oversee product design, and any dampening of technological innovation would be at cross-purposes with antitrust law."[104] That court also has noted that "tying . . . may produce efficiencies that courts have not previously encountered," particularly in "pervasively innovative . . . markets."[105] The Fifth Circuit similarly has warned against any liability standard that "would enmesh the courts in a technical inquiry into the justifiability of product innovations."[106]

Commentators likewise express concern about the potential of rules condemning technological ties to chill procompetitive conduct. A treatise warns that "[a]n antitrust rule prohibiting a firm from improving its own invention simply because the improvement turns out *ex post* not to be much of an improvement at all and when it makes rivals' complementary products obsolete would chill innovation unnecessarily."[107] Judge Posner has noted the "particularly acute evidentiary and remedial difficulties" presented by technological-tying cases, where courts may be called upon to assess the merits of technical engineering issues.[108] Similarly, Professors Carlton and Waldman advocate that "greater deference" be given to "efficiencies achieved through physical integration" because "the cost of interfering inside a firm—where many unspecified relationships and transactions are not mediated by the price system—is likely to be higher than interfering in the contractual relations between two firms."[109]

The Department agrees with courts and panelists urging restraint in the area of product design and believes that great caution should be exercised before condemning a technological tie under the antitrust laws. Firms make many decisions about the design of their products, the vast majority of which—including those made by monopolists—raise no competitive concern. Moreover, economic understanding about technological tying's competitive effects is often particularly challenging, heightening the risk of mistaken condemnation of procompetitive (or competitively neutral) activity.[110] In addition, a key feature of technological progress is the introduction of new products that perform functions that previously required multiple products. Finally, the Department agrees that remedying anticompetitive technological ties appropriately can often be difficult, requiring courts to make judgments about unusually complicated, forward-looking business issues and thereby heightening the risk that a remedy will hurt, rather than help, consumers. Private firms, rather than the Department or courts, are better equipped to design products that respond best to consumer demands and rapidly

[102] *Id.* at 139–40 (Willig); *see also id.* at 78 (Willig) (noting the "need to be especially careful when the practices at issue do affect innovation, because after all, innovation . . . is particularly valuable to consumer welfare"). *But see id.* at 136 (Feldman) (stating that she "would be very wary of something that says we focus only on contractual ties and not technological ties").

[103] Sherman Act Section 2 Joint Hearing: Conduct as Related to Competition Hr'g Tr. 87, May 8, 2007 [hereinafter May 8 Hr'g Tr.] (Sidak).

[104] United States v. Microsoft Corp., 147 F.3d 935, 948 (D.C. Cir. 1998).

[105] United States v. Microsoft Corp., 253 F.3d 34, 93 (D.C. Cir. 2001) (en banc) (per curiam).

[106] Response of Carolina, Inc. v. Leasco Response, Inc., 537 F.2d 1307, 1330 (5th Cir. 1976); *see also, e.g.*, Digital Equip. Corp. v. Uniq Digital Techs., Inc., 73 F.3d 756, 761–62 (7th Cir. 1996) (Easterbrook, J.); Data Gen. Corp. v. Grumman Sys. Support Corp., 36 F.3d 1147, 1179 (1st Cir. 1994); Klamath-Lake Pharm. Ass'n v. Klamath Med. Serv. Bureau, 701 F.2d 1276, 1290 (9th Cir. 1983).

[107] 3A AREEDA & HOVENKAMP, *supra* note 84, ¶ 776, at 258 (2d ed. 2002).

[108] Richard A. Posner, *Vertical Restraints and Antitrust Policy*, 72 U. CHI. L. REV. 229, 233 (2005).

[109] Carlton & Waldman, *supra* note 5, at 38.

[110] *See, e.g.*, Abbott & Salinger, *supra* note 63, at 10–14.

changing technologies.

That is not to say that all technological ties should be per se lawful. Condemnation might be appropriate, for example, if the technological integration is a sham that serves no purpose other than to exclude competitors.[111]

E. Tying Should Not Be Per Se Illegal

Tying is one of the few remaining antitrust areas where a rule of per se illegality exists. In antitrust law, a per se rule is appropriate only if courts, having had sufficient experience with a practice, can determine with confidence that the practice is anticompetitive in almost all circumstances when applying the rule of reason.[112] Echoing the views of the many legal scholars, commentators, economists, and others who have questioned for decades whether tying should be accorded per se treatment, panelists criticized existing tying standards. No panelist at the hearings endorsed the Supreme Court's current per se framework,[113] and other commentators single it out for particular criticism.[114] Their rationale is that tying often has procompetitive benefits and thus does not fall appropriately into any category of per se treatment, which is typically reserved for conduct "that would always or almost always tend to restrict competition and decrease output."[115]

The Supreme Court has moved away from per se rules in other contexts. In 1977, the Court overturned the per se rule for nonprice vertical restraints.[116] In 1997, the Court overturned a per se rule for maximum resale price maintenance.[117] And, in 2007, the Court overturned the per se rule against minimum resale price maintenance.[118] In those cases, the Court determined that the practices could in many circumstances benefit consumers, counseling against applying a rule of per se illegality.[119]

Commentators and panelists agree that the per se framework for assessing the legality of a tie under the antitrust laws should be abandoned.[120] The Supreme Court itself recently recognized that "many tying arrangements . . . are fully consistent with a free, competitive market."[121] The Department agrees that a rule of per se illegality for tying is misguided because tying has the potential to help consumers and cannot be said with any confidence to be anticompetitive in almost all

[111] *See, e.g.*, May 8 Hr'g Tr., *supra* note 103, at 90–91, 96–97 (Melamed); *id.* at 93–95 (Creighton); *see also* United States v. Microsoft Corp., 147 F.3d 935, 949 (D.C. Cir. 1998) ("[I]f there is no suggestion that the product is superior to the purchaser's combination in some respect, it cannot be deemed integrated.").

[112] *See* Leegin Creative Leather Prods., Inc. v. PSKS, Inc., 127 S. Ct. 2705, 2713 (2007).

[113] *See, e.g.*, Nov. 1 Hr'g Tr., *supra* note 2, at 23 (Evans) (advocating "ending per se liability for tying"); *id.* at 36 (Russell) (advocating abandoning "the per se rule for tying," which "is enough of a per se rule that it still causes substantial harm and confusion and harm to consumer welfare"); *id.* at 76 (Willig) ("I, too, am against per se treatment of tying under the antitrust laws. I, too, think there is no business or economic or indeed any logical justification for such a treatment by the courts."); *id.* at 98 (Feldman) (noting agreement to "knock out" per se treatment of tying); *see also* May 8 Hr'g Tr., *supra* note 103, at 86 (Sidak) (agreeing that the desirability of abandoning per se treatment of tying is "uncontroversial"); *id.* (Eisenach); *cf. id.* at 87 (Sidak) ("[T]echnological tying with respect to product innovations ought to be per se legal . . . .").

[114] *See, e.g.*, HOVENKAMP, *supra* note 64, at 118 (characterizing the "per se rule against tying" as "completely senseless"); Evans & Salinger, *supra* note 81, at 85 ("As a matter of theoretical and empirical economics, the modified per se test is not capable of identifying anticompetitive tying except by happenstance.").

[115] Broad. Music, Inc. v. CBS, 441 U.S. 1, 19–20 (1979).

[116] Cont'l T.V., Inc. v. GTE Sylvania Inc., 433 U.S. 36, 57–59 (1977).

[117] State Oil Co. v. Kahn, 522 U.S. 3, 22 (1997).

[118] Leegin Creative Leather Prods., Inc. v. PSKS, Inc., 127 S. Ct. 2705, 2725 (2007).

[119] *See also* United States v. Microsoft Corp., 253 F.3d 34, 94, 95 (D.C. Cir. 2001) (en banc) (per curiam) (declining to apply a per se rule to "bundling in platform software markets" because "wooden application of per se rules in this litigation may cast a cloud over platform innovation in the market for PCs, network computers and information appliances").

[120] *See supra* notes 113–14.

[121] Ill. Tool Works Inc. v. Indep. Ink, Inc., 547 U.S. 28, 45 (2006).

circumstances.

The Department agrees that a rule of per se illegality for tying is misguided because tying has the potential to help consumers and cannot be said with any confidence to be anticompetitive in almost all circumstances.

IV. Conclusion

Tying typically benefits consumers by allowing firms to lower costs and better satisfy consumer demand. Because it is often procompetitive, the Department agrees with the vast majority of commentators that tying should not be judged under a rule of per se illegality.

In place of the per se framework, the Department endorses a structured analysis, the first step of which should be to determine whether the tie has the potential to harm competition and consumers. In situations where harm to competition is implausible—for instance, where defendant lacks monopoly power (or any reasonable prospect of acquiring it through a tie) or where the tie is imposed solely to allow price discrimination—courts should uphold the arrangement.

Further, the Department believes that when actual or probable harm to competition is shown, tying should be illegal only when (1) it has no procompetitive benefits, or (2) if there are procompetitive benefits, the tie produces harms substantially disproportionate to those benefits. The Department does not believe that a trivial benefit should outweigh substantial anticompetitive effects. The Department believes that this is the appropriate standard in view of the uncertainty that can surround tying's competitive effects and the costs of inadvertently imposing antitrust liability on conduct that either helps or does not harm consumers.

When actual or probable harm to competition is shown, tying should be illegal only when (1) it has no procompetitive benefits, or (2) if there are procompetitive benefits, the tie produces harms substantially disproportionate to those benefits.