# REASSESSING TYING ARRANGEMENTS AT THE END OF AT&T'S IPHONE EXCLUSIVITY

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*Tying arrangements are common in the wireless telecommunications industry. Wireless networks compete for exclusive contracts to offer popular mobile devices. In January 2011, one of the most notorious exclusivity contracts ended when Apple announced that the iPhone would be available on the Verizon network, ending four years of iPhone exclusivity on AT&T. This long-anticipated move has been hailed as progress for consumer choice and competition in the industry. Such enthusiasm is rooted in the Supreme Court's enduring stance against tying arrangements—a position that is based on unreasonable goals and illusory harms. This Article examines the Supreme Court's tying jurisprudence in order to understand the harms that the Court seeks to combat. It then applies that understanding to a context-specific analysis of tying arrangements in the wireless telecommunications industry. In finding that AT&T's iPhone exclusivity has had significant pro-competitive effects and has fostered innovation in the industry, the Article exposes the misguided basis of the Court's tying doctrine and argues that it is time to reform the Court's stance against tying.*

## I. INTRODUCTION

In 2007, the iPhone was unveiled, and was immediately praised as a groundbreaking and innovative device. AT&T, however, elicited a different reaction from iPhone users. As the only U.S. wireless network on which the iPhone could

operate, it was heavily criticized. For nearly as long as AT&T has been the exclusive network of the iPhone, there have been rumors that an iPhone for Verizon or some other network would soon be available. The iPhone has finally arrived on Verizon. Now that the device is available on a second network, commentators envision a sea change—better service, cheaper prices, more iPhones sold.

But those who hope for radical change will be sorely disappointed. The end of iPhone exclusivity for AT&T will neither meaningfully reduce the price of the iPhone nor improve competition in the industry. Belief that the tying arrangement has caused serious harm is misplaced, yet understandable. The United States Supreme Court has fostered suspicion of tying arrangements by promoting a tying doctrine that seeks unreasonable goals and fights illusory harms. That the end of the most notable tying arrangement in wireless telecom will not significantly change competition in the industry is strong evidence that it is time for the Court to abandon its strict rule against tying arrangements.

For nearly a century, the Supreme Court has taken a hard line against the practice of tying.[1] Yet in the past decade, tying arrangements have become open and notorious in the wireless communications industry. The most notable example is between Apple's iPhone and AT&T's wireless

[1] *See, e.g.*, Henry v. A.B. Dick Co., 224 U.S. 1, 48–49 (1912) (holding it to be "contributory [patent] infringement" to sell mimeograph ink to licensee of patented machine who agreed in license to use only patent-holder's ink); *see also* Standard Oil Co. of Cal. v. United States, 337 U.S. 293, 305 (1949) ("Tying agreements serve hardly any purpose beyond the suppression of competition."). This hard-line stance stems from the Court's belief that market competitors have an absolute right to compete on even footing in any market. The oft-repeated truism that antitrust law protects "competition, not competitors," *Brown Shoe Co. v. United States*, 370 U.S. 294, 320 (1962), has not held true in tying law. The Court's foundational tying cases can only be explained by a desire to protect competitors from competitive forces that put them at some disadvantage in a market in which they would like to sell goods. Unfortunately, attempting to protect a would-be competitor's unfettered access to a market is likely, in some situations, to harm competition itself.

services, but the practice is widespread. This gap between Supreme Court jurisprudence and common business practice has created uncertainty, some litigation,[2] and calls for legal reform.[3] Despite these tying arrangements, the industry has remained competitive—and in fact, there is strong evidence that tying has increased competition between major wireless networks.

In the context of high expectations that the end of iPhone exclusivity will improve competition in wireless telecommunications, this Article examines the Court's traditional basis for condemning tying arrangements, and then applies the Court's rationales to tying between high-end mobile devices and wireless service providers. This Article argues that tying arrangements in the wireless industry are often good for competition, and that they provide strong incentives for innovation and a method for networks to differentiate themselves. It further argues that the iPhone's availability on Verizon's wireless network will cause only minor changes to competition in the industry.

This Article conducts both a doctrinal and a context-specific examination of tying in the wireless telecommunications industry. This combined approach demonstrates significant weaknesses in the current test for anticompetitive tying. In particular, the test prohibits the tying arrangements that are most likely to spur the rapid innovation and growth that has characterized the smartphone market in the wireless industry. Mobile communications devices are not likely to be a unique product

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[2] To date, only a few cases have tested this practice. *See, e.g., In re* Apple & AT & TM Antitrust Litig., 596 F. Supp. 2d 1288, 1306 (N.D. Cal. 2008) (finding that plaintiffs had stated an antitrust claim against AT&T's iPhone exclusivity); *cf. In re* Wireless Tel. Servs. Antitrust Litig., 385 F. Supp. 2d 403, 431 (S.D.N.Y. 2005).

[3] *See* Brad Reed, *How Ending Exclusivity Agreements Would Change the Telecom Industry: Small Wireless Providers Could Benefit from End of Exclusivity Deals for iPhones and Other Devices*, NETWORK WORLD (July 9, 2009, 10:01 AM), http://www.networkworld.com/news/2009/070909-telecom-exclusivity-deals.html; *Senators Suggest Exclusive Handset Contracts are Bad for Consumers*, TELECOMMUNICATIONS REPORTS DAILY (June 17, 2009), *available at* 2009 WLNR 11605612.

in this respect. A strong policy against tying could force all related goods and services to be provided piecemeal. While this would force each individual product to stand or fall on its own merits, rather than riding on the tails of a tying product, it would also remove a major incentive for wireless networks to support innovation in the mobile device market. It could also increase the incentives for incumbents to attempt to lock their customers in, rather than to innovate to draw in new customers.

With the current doctrine, the Court has failed to adequately identify the harms that tying may cause, and has imposed a rule that, if vigorously enforced, would radically slow the innovation on which technology industries thrive. In the wireless communications industry service providers are large players that generally take in greater revenue than device manufacturers. A strict rule against tying makes those major players indifferent to innovation in mobile devices. Such a rule requires that device innovations be available to all wireless networks, eliminating the incentives for networks to promote innovative devices with the hope of using them to draw customers to the network. In the presence of tying arrangements there has been an innovative explosion in the mobile device industry—one that would likely have occurred more slowly had the iPhone not been allowed to tie with AT&T wireless services. An examination of the Court's questionable motives for its tying doctrine strongly suggests that the end of the tying arrangement between AT&T and the iPhone is unlikely to result in major changes to the competitive environment. In fact, now that device competitors have caught up with the iPhone, the most important tying arrangements are likely to involve new devices, perhaps the Apple iPad, or something just now being dreamt up by device innovators.

Part II of this Article examines the current tying doctrine and the cases in which the Court has developed its convoluted rationale for scrutinizing tying arrangements. It also examines criticisms of the Court's doctrine. Part III engages in a context-specific analysis of tying in the mobile telecommunications industry, and characterizes tying in that

industry as a form of competition, rather than as a restriction on it. Part III also demonstrates that tying in the wireless industry promotes innovation in mobile devices. Part IV argues that it is time for the Court to return to the mantra of *competition, not competitors*, and reform its tying doctrine. It identifies a limited set of situations in which tying arrangements may cause competitive harm, and urges that they form the starting point for a new tying doctrine. This Article concludes by looking again at the recent end of the AT&T/iPhone tying arrangement, and finds that it will not cause major changes to the market.

## II. CURRENT DOCTRINE AND THE COURT'S VISION OF THE HARM OF TYING

### A. Basics of the Doctrine

The Court's tying doctrine is relatively straightforward, but because of its peculiar understanding of the harm that may be caused by tying arrangements, the Court has applied its test in unfortunate ways.[4] Tying arrangements are analyzed under what has been called a "quasi-per se rule."[5] It is similar to a per se rule in that a plaintiff need not identify the anticompetitive effects of the tying arrangement, but certain market conditions must be demonstrated before this per se illegality is triggered.[6] A tying arrangement is

[4] *See, e.g.*, Fortner Enters., Inc. v. U.S. Steel Corp. (*Fortner I*), 394 U.S. 495, 502 (1969) (discussing the "economic power" standard in the context of tying); *see also infra* note 19 and accompanying text.

[5] *See, e.g.*, U.S. Healthcare, Inc. v. Healthsource, Inc., 986 F.2d 589, 593 n.2 (1st Cir. 1993) ("Tying is sometimes also described as a per se offense but, since some element of power must be shown and defenses are effectively available, 'quasi' per se might be a better label."); *see also* Einer Elhauge, *Tying, Bundled Discounts, and the Death of the Single Monopoly Profit Theory*, 123 HARV. L. REV. 397, 400 (2009).

[6] *See* Jefferson Parish Hosp. Dist. No. 2 v. Hyde, 466 U.S. 2, 11–12 (1984) ("It is clear . . . that every refusal to sell two products separately cannot be said to restrain competition. If each of the products may be purchased separately in a competitive market, one seller's decision to sell the two in a single package imposes no unreasonable restraint on either

per se illegal if and only if a substantial amount of interstate commerce is involved,[7] the seller offers two products exclusively as a unit,[8] and the seller has "economic power" in the market for the tying product.[9] If the prerequisites of the quasi-per se rule are not met, a tying arrangement may be analyzed under the default antitrust standard, the rule of reason.

The substantial amount of interstate commerce element is easily met and rarely stops cases from moving forward. For example, in *Fortner I*, the Court did not discuss the possibility of denying a claim that involved less than $4 million in annual sales.[10] The Court set a very lenient bar to establishing substantial volume: "normally the controlling consideration is simply whether a total amount of business, substantial enough in terms of dollar-volume so as not to be

market, particularly if competing suppliers are free to sell either the entire package or its several parts.").

[7] *See id.* at 16 ("If only a single purchaser were 'forced' with respect to the purchase of a tied item, the resultant impact on competition would not be sufficient to warrant the concern of antitrust law."); *cf. id.* at 9–10 ("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.' The rule was first enunciated in *International Salt Co. v. United States* . . . and has been endorsed by this Court many times since. The rule also reflects congressional policies underlying the antitrust laws."). Notwithstanding the Court's endorsement of the law governing tying law in *Jefferson Parish*, the future of per se condemnation of tying arrangements is uncertain. Justice O'Connor openly challenged the per se rule in her concurrence in *Jefferson Parish*. *Id.* at 35. In *Illinois Tool Works, Inc. v. Independent Ink, Inc.*, 547 U.S. 28, 29 (2006), Justice Stevens, writing for a unanimous court, wrote that "tying arrangements involving patented products should be evaluated under the standards applied in cases like *Fortner II* and *Jefferson Parish* rather than under the *per se* rule applied in *Morton Salt* and *Loew's*." This dictum is confusing because like *Morton Salt Co. v. G.S. Suppiger Co.*, 314 U.S. 488 (1942), and *United States v. Loew's, Inc.*, 371 U.S. 38 (1962), *Fortner II* and *Jefferson Parish* conducted per se analyses. This Article argues that the time has come for the Court to fully abandon the quasi-per se rule.

[8] *Jefferson Parish*, 466 U.S. at 12.

[9] *Id.* at 12–15.

[10] *Fortner I*, 394 U.S. 495, 502 (1969).

merely de minimis, is foreclosed to competitors by the tie . . . ."[11]

The two-product requirement is somewhat more challenging.[12] The Court has established a general standard that a tying arrangement involves two products when there is demand for the tying and tied products to be purchased separately. For example, in *Jefferson Parish*, the Court faced the question of whether anesthesia services and surgical services that require anesthesia are one or two products.[13] The Court focused "not on the functional relation between [the two services], but rather on the character of the demand for the two items."[14] The Court framed this question as whether consumers purchase anesthesiological services separately from the surgical services with which they are used. The Court found that they do, and that surgery and anesthesia are different services operating in different markets.[15] It based this holding on findings that surgery and anesthesia are billed separately, and that "patients or surgeons often request specific anesthesiologists to come to a hospital and provide anesthesia, and that the choice of an individual anesthesiologist separate from the choice of a hospital is particularly frequent in respondent's

[11] *Id.* at 501.

[12] At times, the two-product requirement is obviously met. For example, in *Northern Pacific Railway Co. v. United States*, 356 U.S. 1 (1958), the Court did not question whether the land (the tying product) and shipping services (the tied product) were separate goods.

[13] *Jefferson Parish*, 466 U.S. at 6. In that case, a hospital had agreed that all anesthesia services would be provided by a single anesthesiology practice. *Id.* If hospital services are a single product that is made up of both surgical services and anesthesiological services, this agreement would not constitute a tying arrangement. Instead, the agreement would simply shape the nature and value of the single service provided by the hospital. *Id.* at 18–19. If, on the other hand, surgery and anesthesia are two different services, the agreement effectively tied surgical services provided by any physician in the hospital to anesthesiology services provided by the selected anesthesiologists. *Id.*

[14] *Id.* at 19.

[15] *Id.* at 22–23.

specialty . . . ."[16] This analysis would likely play out in a similar fashion in a challenge to a tie between a smartphone or wireless device and a service provider. Though mobile devices and wireless services may be purchased at once, the two are generally priced and billed separately, and consumers regularly make decisions regarding their mobile device and wireless service provider separately. The prevalence of such tying arrangements limits the extent to which consumers can select devices and wireless networks, but consumers often make separate decisions in the two markets.

The third element of a tying case, economic power, has developed gradually with the Court's economic understanding of the harm that may result from tying arrangements and its rationale for condemning them. This economic power requirement once required "a monopolistic position,"[17] but today's standard allows a showing of economic power through a market share falling far short of monopoly,[18] or by showing that the tying good is sufficiently

[16] *Id.* at 22. *See also* Times-Picayune Pub. Co. v. United States, 345 U.S. 594 (1953) (the majority and the dissenters disagreed about whether advertisements in morning and evening papers occupied the same or different markets).

[17] *See, e.g.*, *Times-Picayune*, 345 U.S. at 608–09. In *Times-Picayune*, the Court found that the tying arrangement was not anticompetitive because the defendant lacked "dominance" over the tying advertising market. *Id.* at 612–13. However, as the dissent notes, this result was nearly certain given the excessively broad manner in which it defined the market. *Id.* at 628; *see also id.* at 612–13 (describing the broad market definition to which the dissent refers).

[18] Early cases did require the tying seller to occupy a "monopolistic position." *See, e.g.*, *Times-Picayune*, 345 U.S. at 608–09. However, later cases required only "economic power." A large market share is one way to demonstrate market share, but the Court has established other ways. "Market dominance . . . is by no means the only test of whether the seller has the requisite economic power. Even absent a showing of market dominance, the crucial economic power may be inferred from the tying product's desirability to consumers or from uniqueness in its attributes." United States v. Loew's, Inc., 371 U.S. 38, 45 (1962).

unique to give its seller economic power in the tying market.[19] The Court describes this economic power as,

> [T]he power, within the market for the tying product, to raise prices or to require purchasers to accept burdensome terms that could not be exacted in a completely competitive market. In short, the question is whether the seller has some advantage not shared by his competitors in the market for the tying product.[20]

## B. The Court's Rationale for Imposing Antitrust Scrutiny on Tying Arrangements: *Fortner Enterprises, Inc. v. United States*

Though the rule is relatively clear and easily applied, an examination of the doctrine's development demonstrates that the Court has goals that are out of step with the rest of its antitrust jurisprudence. Tying cases repeatedly protect competitors by focusing on an idealized right to compete on even footing in all markets and sub-markets. This makes no sense in an economy in which innovation may give a firm

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[19] *See, e.g.*, *Fortner I*, 394 U.S. 495, 502–03 (1969) ("The standard of 'sufficient economic power' does not, as the District Court held, require that the defendant have a monopoly or even a dominant position throughout the market for the tying product. Our tie-in cases have made unmistakably clear that the economic power over the tying product can be sufficient even though the power exists only with respect to some of the buyers in the market . . . . As we said in the *Loew's* case: 'Even absent a showing of market dominance, the crucial economic power may be inferred from the tying product's desirability to consumers or from uniqueness in its attributes.'"). In *Fortner II*, the Court refined this test to require that "the seller has the power, within the market for the tying product, to raise prices or to require purchasers to accept burdensome terms that could not be exacted in a completely competitive market. In short, the question is whether the seller has some advantage not shared by his competitors in the market for the tying product." U.S. Steel Corp. v. Fortner Enters., Inc. (*Fortner II*), 429 U.S. 610, 620 (1977). The Court recently (and wisely) abandoned one indicator of market power, the presence of a patent. Ill. Tool Works, Inc. v. Indep. Ink, Inc., 547 U.S. 28, 31 (2006) ("We conclude that the mere fact that a tying product is patented does not support . . . a presumption [of market power.]").

[20] *Fortner II*, 429 U.S. at 620.

advantages that spread across several markets. This untenable rationale is best viewed through an examination of a single, disastrous case and its aftermath.

The greatest example of the failure of the Court's tying doctrine is one of the more recent affirmations of the quasi-per se rule. In *Fortner Enterprises, Inc. v. United States* (*Fortner I*), the Court considered a seller of pre-fabricated homes, U.S. Steel, that also offered financing (through a subsidiary) on those homes. This financing was only available for purchase of the defendant's homes.[21] The challenge to this practice rested heavily on the fact that the financing offered by the defendant was particularly attractive, and that the homes offered were overpriced.

In *Fortner I*, the Court reversed the district court's grant of summary judgment to the defendant, finding sufficient evidence to meet the quasi-per se rule. However, summary judgment could easily have rested on two of the three branches of the Court's doctrine. First, it is clear that the defendant did not have economic power in the finance market. There was nothing special about the defendant's position that allowed it to offer attractive financing.[22] It did not have any "advantage not shared by [its] competitors in the market for the tying product."[23] The only advantage it had in the tying market was its willingness to accept risk, something that competition law should not penalize.[24]

Second, it is not clear that the financing and the homes were two separate products. While there is unique demand for both prefabricated homes and credit, it is not clear that

[21] *Fortner I*, 394 U.S. at 497.

[22] *See id.* at 515 (White, J., dissenting) ("A low price on a product is ordinarily no reflection of market power. It proves neither the existence of such power nor its absence, although absence of power may be the more reasonable inference.").

[23] *See Fortner II*, 429 U.S. at 620.

[24] *Fortner I*, 394 U.S. at 515. It is possible that under today's pleading standards, general allegations of market power would not be sufficient in this case. *See* Bell Atlantic Corp. v. Twombly, 550 U.S. 544, 556 (2007) ("[W]e hold that stating [a restraint of trade] claim requires a complaint with enough factual matter (taken as true) to suggest that an agreement was made.").

the credit offered by the defendant is of a type that has this separate demand. Instead, the financing is simply a negotiated method of payment. As Justice White argued in dissent,

> In this case, the low price of credit is functionally equivalent to a reduction in the price of the houses sold. Since the buyer has untied credit available elsewhere, he can compare the houses-credit package of U.S. Steel as competitive with the price of the untied credit plus the cost of houses from another source.[25]

If U.S. Steel had stopped offering either the homes or the financing, its business in the other would be untenable—it would not be able to sell homes at prices above the competitive level, and it would not be able to offer the extremely low-rate financing alone without rapidly going bankrupt.[26] However, assuming that the two-product issue was decided correctly demonstrates the folly of the Court's rule. If the financing and the homes were two products, the defendant's innovation in putting them together in a way that some purchasers find attractive would expand the number of prefabricated homes sold—a distinctly pro-competitive effect.[27] Would-be purchasers could choose U.S. Steel's attractive financing of expensive homes when they otherwise might not be able to afford the cheaper price tag

[25] *Fortner I*, 394 U.S. at 515 ("By cutting the price of his houses, a competitor of U.S. Steel can compete with U.S. Steel houses on equal terms since U.S. Steel's money is no more desirable to the purchaser than money from another source except in point of price. The same money which U.S. Steel is willing to risk or forgo by providing better credit terms it could sacrifice by cutting the price of houses. There is no good reason why U.S. Steel should always be required to make the price cut in one form rather than another, which its purchaser prefers.").

[26] *Id.*

[27] Justice White expressly notes this possibility: "adopting the . . . assumption, that sufficient credit to go forward with the enterprise was simply unavailable to petitioner from any other source at all, the result in this case is even worse. Were it not for the credit extended by U.S. Steel, petitioner would have been unable to carry out its development." *Id.* at 516.

and less attractive financing offered by competitors.[28] Stopping U.S. Steel from tying its homes to credit could not have the effect of making cheap credit available for the purchase of other prefabricated homes and other products. It could only reduce the methods available to consumers to purchase prefabricated homes.

This is not to say that the Court had no basis on which to rest its decision. *Fortner I* fits nicely with the Court's theory of tying arrangements. Under this theory, the Court does not seek an economically measurable benefit of competition, such as consumer or societal welfare. Instead, it places a normative value on creating an even playing field for competitors by removing advantages that they may gain through actions in other markets. If there is distinct demand for goods in a given market, the Court's tying doctrine seeks to ensure that no market actor has an advantage by virtue of his participation or success in some other market. The Court, oddly, attempts to separate economic relationships between markets, even where the products sold are related.

Applied in *Fortner*, this theory meant that because there was a separate demand for financing and prefabricated homes, the *Fortner* defendant could not link the two together in a way that would lead consumers to purchase something in either market that would appear unfavorable if you looked only at that market.[29] Ignoring the market for financing and looking only at purchases of prefabricated homes, every sale of the defendant's overpriced homes appears to be evidence that consumers were coerced into accepting a bad deal in that market. But this is simply not the case, and the Court does not explain why consumers would be susceptible to such a bad deal. Consumers only accepted a bad deal for homes because they were getting an exceptionally good deal on the financing. Had Fortner taken the opposite course and

[28] *Id.*

[29] When looking at both markets together, it is clear that U.S. Steel could not successfully offer an unattractive product—but a cross-market look that makes sense of U.S. Steel's actions is one that the Court refuses to take.

offered very cheap homes and very unattractive financing, the Court's logic would have lead it to the same result in finding the potential for anticompetitive activity in the defendant coercing consumers into accepting unattractive financing. In such a world, the defendant has no incentive to offer a cheaper product in either market, or to change the structure of its offer to entice consumers, because any offsetting increase in price in a related market would be, according to the Court, anticompetitive.

Writing for the Court, Justice Black used broad language that makes it clear that the financing and prefabricated home offers must be considered separately in two markets, rather than as a package: "[t]he buyer may have the choice of buying the tangible commodity separately, but . . . the seller can use his power over the tying product to win customers that would otherwise have constituted a market available to competing producers of the tied product. '[C]ompetition on the merits with respect to the tied product is inevitably curbed.'"[30] Justice Black focused myopically on the good in the tied market, and found it to be available more cheaply elsewhere, thus, the buyer must be "coerced" into buying that product. This would almost make sense if the seller were offering a line of credit that extended beyond the purchase of prefabricated homes. For example, if a creditor who truly had power in the finance market were only willing to offer credit upon the purchase of a specific brand of neckties, that arrangement could, feasibly, foreclose some necktie sellers from some small segment of the necktie market—necktie customers who also need credit.[31] But in *Fortner*, the credit was made available solely to build the homes sold by the defendant. The *Fortner I* defendant's actions did not foreclose other prefabricated home sellers

[30] *Fortner I*, 394 U.S. at 508 (citing N. Pac. Ry. Co. v. United States, 356 U.S. 1, 6 (1958)).

[31] However, even that arrangement is unlikely to have any real anticompetitive effect absent the possibility of raising the costs of entering the necktie market, or of forcing existing necktie sellers out of business in a way that would make the overall necktie market significantly less competitive. *See* text accompanying notes 58–62, *infra*.

from any portion of that market, it simply forced them to compete on a new axis—an axis on which any seller of houses is likely prepared to compete. The Court in *Fortner I* would disallow competition on financing—to offer a better financing deal and a higher sticker price would be, according to the Court, anticompetitive.[32] The dissent, on the other hand, would encourage home sellers to compete on financing, as well as all of the other elements on which sellers compete, such as sticker price, quality, reputation, and service.[33]

Nearly eight years after the Court remanded the *Fortner* case for trial, it returned to the Supreme Court. *Fortner II*, one of Justice Stevens's first antitrust opinions for the Court, was a moment of clarity, albeit a narrow one that failed to resolve the misconceptions underlying the Court's tying jurisprudence.[34] On remand, the district court granted a directed verdict in favor of the plaintiff, and sent the case to the jury only on the issue of damages. In *Fortner II*, the Court again reversed, and after *Fortner I* had required the district court to consider the issue, the Court held that the evidence was insufficient to support a finding of economic power.[35] As should have been obvious to the Court in *Fortner I*, the *Fortner II* Court held that "there is nothing in the record to indicate that [the defendant's economic power] enabled it to borrow funds on terms more favorable than those available to competing lenders, or that it was able to operate more efficiently than other lending institutions."[36] The *Fortner II* Court did not revisit its existing rationale for examining tying arrangements, namely, that a firm may not sell products together in two markets in such a way that it appears that consumers are getting a bad deal in either of those markets. As the next subsection demonstrates, this

[32] *Fortner I*, 394 U.S. at 503–04.

[33] *Id.* at 511 ("Provision of favorable credit terms may be nothing more or less than vigorous competition in the tied product, on a basis vary nearly approaching the price competition which it has always been the policy of the Sherman Act to encourage.").

[34] 429 U.S. 610 (1977).

[35] *Id.* at 617.

[36] *Id.*

rationale was well established by the time the *Fortner* cases were decided.

## C. The Development of the Court's Tying Jurisprudence

Though *Fortner* provides a particularly egregious example of how the Court's tying jurisprudence has gone astray, it is not the only example. From early on, the Court struggled to identify a reason to scrutinize a type of business arrangement that it was certain was harmful. Once the quasi-per se rule was in place, the Court simply justified the rule based on the idea that it was "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 . . . ."[37]

[37] Jefferson Parish Hosp. Dist. No. 2. v. Hyde, 466 U.S. 2, at 9 (1984). The Court's most recent tying decisions have not attempted to justify or explain the quasi-per se rule, but have instead focused on narrow issues in applying the rule. *See, e.g.*, Illinois Tool Works, Inc., v. Indep. Ink, Inc., 547 U.S. 28, 31 (2006) (holding that patented products do not warrant a presumption of market power); Eastman Kodak Co. v. Image Technical Servs., Inc., 504 U.S. 451, 471 (1992) (holding that a seller of machinery may have market power in the parts market for its own machinery, even if it does not have market power in the market for that type of machinery). The earliest tying cases were not focused on whether or not tying was anticompetitive, but were instead patent cases. For example, *Henry v. A.B. Dick*, 224 U.S. 1 (1912), and *Motion Picture Patents Co. v. Universal Film Manufacturing Co.*, 243 U.S. 502 (1917), focused on the question of whether there could be a case for "contributory patent infringement" by a competitor who sold a product to a consumer who had agreed to a tying arrangement that would preclude them from buying from the defendant. *Henry* held that such a cause of action was supported, and that the seller of ink contributorily infringed the patent held by a mimeograph distributor who licensed its machine on the condition that the licensee only purchase ink exclusively from the patent holder. *Henry*, 224 U.S. at 32–33. In short, the case upheld a tying arrangement, and prosecuted *another seller* of the tied good for selling that good to the licensee who was bound by the licensing agreement. *See id.* In *Motion Picture Patents*, the Court went the opposite direction, and held that nothing in the patent statute gave the patent holder the right to extend its exclusive control over any product beyond the patented good. 243 U.S. at 514. Neither of these

In the first case to move towards the modern quasi-per se rule, the Court laid the foundation for its focus on even competition in single markets, unconnected to competition in other markets. In *International Salt Co. v. United States*, the Court affirmed an injunction preventing a manufacturer of canning machines from requiring the use of its own salt with its machines.[38] There is little doubt that the tying arrangement allowed the International Salt Company to capture some portion of the salt market that it otherwise might not have captured. The question that the Court failed to ask is not whether the salt company benefited from its strategic action, but whether this method of increasing sales in the salt market is anticompetitive, rather than simply successful competition. According to the Court, tying arrangements "'tend to create a monopoly,' and it is immaterial that the tendency is a creeping one rather than one that proceeds at full gallop; nor does the law await arrival at the goal before condemning the direction of the movement."[39] It would be hard for the Court to create a clearer condemnation of behavior that is the essence of competition—arrangements that increase parties' market shares are held to be anticompetitive simply because by increasing one market actor's share, they move that firm towards monopoly—even if it does not approach monopoly.

The Court's rationale proves too much. It upheld the injunction based solely on the harm it saw in the International Salt Company increasing its market share, without even attempting to find any harm to consumers, society, or the competitive marketplace. The only plausible harm identified by the Court was to International Salt's competitors, who were foreclosed from competing on an even footing for the portion of the salt market that is associated with International Salt Company's canning machines. In its brief opinion, the Court was explicit about this: "it is unreasonable, per se, to foreclose competitors from any

cases considered the competitive effects of tying arrangements, nor did they approach the doctrine that the Court would develop decades later.

[38] 332 U.S. 392, 396 (1947).

[39] *Id.* at 396.

substantial market." This focus upends the oft-quoted mantra that antitrust law protects "competition, not competitors."[40] It also fails to understand the essence of competition. Most competitors *want* to defeat their competition. Successful steps towards this goal that increase a firm's market share should not be suspect unless there is a positive reason that such steps actually harm the *process* of competition.

Six years after *International Salt*, the Court sharpened its theory of protecting competitors in every market from successful competitors in other markets. However, it also began, to identify harms to the overall marketplace that insulation from competition can have. Unfortunately, the Court simultaneously ignored the potentially positive effects that limited antitrust scrutiny of tying arrangements can have. In *Times-Picayune Publishing Co. v. United States* the Court considered a newspaper publisher's tying of advertising space in its very popular morning newspaper to advertising space in its evening newspaper.[41] The Court saw the tying arrangement as insulating the evening newspaper from competitive pressures, and thus allowing a weaker product to survive in the market: "[b]asic to the faith that a free economy best promotes the public weal is that goods must stand the cold test of competition; that the public, acting through the market's impersonal judgment, shall allocate the Nation's resources and thus direct the course its economic development will take."[42] Tying, according to the Court, undercuts this development, hindering what it sees as a strengthening, naturally selective, competitive process.

[40] Brown Shoe Co. v. United States, 370 U.S. 294, 320 (1962). *See also* United States v. Paramount Pictures, 334 U.S. 131 (1948). The *Paramount Pictures* Court appeared to desire even competition in all possible sub-markets, and so enjoined the block-booking of multiple films because "[b]lock-booking prevents competitors from bidding for single features on their individual merits." *Id.* at 156–57.

[41] 345 U.S. 594, 600 (1953) ("[I]nsertions in [the morning] paper were deemed essential by advertisers desiring to cover the local market."). The evening paper faced competition from a greater number of other papers than the morning paper. *Id.*

[42] *Id.* at 605.

Unfortunately, it follows this logic to find that individual competitors should be protected from a form of competition, and identifies the harm of tying arrangements not as any harm that consumers face due to inferior products that survive market competition,[43] but as the harm that occurs when "other existing or potential sellers are foreclosed from offering up their goods to a free competitive judgment; they are effectively excluded from the marketplace."[44] Ultimately, as in *International Salt*, the *Times-Picayune* Court sought to establish an even footing between competitors who may not be evenly matched.[45]

Subsequently, the Court decided the *Fortner* cases, since which it has only issued three tying decisions. None of these meaningfully changed the rationale underlying the doctrine or the basics of the quasi-per se rule. These cases generally applied the quasi-per se rule without revisiting its justifications or the logic underlying it.[46] For example, in *Jefferson Parish Hospital District Number 2 v. Hyde*,[47] the Court considered whether an exclusive contract between a hospital and a group of anesthesiologists was an unlawful tying arrangement. The Court held that the hospital did not have sufficient market power to invoke the quasi-per se rule.[48] In so doing, it reaffirmed its prior justifications of the quasi-per se rule, stating that:

> Our cases have concluded that the essential characteristic of an invalid tying arrangement lies in the seller's exploitation of its control over the tying

[43] It is unlikely that this tying arrangement made products in the relevant markets inferior. *See infra* text accompanying notes 53–54.

[44] *Id.* at 605.

[45] See also *Northern Pacific Railway v. United States*, 356 U.S. 1, 7 (1958), in which the Court held that a railroad could not give, sell, or lease land with "preferential routing clauses" requiring the occupants of the land to use the railway to ship goods as long as it offered competitive services.

[46] Dissents and concurrences in these cases, however, do not hesitate to question the very basis of the quasi-per se rule. *See supra* Part I.D.

[47] 466 U.S. 2 (1984).

[48] *Id.* at 6.

> 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. When such 'forcing' is present, competition on the merits in the market for the tied item is restrained and the Sherman Act is violated.[49]

The Court continued to see a consumer's acceptance of a tied product as "forced" or "coerced" rather than *competed for* by successful performance in a related market. This is the last time that the Court had so clearly approached the rationale for the quasi-per se rule. The Court's two more recent tying cases have been much more narrowly focused.[50]

## D. Other Views: Dissenting Justices and Commentators Attempt to Give Substance to the Court's Doctrine

The Court envisions a tying arrangement where competition is undercut by a weak product being protected by the power of a strong product in another market. But the Court fails to consider the negative effects that such an arrangement could have on the competitors engaging in it. If a strong product does indeed allow a weak product to gain

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[49] *Id.* at 12.

[50] In *Eastman Kodak Co. v. Image Technical Services, Inc.*, 504 U.S. 451 (1992), the Court held that a seller of machinery may have market power in the parts market for its own machinery, even if it does not have power in the broader market for that type of machinery. This continues the Court's focus on ensuring that competitors have access to even narrowly defined sub-markets. It does seem odd to define a service market so narrowly as to include only those who have already purchased a single brand of product. Defining markets that are narrowed by other market choices is like finding that a firm has monopoly power over customers who have already decided to purchase the firm's product. In *Illinois Tool Works, Inc. v. Independent Ink, Inc.*, 547 U.S. 28 (2006), the Court issued a similarly narrow decision that did not touch directly upon the broader rationale behind tying doctrine. There, the Court eliminated the presumption that a patented good had market power sufficient to satisfy the quasi-per se rule. *Id.* at 31 (2006) ("We conclude that the mere fact that a tying product is patented does not support . . . a presumption [of market power.]").

market share on its coattails, the attachment of the weak product will reduce the strong product's draw. This undercuts the Court's assumption that tying is used to protect tied products from competition. Instead, gains made by the tied product are likely to be offset by losses to the tying product.[51] No controlling Court opinion has yet attempted to resolve this problem, and the Court continues to have an inability to identify a convincing rationale for scrutinizing tying arrangements. Although the Court has not strayed from its focus on protecting even competition between markets, several dissents and concurrences have attempted to identify other rationales for antitrust scrutiny of tying arrangements, rationales that, if adopted, would at times require a change in the Court's doctrine.

The first example of this is in Justice White's dissent to *Fortner I*, discussed above. While the Court insisted that the defendant provide financing and pre-fabricated homes separately, the dissent urged a different focus. First, Justice White simply rebutted the Court's characterization of the facts as pled. While the majority maintained that the defendant could have economic power in the credit market, White saw nothing in the pleadings to support a finding of such power:

> In this case there is no offer to prove monopoly or dominance in the tying product—money. And in no sense is the money provided to petitioner unique, even though the terms on which it was furnished and

[51] The Court attempted to get around this paradox by imposing the market power requirement. The only products that may shelter tied products from the forces of competition are those with market power, or that give "the seller . . . power . . . to raise prices or to require purchasers to accept burdensome terms that could not be exacted in a completely competitive market. In short, the question is whether the seller has some advantage not shared by his competitors in the market for the tying product." *Fortner II*, 429 U.S. 610, 620 (1977). The problem is that the seller still faces a tradeoff between raising prices, which ordinarily raises no competitive concern, and tying, which does. Without some theory as to why imposing a tying arrangement is worse for consumers or for competition than simply raising prices, there is no justification for condemning tying arrangements.

> was to be repaid may have been advantageous, and indeed the money itself available from no other source on equally good terms.[52]

However, rather than simply resting his dissent on the facts, Justice White goes on to explain why the missing element of economic power is vital to a tying case. In so doing, he urges a transformation of the rationales underlying the Court's tying jurisprudence. Up until this point, the Court had largely sought to invalidate tying arrangements on normative grounds: tying hurt balanced competition, and the Court believed that it would be normatively better if all competitors could compete evenly in markets, without some competitors receiving benefits based in other markets. Justice White, on the other hand, seeks to lay out the economic harms that tying may cause, and then argues that the missing economic power element is necessary for these harms to come to pass.

Justice White laid out two primary harms that may stem from tying arrangements where the tying product has economic power: "the use of power over one product [(1)] to attain power over another, [and (2)] otherwise to distort freedom of trade and competition in the second product."[53] Even where the tie does not harm consumers either because they were indifferent between the tied product and its competitors, or because they would have bought the tied product anyway, "[t]he tying seller may be working toward a monopoly position in the tied product and, even if he is not, the practice of tying forecloses other sellers of the tied product and makes it more difficult for new firms to enter that market."[54] In other words, tying can allow a monopolist to use one monopoly to gain another, or it can cause "distortions" in the tied market by forcing non-tied competitors out of the tied market or by making it excessively difficult to enter the tied market.

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[52] *Fortner I*, 394 U.S. 495, 511 (1969) (White, J. dissenting).

[53] *Id.* at 512.

[54] *Id.* at 513.

The first of these potential harms—that a tying firm might use a monopoly in one market to obtain a monopoly in another—has been the subject of extensive economic literature in the past thirty years, and has been largely discredited. For example, Judge Richard Posner explains that "[i]t may seem obvious that two monopolies are better than one, but since the products are used in conjunction with one another to produce the final product or service in which the consumer is interested . . . , it is far from obvious."[55] This is the case because a seller with some level of monopoly power in a market may either raise the price in the market over which it has power, or it may impose some other burdensome sale term, such as a tying arrangement. Imposing a tying arrangement that requires consumers to purchase a second product that would not be their preference will decrease demand in the same fashion as raising prices. Although it is possible that a tying product with complete monopoly power could direct all sales in a second market to a tied product, doing so would be a substitute for charging a monopoly price. Ultimately, the seller might not be able to charge any non-competitive price for either good, if the tie itself lowers demand sufficiently. At most, the seller with a monopoly in the tying product will be able to charge a single monopoly rent on the tying good if the tied good is offered at a competitive price. If it is offered at a non-competitive price, there will be a drop in demand, or the seller will have to charge a sub-monopoly price on the tying good.[56] In short, only a single monopoly profit is available whether a seller with market power in one product chooses to tie, or simply to charge a monopoly price. This logic has been well developed, and is widely accepted.[57]

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[55] RICHARD A. POSNER, ANTITRUST LAW 199 (2d ed. 2001).

[56] *Id.* As Justices White and O'Connor have recognized, it is possible that tying arrangements may have other negative effects. For example, if a tying arrangement drives existing competitors out of the tied market, making that market non-competitive, or if entry costs are significantly raised in either market, consumers will be hurt.

[57] *See* ROBERT H. BORK, THE ANTITRUST PARADOX 372–75 (1978); Ward S. Bowman, Jr., *Tying Arrangements and the Leverage Problem*, 67 YALE

The "distortions" suggested by Justice White, on the other hand, are the focus of most current discussions regarding the harm that tying may achieve, even if the Court continues to focus on absolute protection of competitors' abilities to enter the market. Justice O'Connor picked up on this strain in her concurrence in *Jefferson Parish*.[58] In that opinion she

L.J. 19, 20–23 (1957); Aaron Director & Edward H. Levi, *Law and the Future: Trade Regulation*, 51 NW. U. L. REV. 281, 190–92 (1956). What would otherwise be total consensus that one monopoly cannot be leveraged into two has recently been challenged by Professor Einer Elhauge, who argues that the theory that only a single monopoly is available from multiple tied markets is limited to a specific set of circumstances that is more often than not unrealistic. Einer Elhauge, *Tying, Bundled Discounts, and the Death of the Single Monopoly Profit Theory*, 123 HARV. L. REV. 397, 399–401 (2009). According to Elhauge, the single monopoly profit theory only holds when "(1) Buyers do not use varying amounts of the tied product with the tying product. (2) Buyer demand for the two products has a strong positive correlation. (3) Buyers do not use varying amounts of the tying product. (4) The competitiveness of the tied market is fixed. [And] (5) [t]he competitiveness of the tying market is fixed. Relaxing those assumptions invalidates the theory." *Id.* at 400. This debate is somewhat of a tangent because the Court has never relied on the theory that one monopoly may be used to extract monopoly rents from two markets in order to hold a tying arrangement unlawful. As Professor Christopher Leslie suggests, the Court's doctrine has nothing to do with obtaining a double monopoly profit. Instead, businesses engage in tying for a simpler reason, namely to sell products in the tying market. Christopher R. Leslie, *Cutting Through Tying Theory with Occam's Razor: A Simple Explanation of Tying Arrangements*, 78 TUL. L. REV. 727, 730 (2004). "The simplest rationale for why a seller requires buyers to purchase the tied product is that the seller wants buyers to purchase the tied product, period: no long-term designs on expanding monopoly empires nor complicated schemes to confuse consumers by burying the 'real' price of a product in a bundle of goods." *Id.* This rationale appears to fit with what the Court is, at times, searching for in tying arrangements. Instead of focusing on the extraction of monopoly rents from two markets, the Court looks for tying sellers obtaining market share in a tied market in a way that insulates them from normal competitive processes. The Court does not seem to care whether such insulation allows the seller to obtain a monopoly profit or not.

[58] *See* Jefferson Parish Hosp. Dist. No. 2 v. Hyde, 466 U.S. 2, 36 (1984) (O'Connor, J., concurring). Justice O'Connor begins by accepting the argument that, generally, a monopoly in one market may not be leveraged into a second monopoly via a tying arrangement: "[t]he existence of a tied

attempts to re-write the Court's tying doctrine under the rule of reason rather than under a quasi-per se rule. Like Justice White, O'Connor would abandon the Court's narrow focus on preserving even-footed competition for all competitors, and would instead bring tying doctrine in line with the rest of antitrust law by focusing on the economic consequences of potentially anticompetitive business practices.[59] O'Connor carefully spells out the distortions that ties can have on a market, and lays out a doctrine that aims to identify those arrangements that will have such negative effects. In particular, O'Connor takes aim at those tying arrangements that may allow the tying party to "driv[e] out competing sellers of [the tied good], or [make] it more difficult for new sellers to enter the [tied] market."[60] She gives greater substance to White's distortions by defining them as increasing barriers to entry or reducing the competitiveness of the market. The analysis proposed by O'Connor would be substantially similar to the quasi-per se rule, looking to market power, possibility of obtaining a share of the tied market, and two distinct products. However, instead of these characteristics leading to a conclusion of illegality, they would be threshold questions for considering the harms of the tying arrangement against any pro-competitive benefits.[61] Part III examines some of the pro-competitive benefits that tying arrangements could have in the wireless

product normally does not increase the profit that the seller with market power can extract from sales of the *tying* product. A seller with a monopoly on flour, for example, cannot increase the profit it can extract from flour consumers simply by forcing them to buy sugar along with the flour." *Id.*

[59] *Id.* at 35 ("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. The law of tie-ins will thus be brought into accord with the law applicable to all other allegedly anticompetitive economic arrangements, except those few horizontal or quasi-horizontal restraints that can be said to have no economic justification whatsoever. This change will rationalize rather than abandon tie-in doctrine as it is already applied.").

[60] *Id.* at 37.

[61] *Id.* at 37–42.

communications industry. Part V suggests that the Court adopt an analysis similar to the one put forth by Justice O'Connor in *Jefferson Parish*. O'Connor is not alone in urging a focus on these two potentially negative effects of tying rather than on either ensuring even footing for competitors or preventing the expansion of one monopoly into two. Commentators have begun to recognize that the Court's doctrine is economically unjustified and can only be rationalized based on a normative value of an extreme form of equal competition and protection of competitors.[62]

## III. A CONTEXT-SPECIFIC INQUIRY INTO TYING IN THE WIRELESS INDUSTRY

Although, it is clear that the Court's doctrine is theoretically unsound, a close examination of a specific industry provides an even more convincing reason to abandon it. The recent end to the iPhone/AT&T tying arrangement provides a useful context to demonstrate this necessity. This Part examines the unique characteristics of the wireless communications industry, and demonstrates that tying arrangements in that industry have not had a strong negative effect on competition, but may have had important pro-competitive effects. In particular, the tying arrangement between the iPhone and AT&T may have spurred wireless service providers to invest in innovation in mobile devices. Such innovation has resulted in an explosion of new mobile devices and continued growth of the mobile communications industry. It has not caused the disastrous results on competition or the formation of double-monopolies that some have feared. Nor does it appear that the distortions identified by Justices White and O'Connor are widespread or harmful. This all suggests that now that AT&T's iPhone exclusivity has ended, there will be little

[62] *See, e.g.*, Erik Hovenkamp & Herbert Hovenkamp, *Tying Arrangements and Antitrust Harm*, 52 ARIZ. L. REV. 925, 966–67 (2010) ("We recommend that courts in antitrust cases forget about price discrimination or leveraging as anticompetitive concerns and focus on foreclosure, or anticompetitive exclusion.").

change in the market. AT&T customers might move to Verizon, and existing Verizon customers might switch to the iPhone, but this will all take place in the context of pre-existing competition within devices and network markets.

## A. The Wireless Telecommunications Market

The wireless telecommunications industry consists of two related markets, one for mobile devices and the other for wireless service. For the most part, different firms serve these two markets. Although tying arrangements between devices and service providers are common, the demand for the two is distinct. It is common for phones, smartphones, and other communications devices to be purchased from third parties and then used in conjunction with existing wireless services contracts. It is also possible for consumers to switch wireless service providers and continue to use the same mobile device. For this reason, it is appropriate to analyze devices and networks as two related markets.[63]

Both the device and wireless service markets are dominated by a relatively small number of well-known firms. In the wireless services market, there are four national providers that serve over 80% of all wireless subscribers in the U.S.[64] Although there are relatively few major market actors, there is competition for customers. Over 95% of the U.S. population has the option of choosing between 3 or more providers of wireless voice service.[65] For wireless broadband service, over 75% of the population may choose between 3 or more providers.[66] Although there is some competition, the

[63] In determining whether a tying arrangement involves one or two products, the Court considers whether there is demand to purchase the items separately. *See Jefferson Parish*, 466 U.S. 2 at 21.

[64] These networks are AT&T (28.5%), Verizon (26.3%), Sprint (17.9%), and T Mobile (12.1%). FEDERAL COMMUNICATIONS COMMISSION, ANNUAL REPORT AND ANALYSIS OF COMPETITIVE MARKET CONDITIONS WITH RESPECT TO MOBILE WIRELESS, INCLUDING COMMERCIAL MOBILE SERVICES: FOURTEENTH REPORT, at 31 (May 20, 2010) [hereinafter FOURTEENTH REPORT].

[65] *Id.* at 7.

[66] *Id.*

FCC characterizes the industry as highly concentrated because relatively few wireless service providers occupy the majority of the market.[67]

The mobile device market and the smartphone sub-market are somewhat more competitive. In 2009, ten manufacturers offered fifty-six smartphones for sale.[68] This competition between smartphones is the effect of an explosion of new smartphones and innovations in smartphone technology that began with the iPhone. Serious competition for the iPhone appeared on the market just over a year after its release.[69] Today, the iPhone has many direct competitors, most notably phones running Google's Android operating system and other common operating systems including the Blackberry OS and the Palm OS.[70]

These smartphones compete in a setting in which tying arrangements are very common. The top wireless networks each offer a large range of mobile devices to work in conjunction with their service. Some mobile devices may be purchased for use with several networks, and there is a great deal of overlap in the devices that are offered. For example, many phones manufactured by major device manufacturers, such as Blackberry, Palm, Samsung, or Motorola, are offered by several wireless networks. There are, however, many models that are tied exclusively to a single wireless provider. The most notable example is Apple's iPhone, which until recently, was only available on the AT&T network. Other examples include the Motorola Droid, available only on

[67] *Id.* at 6 ("One widely-used measure of industry concentration indicates that concentration has increased 32 percent since 2003 and 6.5 percent in the most recent year for which data is available.").

[68] *Id.* at 163. The top five manufacturers, RIM, HTC, Samsung, LG, and Palm offered a total of thirty-eight smartphones. *Id.* Many more traditional mobile devices are available on the market. *See id.*

[69] *Id.* at 163.

[70] *See id.* at 166 tbl.33 (displaying smartphone market share by operating system: the Blackberry RIM OS has the greatest share at 41.6%, while Apple's iOS has only 25.3%. As of December 2009, Android occupied only 5.2% of the market, but that number has since risen). Of the major operating systems, Apple's iOS is notable for being the only one that is not offered on most or all networks.

Verizon, and the Samsung Epic 4G, available only on Sprint. Each of these devices has been heavily marketed both by the device manufacturer and by the network with which it is associated. Nearly half of the sixty-seven devices classified by the FCC as smartphones and released in 2010 were released exclusively on one of the top four networks.[71]

From the perspective of operating systems rather than specific devices, tying in wireless communications appears quite different. Unlike the iPhone, which runs an operating system only available on iPhones that are made exclusively by Apple and which, until recently, were used exclusively on the AT&T network,[72] Google's operating system is free for use by any phone manufacturer. Manufacturers may then enter into an exclusive tying arrangement with any network, or with no network at all. All of the major wireless networks have exclusive tying arrangements with some mobile device that operates on Android. This leads to an interesting situation in which there are several competing networks, devices, and operating systems. Nearly half of all smartphones are exclusively available on a single network,[73] but only one of the top operating systems is available on just one network. Thus, a customer seeking a specific operating system other than Apple's iOS may choose between several networks.[74] However, a consumer desiring a specific, high-end device will likely only be able to use that device on a single network. Some consumers select their network because it offers the device they desire, while others consider

[71] *Id.* at 84.

[72] The iPhone is the only mobile *phone* that uses the iOS. Both the iPod touch and the iPad use the same system, but these devices do not support traditional voice calls on a wireless network as the iPhone does.

[73] FOURTEENTH REPORT, *supra* note 64, at 84.

[74] Many consumers consider operating system to be a very important consideration when selecting a new device. One survey finds that the operating system that a device operates is the second most important factor to consumers, after price. *See ComScore Looks Back At Smartphone Growth in 'Mobile Year in Review,'* SEARCH ENGINE LAND (Feb. 14, 2011, 8:51 AM), http://searchengineland.com/comscore-looks-back-as-mobile-year-in-review-64640.

only the devices offered by the network they have already selected.

## B. The iPhone Tying Arrangement and Its Consequences

### 1. Basics of the Deal

The iPhone tying arrangement was not the first tying arrangement, but it is notably different from prior exclusive offerings. Although the idea seems quaint now, in 2007, the iPhone was a singular and groundbreaking device. Upon its release, this very popular, high-end mobile phone immediately became the most coveted mobile phone on the market. It cost $599,[75] more than any other mobile phone then available—yet 1 million iPhones sold in fewer than 3 months.[76] These sales statistics are remarkable, especially considering the fact that iPhone customers were required to sign a two-year contract with AT&T,[77] and any customer in a contract with another wireless network had to break that contract.[78] In other words, getting an iPhone in 2007 was a costly move, but iPhone users were on the cutting-edge of wireless communications technology. Customers generally praised the iPhone, but AT&T has been widely criticized by iPhone users for both the price that they must pay for wireless service and the quality of service that it provides.[79]

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[75] Mark Huffman, *Apple Cuts Price of Most Expensive iPhone*, CONSUMERAFFAIRS.COM (Sept. 6, 2007), http://www.consumeraffairs.com/news04/2007/09/iphone_price.html.

[76] Scott Moritz, *Analyst: 3 million iPhones sold in first month*, CNNMONEY.COM (Aug. 11, 2008, 9:24 AM), http://money.cnn.com/2008/08/08/technology/iphone-3m.fortune/.

[77] Barb Dybwad, *AT&T has iPhone exclusivity until 2012*, CNNTECH (May 11, 2010), http://www.cnn.com/2010/TECH/05/11/iphone.att.2012.mashable/.

[78] Breaking contracts with wireless providers could cost consumers between $50 and $350.

[79] Besta Shankar, *Blogs Rip Apart Apple, Make it Most Criticized Brand*, INTERNATIONAL BUSINESS TIMES (Aug. 9, 2010, 5:31 AM), http://www.ibtimes.com/articles/41863/20100809/apple-twitter-facebook-bbc-iphone-ipad-mac-brandwatch-social-media.htm.

Neither party to the tying arrangement has made the details of the exclusivity contract public, nor is it known how the deal has changed now that it is no longer exclusive. However, it is widely speculated that Apple received monthly payments from AT&T for every iPhone user.[80] Although the amount of any such payment is unknown, Apple must have received *something* in compensation for its agreement to limit the availability of its flagship mobile communications device to a single network. From the very beginning of the iPhone exclusivity, there was speculation that a Verizon iPhone was just over the horizon, but the AT&T exclusivity lasted for four years before Verizon finally got to offer the iPhone.[81]

### 2. Market Power

Both the iPhone's price and customers' willingness to move to AT&T suggest that in 2007, the iPhone had economic power in the mobile device industry. The Court's test for market power is whether "the seller has the power, within the market for the tying product, to raise prices or to require purchasers to accept burdensome terms that could not be exacted in a completely competitive market."[82] In short, the question is whether the seller has "some advantage not shared by his competitors in the market for the tying product."[83] The iPhone's advantage over its competitors was its uniqueness. Apple chose to use this uniqueness *both* by raising prices *and* by requiring purchasers to accept a burdensome term: the two-year contract with AT&T, a wireless network that was widely

[80] *See, e.g.*, *Who Is Getting Rich of the iPhone*, GIGAOM (Dec. 9, 2009, 12:23 PM), http://gigaom.com/2009/12/09/who-is-getting-rich-off-the-iphone/.

[81] *See, e.g.*, Jeffrey Bartash, *AT&T Not Worried about iPhone, Future*, MARKET WATCH (May 19, 2010, 2:32 PM), http://www.marketwatch.com/story/att-not-worried-about-iphone-future-2010-05-19.

[82] *Fortner II*, 429 U.S. 610, 620 (1977).

[83] *Id.*

regarded as inferior to Verizon and other competitors.[84] According to AT&T, 40% of its iPhone customers switched to AT&T from another network at the time they purchased their iPhone.[85] Furthermore, uniqueness of a product is explicitly a characteristic that may support market power, where the uniqueness of the product allows the seller to raise prices or impose burdensome sales terms.[86]

Because the iPhone had economic power during the early years of AT&T's exclusivity, its tying arrangement with AT&T is squarely the type of agreement with which the Court is concerned in its tying cases. The Court fears that by tying with a popular product in one market (the iPhone), the tied product (AT&T service) will gain market share without submitting to the cold test of competition. In the case of the iPhone, it is certain that many consumers did switch to AT&T only to get the iPhone.[87] If the theory upon which the Court has rested its quasi-per se rule were to work in the wireless communications industry, we would expect both AT&T to gain market share at the expense of other providers, and the wireless services market to become significantly less competitive. However, an examination of

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[84] *See, e.g.*, Barbara E. Hernandez, *AT&T Led More to Avoid iPhone 4 than 'Antennagate,' Poll Says*, PCWORLD BUSINESS CENTER (Sept. 8, 2010, 7:11 PM), http://www.pcworld.com/businesscenter/article/205083/atandt_led_more_to_avoid_iphone_4_than_antennagate_poll_says.html. Many customers who were neutral as to which network they preferred might still see the AT&T contract requirement as burdensome if they have to pay the fees associated with breaking their contract with some other wireless provider.

[85] *See* FOURTEENTH REPORT, *supra* note 64, at 81.

[86] *See Fortner II*, 429 U.S. at 620.

[87] AT&T reports that 40% of iPhone customers switched from another network. FOURTEENTH REPORT, *supra* note 64, at 81. Studies also find that many consumers select their network based on the mobile device that they desire. *See id.* at 161–62 (citing a study finding that 38% of those who switched networks did so in order to get the mobile device of their choice). However, rather than suggesting that tying arrangements between wireless services and mobile devices are anticompetitive, if consumers do not consider the network separately from the device, it suggests that the two make up a single product, and there can be no scrutiny of a tying arrangement at all.

the wireless industry since 2004 tells an altogether different story, one that is much more positive from the perspective of competition and innovation.

### 3. Effects on Competition

Today, as AT&T's exclusivity ends four years after the release of the iPhone, the wireless telecommunications market does not resemble one that is suffering the anticompetitive consequences of a harmful tying arrangement. Most consumers have a wide range of choices in both wireless service providers and mobile devices.[88] But the Court's more specific worry about tying arrangements as applied to the iPhone would be that AT&T would capture market share to which it was not entitled based on fair and even market competition. The logic of the Court's cases suggests that AT&T would gain market share simply by virtue of its tying arrangement with Apple. Wireless service subscriber data suggests that this did occur to some extent, although it does not demonstrate harm to the overall competition in the industry.[89]

The Court's explanation of the harm that tying arrangements cause suggests that the primary harm should appear in the tied market—wireless services.[90] By tying with a good with significant draw in the mobile device market, AT&T should have had a major edge against its competition. Certainly the iPhone was a major draw to AT&T, but for the past ten years, the same four wireless networks have remained at the top of the market. By number of subscribers

[88] *See supra* text accompanying notes 64–67. Consumers also have a wide, and mostly untied, choice of mobile device operating systems. *See supra* text accompanying notes 68–70.

[89] Wireless service subscriber data is not a perfect measure for evaluating market share and the overall competitiveness of the market, but changes in subscribership can give some indication of the effects of the networks' attempts to draw in customers.

[90] It is not always clear which product is tying and which is tied, especially if neither product has market power. Here, however, it is clear that the iPhone's market power allows it to serve as a draw to the tied product, AT&T wireless service.

in December 2009, the top networks were Verizon (33%), AT&T (31%), Sprint (17%), and T-Mobile (12%).[91] The next most popular network, U.S. Cellular, is much less popular than these four providers, with just 2% of all U.S. subscribers.[92] There are far fewer competitors in the industry than there were a decade ago, but the pattern of concentration does not suggest that tying has been a major factor in reducing competition. In December of 2000, no network had more than 30% of subscribers, and only one, Verizon, had more than 20%, with 27%.[93] Five other networks had between 5% and 20% of all subscribers.[94] Of the top five networks in 2000, only three remain. In 2004, AT&T and Cingular merged,[95] and in 2005, Sprint and Nextel merged.[96] Each of these mergers resulted in the elimination of a major competitor. While it would be inaccurate to describe the current market as uncompetitive, it is less competitive than it was a decade ago.[97]

The iPhone was introduced in the midst of a decade of rapid industry growth. In 2000, there were approximately

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[91] FOURTEENTH REPORT, *supra* note 64, at 223 tbl.C-4.

[92] *Id.*

[93] FEDERAL COMMUNICATIONS COMMISSION, ANNUAL REPORT AND ANALYSIS OF COMPETITIVE MARKET CONDITIONS WITH RESPECT TO MOBILE WIRELESS, INCLUDING COMMERCIAL MOBILE SERVICES: SIXTH REPORT, at C-4 tbl.3 (July 17, 2001) [hereinafter SIXTH REPORT].

[94] *Id.*

[95] FEDERAL COMMUNICATIONS COMMISSION, ANNUAL REPORT AND ANALYSIS OF COMPETITIVE MARKET CONDITIONS WITH RESPECT TO MOBILE WIRELESS, INCLUDING COMMERCIAL MOBILE SERVICES: TENTH REPORT, at 23 (Sept. 30, 2005) [hereinafter TENTH REPORT].

[96] FEDERAL COMMUNICATIONS COMMISSION, ANNUAL REPORT AND ANALYSIS OF COMPETITIVE MARKET CONDITIONS WITH RESPECT TO MOBILE WIRELESS, INCLUDING COMMERCIAL MOBILE SERVICES: ELEVENTH REPORT, at 25 (Sept. 29, 2006) [hereinafter ELEVENTH REPORT].

[97] Recently, another wireless network has been lost to consolidation, as AT&T has announced that it is purchasing T-Mobile, the fourth-largest network. Andrew Ross Sorkin, Michael J. de la Merced, and Jenna Wortham, *AT&T to Buy T-Mobile USA for $39 Billion*, DEALBOOK (Mar. 20, 2011, 2:37 PM), http://dealbook.nytimes.com/2011/03/20/att-to-buy-t-mobile-usa-for-39-billion/.

100 million wireless network subscribers.[98] In 2009, there were over 275 million subscribers. Competition during this decade was competition for growth. As Table 1 shows, there are few years in which any of the major networks faced losses in their total number of subscribers. Were the iPhone/AT&T tying arrangement to have had major anticompetitive effects, they would likely have shown up in the proportion of the market that competitors occupy, rather than their raw numbers of subscribers. At the end of 2006, prior to entering into the tying arrangement with the iPhone, AT&T had about 61 million subscribers and approximately 27% of the market.[99] Today, AT&T has about 85 million subscribers and 31% of the market.[100] Immediately prior to the iPhone's release, AT&T was the largest network, but it was recently overtaken by Verizon, which now has about six million more customers. In other words, during the period that it had iPhone exclusivity, AT&T failed to keep its biggest competitor at bay.

[98] SIXTH REPORT, *supra* note 93, at C-4 tbl.3.

[99] FEDERAL COMMUNICATIONS COMMISSION, ANNUAL REPORT AND ANALYSIS OF COMPETITIVE MARKET CONDITIONS WITH RESPECT TO MOBILE WIRELESS, INCLUDING COMMERCIAL MOBILE SERVICES: TWELFTH REPORT, at 132 tbl.A-4 (Jan. 28, 2008) [hereinafter TWELFTH REPORT].

[100] FOURTEENTH REPORT, *supra* note 64, at 223 tbl.C-4.

**Table 1: Total year-end subscribers by network, in thousands**

| Wireless Network | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|---|---|---|
| AT&T / Cingular | | | | | 49,109 | 54,144 | 60,962 | 70,052 | 77,009 | 85,120 |
| AT&T | 15,163 | 18,047 | 20,900 | 21,980 | | | | | | |
| Cingular | 19,681 | 21,596 | 21,900 | 24,027 | | | | | | |
| Verizon | 27,505 | 29,398 | 32,491 | 37,522 | 43,816 | 51,337 | 59,052 | 65,707 | 72,056 | 91,249 |
| Sprint/Nextel | | | | | | 44,815 | 52,175 | 53,003 | 48,338 | 48,133 |
| Sprint | 9,543 | 13,555 | 14,760 | 15,900 | 21,507 | | | | | |
| Nextel | 6,678 | 8,667 | 10,612 | 12,882 | 16,247 | | | | | |
| T-Mobile | 3,879 | 6,993 | 9,913 | 13,128 | 17,314 | 21,690 | 25,041 | 28,685 | 32,758 | 33,790 |
| Alltel | 6,300 | 6,683 | 7,600 | 8,023 | 8,626 | 10,662 | 11,824 | 13,400 | 13,219 | |
| US Cellular | 3,061 | 3,461 | 4,103 | 4,409 | 4,945 | 4,945 | 5,815 | 6,122 | 6,196 | 6,141 |
| Other | 8,682 | 11,954 | 11,867 | 13,551 | 15,289 | 14,673 | 12,550 | 14,318 | 18,373 | 11,594 |
| Total Reported | 100,492 | 120,354 | 134,146 | 151,422 | 176,853 | 202,266 | 227,419 | 251,287 | 267,949 | 276,027 |

**Source: Federal Communications Commission, Annual Report and Analysis of Competitive Market Conditions With Respect to Commercial Mobile Services (1999–2009, Reports Four through Fourteen).**

The timing of the relatively small shifts in market share further suggest that the iPhone tying arrangement was not the major factor reducing competition in the last decade. In December 2006, just before the iPhone was released, AT&T had about 27% of U.S. subscribers. AT&T gained about 1% in each of the next 2 years, and then about 2% in 2009, leaving it with about 31% of all subscribers. These modest increases suggest that AT&T did not have an anticompetitive advantage over its competitors. During the same time period, AT&T's closest competitor, Verizon, made even greater advances in market share, increasing its share of all subscribers from 26% to 33%.[101] Most of this increase came in 2009, when Verizon went from having less than 27% of all subscribers to having more than 33%.[102] However, much of Verizon's growth is not simply due to outcompeting its rivals. In June 2008, Verizon obtained the then-fifth

[101] *See supra* Table 2.

[102] *Id.* In fact, Verizon's growth in subscribers roughly matched the overall market in 2007 and 2008, and its percent of all subscribers stayed about the same. *Id.*

largest network, Alltel.[103] This acquisition likely accounts for some, but not all, of Verizon's advances in the period in which it overtook AT&T. During the same period, Sprint declined in terms of number of subscribers, and went from having about 23% of all subscribers to 17.5%.[104] Notably, in 2008, Sprint lost about 5 million customers, and went from having about 21% of all wireless subscribers to about 18%. The other major competitor, T-Mobile (previously Voicestream), steadily gained in its percentage of all subscribers, moving from 11% to more than 12% of all subscribers.

**Table 2: Percent of all wireless network subscribers by year**

| Wireless Network | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|---|---|---|
| AT&T / Cingular | | | | | 27.77 | 26.77 | 26.81 | 27.88 | 28.74 | 30.84 |
| AT&T | 15.09 | 14.99 | 15.53 | 14.52 | | | | | | |
| Cingular | 19.58 | 17.94 | 16.33 | 15.87 | | | | | | |
| Verizon | 27.37 | 24.43 | 24.22 | 24.78 | 24.78 | 25.38 | 25.97 | 26.15 | 26.89 | 33.06 |
| Sprint/Nextel | | | | | | 22.16 | 22.94 | 21.09 | 18.04 | 17.44 |
| Sprint | 9.50 | 11.26 | 11.00 | 10.50 | 12.16 | | | | | |
| Nextel | 6.65 | 7.20 | 7.91 | 8.51 | 9.19 | | | | | |
| T-Mobile | 3.86 | 5.81 | 7.39 | 8.67 | 9.79 | 10.72 | 11.01 | 11.42 | 12.23 | 12.24 |
| Alltel | 8.27 | 5.55 | 5.67 | 5.30 | 4.88 | 5.27 | 5.20 | 5.33 | 4.93 | |
| US Cellular | 3.05 | 2.88 | 3.06 | 2.91 | 2.80 | 2.44 | 2.56 | 2.44 | 2.31 | 2.22 |
| Other | 8.64 | 9.93 | 8.85 | 8.95 | 8.65 | 7.25 | 5.52 | 5.70 | 6.86 | 4.20 |
| Total Reported | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |

**Source: Federal Communications Commission, Annual Report and Analysis of Competitive Market Conditions With Respect to Commercial Mobile Services (1999–2009, Reports Four through Fourteen).**

These changes in the shares of subscribers for each of the top wireless networks do not suggest that the AT&T/iPhone tying arrangement had major anticompetitive effects. Rather, the largest changes in the market followed mergers, not tying arrangements.

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[103] FOURTEENTH REPORT, *supra* note 64, at 54–55, 53 tbl.9.

[104] *See* Table 2. While, Sprint, like AT&T and Verizon, grew during this period, it did so at a slower rate than its main competitors.

Examining what happened to the major competitors is an intuitive, but rough, method of examining the effects of a specific business arrangement. A better method of evaluating competition in the wireless industry is to consider more direct measures of market concentration, such as the Herfindahl-Hirschman Index (HHI). The HHI is the sum of the squares of the market shares of the top fifty firms in a market.[105] The Department of Justice considers an industry to be "unconcentrated" if it has an HHI of below 1500, and "highly concentrated" if it has an HHI over 2500.[106] As shown in Figure 2, the FCC has calculated HHI values for the wireless network market for 2003–2008.[107] In 2005, the industry reached "highly concentrated" levels. Though the FCC HHI data paints with broad strokes, neither the 2007 nor the 2008 numbers, which reflect the iPhone tying arrangement, suggest a strong reduction in market competition. Instead, the major competitive losses (and jumps in HHI) are in 2004 and 2005, following the AT&T/Cingular and Sprint/Nextel mergers.

None of these rough looks at competition in the wireless communications industry suggest that the AT&T/iPhone tying arrangement had the negative effects that make the Court suspicious of tying arrangements. However, under the quasi-per se rule, once the per se analysis is reached, no demonstration of actual anticompetitive effects is necessary. Nor would there be any reason to examine the effects of tying, if the Court were correct in its oft-quoted statement that "[t]ying agreements serve hardly any purpose beyond the suppression of competition."[108] However, close

[105] *See id. See also The Herfindahl-Hirschman Index*, U.S. DEP'T OF JUSTICE, http://www.justice.gov/atr/public/testimony/hhi.htm (last visited Apr. 14, 2011); *Herfindahl Index*, WIKIPEDIA, http://en.wikipedia.org/wiki/Herfindahl_index (last visited Apr. 14, 2011). The highest possible value, reflecting complete monopoly, is 10,000 (100% market share, squared). For two competitors with equal market shares, the value would be 5000, and for four equal competitors, it would be 2500.

[106] UNITED STATES DEPARTMENT OF JUSTICE AND FEDERAL TRADE COMMISSION, HORIZONTAL MERGER GUIDELINES § 5.3 (Aug. 19, 2010).

[107] FOURTEENTH REPORT, *supra* note 64, at 42.

[108] Standard Oil Co. of Cal. v. United States, 337 U.S. 293, 305 (1949).

examination of the effects of, and incentives caused by, the AT&T/iPhone tie demonstrates that, at least in that case, the tie may have been a method of competition, and may have increased competition between wireless networks that have become increasingly fungible. The Court's tying jurisprudence seeks to ensure an even playing field between competitors, and yet, it does not appear that AT&T's competitors are suffering from an uneven playing field and being forced out of the market. The wireless consolidation that has occurred in the last decade appears to coincide with mergers between major networks, rather than from any negative effects of tying arrangements.

### 4. Competitors' Reactions to the iPhone Tying Arrangement

The broad data discussed above suggest that the iPhone/AT&T tie did not have disastrous competitive consequences. An examination of the actions of AT&T's competitors both before and after the release of the iPhone demonstrates why. The Court has based the quasi-per se rule on the assumption that upon facing stiff competition, especially when that competition is bolstered by power in some other market, competitors will simply lie down. This assumption misses the true nature of competition and what the goals of competition policy should be. As discussed above, in *International Salt*, the Court wrote that tying arrangements "'tend to create a monopoly,' and it is immaterial that the tendency is a creeping one rather than one that proceeds at full gallop; nor does the law await arrival at the goal before condemning the direction of the movement."[109] Stopping a monopoly before it has the chance to cause competitive harm is a short-sighted goal. The ideal situation is one in which market actors (1) want to eliminate or dominate their competitors, (2) try to achieve this, but (3) fall short of monopolistic domination because their competitors are trying just as hard to eliminate them. In other words, actions that creep towards monopoly are

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

*necessary and good*, as long as they never quite get there and do not use methods that harm the *process* of competition.

The immediate and obvious effect of the iPhone tying arrangement was a creep toward monopoly—AT&T had an opportunity to increase its market share. However, it had a different and important effect on AT&T's competitors. The tying arrangement provided a strong incentive for them to either find a way to offer the iPhone (which has only recently happened) or to offer other mobile devices that could compete with the iPhone. Only four years later, the iPhone faces extensive competition from other smartphones that offer many of the same features as the iPhone, as well as many new and different features. In 2009, nine different manufacturers introduced more than sixty new smartphones to the market.[110] Thirty-two of these were initially offered exclusively on one of the four largest networks.[111] In this market, the iPhone was only occasionally the biggest seller.[112] In the first quarter of 2009, three of the top five smartphones were Blackberry models.[113] In 2010, the iPhone was back on top as the best selling smartphone, but it faced increasing competition from a number of devices using Google's Android operating system.[114] Following the release of the iPhone, there has been an explosion of new smartphones, on all major networks, and designed by a large number of manufacturers.

This explosion in smartphone design began immediately following the iPhone's release. Before the end of 2007,

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[110] FOURTEENTH REPORT, *supra* note 64, at 224 tbl.C-5.

[111] *Id.*

[112] For example, in May 2009, the iPhone was the number two seller, after the Blackberry Curve. *See The Five Best-Selling Consumer Smartphones*, CRN (May 4, 2009, 2:23 PM), http://www.crn.com/slide-shows/client-devices/217201409/the-five-best-selling-consumer-smartphones.htm.

[113] *Id.*

[114] Molly McHugh, *Apple is Best Selling Smartphone, Android Most Popular OS*, DIGITAL TRENDS (Nov. 1, 2010), http://www.digitaltrends.com/mobile/apple-is-bestselling-smartphone-android-most-popular-os/. Mobile device operating systems are a relatively new forum for competition. *See supra* text accompanying notes 72–74.

Verizon, Sprint, and T-Mobile were all introducing new, exclusive smartphones with which they could compete with AT&T and the iPhone. For example, on the Friday after Thanksgiving in 2007, Verizon introduced a whole line of new devices.[115] Verizon explicitly aimed to compete with the iPhone through its exclusive offering of the LG Voyager, a touch-screen device designed to play videos and music that, unlike the iPhone, offered a pull-out QWERTY keyboard.[116] By mid-2007, Sprint was offering the Samsung UpStage and the LQ Musiq—smartphones that attempted to mimic the iPhone's roots in the immensely popular iPod.[117] More recently, Sprint has offered exclusive deals on the Palm Pre and the HTC Evo.[118] While not as revolutionary as the iPhone was when it was released, the Evo offers one feature not available on any other network: the ability to run at 4G speeds.[119] It also has a larger touchscreen than the iPhone, and has cameras on both sides.[120] Similarly, T-Mobile introduced the Shadow, which shares several qualities with the iPhone and the Voyager, including a touchscreen and a slide-out keyboard.[121]

The market actors on the short end of the AT&T/iPhone tying arrangement—the other networks and device

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[115] *See* Leslie Brooks Suzukamo, *Verizon Struts Its Cell Stuff: New Handsets Poised to Challenge iPhone*, ST. PAUL PIONEER PRESS, Oct. 4, 2007, at C1.

[116] *Id.*

[117] *See* Kim Hart, *Calling All Competition: iPhone Promises to Change Way Wireless Industry Plays*, WASH. POST, June 23, 2007, *available at* http://www.washingtonpost.com/wp-dyn/content/article/2007/06/22/AR2007062201813.html; *see also* Brian White, *Sprint (S) Feels the Heat from iPhone (AAPL)*, BLOGGINGSTOCKS (Aug. 20, 2007), http://www.bloggingstocks.com/2007/08/20/sprint-s-feels-the-heat-from-iphone-aapl/.

[118] Matthew Miller, *Smartphones and Cell Phones: HTC EVO 4G vs. Palm Pre*, ZDNET (June 20, 2010, 3:19 AM), http://www.zdnet.com/blog/cell-phones/sprint-smartphone-comparison-htc-evo-4g-vs-palm-pre/4079.

[119] Jared Newman, *Sprint's HTC EVO 4G: 5 Killer Features*, TODAY@PCWORLD (Mar. 20, 2011, 11:06 AM), http://www.pcworld.com/article/192286/sprints_htc_evo_4g_5_killer_features.html.

[120] *Id.*

[121] David Pogue, *Reaching for Apple, Falling Short*, N.Y. TIMES, Nov. 8, 2007, at C1.

manufacturers—often framed the iPhone as presenting an opportunity to grow the industry as a whole, rather than as a moneymaker from which they were excluded. For example, Verizon's CEO, Ivan Seidenberg, suggested that the iPhone could help Verizon by making consumers more excited about new devices, and that some of these consumers would turn to iPhone competitors on the Verizon network.[122] Similarly, a Samsung official said, "[w]e think the (iPhone) buzz is very good [because] [i]t helps people understand the convergence of phones and music players."[123] Other commentators suggest a less amiable way in which the iPhone and the tying arrangement may help bring new and innovative devices to consumers: "[o]rdinarily, Verizon, Sprint and their rivals are the gatekeepers for phone features. If Nokia or Motorola comes up with a brilliant breakthrough, but the carrier doesn't like it, well, tough rocks. The feature goes away. As you can imagine, this isn't a system that's conducive to innovation."[124] The iPhone was able to break this dynamic by using Apple's strong brand to create sufficiently strong consumer demand that no network would be able to restrict or significantly alter the device as Apple had designed it.[125] The evidence suggests that the iPhone and its tying arrangement with AT&T stimulated innovation. Of course, this evidence does not prove that there would not have been significant innovation in smartphones in the absence of the AT&T/iPhone tie, although it does undercut the idea that tying arrangements like AT&T's iPhone exclusivity are universally anticompetitive. This idea is further undercut in light of the

[122] Andrew Hines, *How Verizon Will Compete with the iPhone*, BNET (June 20, 2007), http://www.bnet.com/blog/intercom/how-verizon-will-compete-with-the-iphone/375.

[123] *Taking on the iPhone: With Apple's New Product Just Weeks Away, Rivals are Dialing up their Sales Pitches*, CHI. TRIB., June 8, 2007, at 8.

[124] *See* Pogue, *supra* note 121.

[125] Although some have argued that networks have held technology back, it is unclear why this would be the case. *See infra* text accompanying notes 131–52.

weakness of the primary arguments against the iPhone tying arrangement.

## C. Tying After the iPhone Deal: Applying Theories of Tying Harm

Although the Court has never enunciated a clear and convincing rationale for scrutinizing tying arrangements, and tying arrangements in the wireless industry appear to have had some pro-competitive effects in the iPhone case, some have continued to advocate for a stronger stance against tying arrangements. Such calls have intensified in the wake of the iPhone/AT&T tying arrangement, and include calls by some legislators and commentators for a statutory intervention prohibiting tying arrangements in the wireless industry.[126] These commentators have developed a plausible theory of the harm that tying arrangements may cause, one that is different from the illusory harms seen by the Court. Calling for a statute banning tying arrangements, especially in the wireless industry, they specifically claim: (1) that tying arrangements put a stop to innovation in the wireless industry and new uses for wireless technology, by allowing wireless service providers to create "walled gardens"[127] in which wireless service providers limit the services that their customers may access to only those that most directly benefit the network;[128] (2) that tying arrangements unfairly and anticompetitively harm small wireless networks, and limit their ability to compete in the market;[129] and (3) that tying arrangements raise the already

[126] *See* Reed, *supra* note 3, at 3; *Senators Suggest Exclusive Handset Contracts are Bad for Consumers*, *supra* note 3, at 1.

[127] Tim Wu, *Wireless Net Neutrality: Cellular* Carterphone *and Consumer Choice in Mobile Broadband* 1 (New America Foundation: Wireless Future Program, Working Paper No. 17, 2007), *available at* http://newamerica.net/publications/policy/wireless_net_neutrality.

[128] *Id.* at 9–12.

[129] *See* Reed, *supra* note 3.

high costs of switching between wireless networks, reducing competition between service providers.[130]

### 1. Tying and Innovation in Smartphone Uses

Although the recent explosion in the number of smartphones on the market and the number of tasks and activities that consumers perform with these devices does not suggest that the industry is struggling to create healthy levels of innovation, some have suggested that the iPhone/AT&T tying arrangement undercuts innovation. For example, in 2009, several legislators suggested that wireless networks were using exclusive tying arrangements to *limit* innovation in wireless devices.[131] Representative Edward J. Markey argued that the practice of tying wireless devices to specific networks "stultifies innovation and unquestionably diminishes consumer choice."[132]

However, while tying arrangements obviously limit consumers' ability to choose to operate an iPhone on any network other than AT&T, it is unclear how they reduce innovation. Those who argue that tying reduces innovation generally point to a desire on the part of wireless networks to limit and control the features available on mobile devices and the uses to which consumers may put them. But why would they want to do such a thing? Wireless networks' incentives appear to be in sync with innovations in mobile devices. If a new device or application for a device is created that allows consumers to do something new, wireless networks with exclusive device offerings would benefit most

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[130] *See* Joseph Farrell & Paul Klemperer, *Coordination and Lock-in: Competition with Switching Costs and Network Effects*, in 3 HANDBOOK OF INDUSTRIAL ORGANIZATION 1967 § 1.1 (Mark Armstrong and Robert H. Porter, eds., 2007) ("[S]witching costs can segment an otherwise undifferentiated products market as firms focus on their established customers and do not compete aggressively for their rivals' buyers, letting oligopolists extract positive profits.").

[131] *See* Hiawatha Bray, *Pick Your Handset or a Network, Not Both: Congress Ponders Curbing Industry Limits on How Consumers Use Phones*, BOSTON GLOBE, July 8, 2009, at 5.

[132] *Id.*

from ensuring that devices on their network can do the new thing before devices on any other network, rather than seeking to stop the new use from invading its network. This is consistent with a view, promoted by wireless networks, that exclusive device offerings are a method for the increasingly fungible major networks to differentiate themselves from each other in order to compete.[133]

There are exceedingly few examples of wireless networks seeking to contain new technologies and mobile device innovations, and the few that do exist do not suggest a serious competitive problem. In the most notable example of wireless networks restricting consumers' use of technology, several wireless networks have restricted the consumers' ability to install and use Skype on their devices.[134] Skype is a voice over internet protocol (VOIP) application.[135] It allows users to make voice calls (which are functionally the same as a phone call) to other Skype users or to traditional telephones.[136] When installed on a mobile device, its primary effect is to allow users to make voice calls using their data plan, rather than the voice minutes available in their service agreement. This is useful to consumers who may have unlimited data plans and relatively few voice minutes. Wireless networks sought to restrict the use of Skype because it allowed customers to make phone calls using their data plans, rather than their voice minutes. In response, Skype petitioned the FCC to enforce its *Carterphone* rule on wireless networks.[137] In the *Carterphone* decision, the FCC

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[133] *See* Benjamin E. Hermalin & Michael L. Katz, *Product Differentiation through Exclusivity* (Third Annual Research Symposium on Antitrust Economics and Competition Policy, Sept. 24, 2010), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1702632.

[134] *See* Marguerite Reardon, *Skype Petitions FCC for Open Cellular Access*, CNET NEWS (Feb. 22, 2007), http://news.cnet.com/2100-1036_3-6161569.html.

[135] *See* SKYPE, *Call Mobiles and Land Lines—Cheap Calls*, http://www.skype.com/intl/en-us/features/allfeatures/call-phones-and-mobiles/ (last visited Apr. 14, 2011).

[136] *Id.*

[137] *See* Skype Commc'ns S.A.R.L., Petition to Confirm a Consumer's Right to Use Internet Commc'ns Software & Attach Devices to Wireless

ended traditional telephone networks' control over the devices used with them.[138] This decision led directly to innovations in the use of traditional telephone networks, including the fax machine and, later, the modem.[139]

Several commentators have urged the FCC to accept Skype's position and apply *Carterphone* to wireless networks. For example, Professor Tim Wu discusses five examples of wireless networks "crippling" mobile devices before allowing them to operate on their network: call timers, photo sharing, web access, Bluetooth, and Wi-Fi.[140] Each of these features was at one point restricted by a wireless network.[141] Wu sees these restrictions as evidence that wireless networks' control over mobile devices restricts innovation and new mobile device uses. However, his argument is undercut by the fact that four years later, each of these once-restricted features is now common.[142] All of the major networks offer multiple smartphones that allow users to easily e-mail photos. Allowing access to the open internet is almost a prerequisite to the term "smartphone." All but the most basic phones utilize Bluetooth technology, and all major networks offer devices that are Wi-Fi-capable. That these once-restricted technologies are now commonplace suggests that networks' brief desire to limit mobile device capabilities has quickly yielded to competition between networks. When all networks desire to restrict a technology to which consumers would like access, it takes but a single defector to offer the technology, and the others will follow or lose customers. In

Networks (Feb. 20, 2007), *available at* http://download.skype.com/share/skype_fcc_200702.pdf.

[138] Use of the Carterfone Device in Message Toll Telephone Service, 13 F.C.C. 2d 420, 424–25 (1968).

[139] Marguerite Readon, *Skype Petitions FCC for Open Cellular Access*, CNET NEWS (Feb. 22, 2007), http://news.cnet.com/2100-1036_3-6161569.html.

[140] Wu, *supra* note 127, at 9–12.

[141] *Id.*

[142] Notably, for at least one of the features, Wi-Fi, the first mobile device to allow consumers to connect the device to a Wi-Fi network was the only one for which there is a plausible argument against the tying arrangement under the quasi-per se rule—the iPhone.

fact, this appears to be happening as AT&T and Verizon prepare to compete to sell the iPhone. The iPhone 4 (the latest version which will be offered by both Verizon and AT&T) has the capability, like a small number of other smartphones, to serve as a mobile hotspot providing internet access to other nearby devices such as a laptop computer.[143] Verizon has announced that it will support this feature, while AT&T is still considering whether to offer it.[144] However, Verizon will not offer another feature that AT&T does offer, the ability to send and receive internet data while making a voice phone call.[145] In other words, Verizon and AT&T will compete not only on price and wireless service quality, but also on the features offered. In a competitive climate, it is unlikely that any iPhone feature, especially one that consumers want and that could be offered by other devices (as the mobile hotspot is), could remain restricted for long.

Wu also presents a theory as to why wireless networks would even want to restrict technology. As noted above, this is a paradox. It would seem that in most situations, wireless networks would want to offer the features sought by consumers. Wu offers four reasons that networks might cripple mobile devices; two of which serve consumers' interests, and two of which do not. First, networks might want to do so in order to "maximize the utility of the overall platform for consumers."[146] When acting under this rationale, networks', consumers', and device manufacturers' interests are aligned. Second, networks may seek to engage in price discrimination. Wu demonstrates that price discrimination may, in some instances, benefit consumers.[147]

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[143] *See* Nathan Olivarez-Giles, *AT&T 'Evaluating' Wi-Fi Hotspot Feature for iPhone 4, Verizon Hotspot Could Pause for Calls*, L.A. TIMES (Jan. 12, 2011, 12:40 PM), http://latimesblogs.latimes.com/technology/2011/01/att-evaluating-mobile-hot-spot-feature-for-iphone-4-a-la-verizon.html.

[144] *Id.*

[145] *Id.*

[146] Wu, *supra* note 127, at 24.

[147] *See id.* For example, Wu argues that "[c]ompanies will sometimes cripple a product so as to sell it at a lower price to those with less money.

Third, networks might be "protecting revenue sources," or "tollbooth[ing]".[148] Wireless networks may seek to restrict some features that consumers desire in order to route consumers through an alternate method of achieving the same ends, but from which the network can derive greater revenue. Wu gives the example of limits on Bluetooth technology: instead of allowing consumers to easily transfer files between Bluetooth devices, some wireless networks forced subscribers to send files (primarily photos) through a special system in which the network charged a toll.[149] However, as noted above, limits that increase network revenues while limiting the product's utility to consumers will be difficult to maintain in the face of competition. A single network deciding to offer the service will be sufficient to lead to all networks offering the service. This is what happened with Wi-Fi. The iPhone was the first mobile device to offer Wi-Fi capability, and shortly thereafter, all major networks offered Wi-Fi capable devices. Fourth, and finally, Wu argues that networks may limit technology because they are following a harmful cultural model of how a network should operate.[150] This model is one that was learned from the Bell telephone company prior to its breakup, and it entails the company seeking, even against its best interest in attracting customers, to dominate every facet of its network.[151] This rationale for limiting device usages is similarly unconvincing as a reason for long-term restrictions on mobile device usage. Bell was able to exert this type of control because it had a monopoly. Wireless networks, on the other hand, face competition. A firm that exerted control that made its product less useful to its customers would quickly lose out to another network. Furthermore, tying

Industries routinely segment markets, by quality and by price, a practice that generally enhances overall consumer welfare." *Id.*

[148] *Id.* at 24–25.

[149] *Id.* Two examples of this phenomenon are "Picture Mail" and "Pix Place," through which Sprint and Verizon charged consumers for transferring photos from their mobile devices. *Id.* at 10.

[150] *Id.* at 25.

[151] *Id.*

should hasten this outcome by directly aligning device manufacturer, network, and consumer interests. When one network is the first to exclusively offer a new technology (rather than all networks offering it at once), the incentive is to promote that new technology rather than to restrict it, in order to maximize the advantage over competitors.

Those limits on mobile device technology that prove to be long-lasting are most likely to benefit consumers. The lasting limits on Skype provide a useful example, as the most notable and one of the very few enduring limits on mobile device usage.[152] Despite commentators' valorization of Skype as an innovation, the application does not actually let consumers do anything with their mobile devices that they could not already do. The claim that protecting Skype promotes innovation is a tenuous one. Skype on a mobile device provides a redundant method for consumers to place voice calls. Skype and other VOIP programs for mobile devices provide consumers a way to channel their voice calls into their data plan. In other words, such programs eliminate wireless networks' ability to price discriminate based on different types of usage. It is common practice for wireless plans to offer consumers differing services for voice phone calls and data usage, and there are many options available for consumers to customize these plans to their particular uses. Dumping all mobile device uses into a single category of data usage is unlikely to benefit consumers as a group. Rather, it is likely to cause an overall increase in data plan prices.

[152] Skype is now freely available for iOS and Android devices. Users may, at no cost, place calls between Skype accounts (for example to another Skype user on their mobile device or desktop computer). But calls using the Skype program that are placed to traditional telephone numbers are counted against a user's contracted voice minutes or in some cases charged a discounted voice rate. This arrangement allows users to take advantage of the modest innovation offered by Skype, while maintaining wireless networks' ability to price discriminate between data and voice services. *See* Brad Stone, *Skype, the Web Phone Giant, Brings Cheap Calls to Cellular*, N.Y. TIMES, Mar. 29, 2009, *available at* http://www.nytimes.com/2009/03/30/technology/internet/30skype.html.

Though several commentators have argued that tying arrangements between wireless networks and wireless devices may stifle innovation, there is a more straightforward and plausible argument that tying arrangements could foster innovation. Generally, when one company attempts to be better than another, it is a sign of good competition, and good competition leads to innovation. Wireless networks compete on price, quality, reputation, and customer service. By engaging in exclusive tying arrangements, they also compete to offer the most attractive devices. The basic question is whether this competition is any better or worse than simple competition between device manufacturers for a share of the mobile device market, untied to competition in the wireless network market. This Article argues that tying the two markets together is likely to result in greater innovation.

First, innovation is a costly and risky venture. For every successful iPhone, there are dozens of failed smartphones. Yet such innovation is increasingly important. The market to sell mobile devices and wireless services to first-time buyers is drying up. More than 90% of Americans have mobile devices, leaving fewer and fewer new mobile customers to entice.[153] Instead, industry growth must come from offering more services to existing customers, and offering services that will draw customers from competitors. This state has led directly to wireless networks attempting to differentiate themselves through exclusive device offerings.[154] This is competition—some networks offer better

[153] FOURTEENTH REPORT, *supra* note 64, at 5.

[154] *See* Hermalin & Katz, *supra* note 133, at 1–5. According to Professors Hermalin and Katz, platforms that are relatively similar (for example, wireless networks), may attempt to compete and differentiate by establishing tying arrangements with different component manufacturers (for example, wireless communications devices). *Id.* Such differentiation may increase competition and lead to more competitors in the market. *Id.* *See also Senators Suggest Exclusive Handset Contracts are Bad for Consumers*, TELECOMMUNICATIONS REPORTS DAILY (June 17, 2009), *available at* 2009 WLNR 11605612 (quoting an AT&T executive arguing that exclusive device offerings spur innovation and differentiation between wireless networks).

devices than others, and draw customers. In turn, other networks seek to improve the devices they offer. Innovation may happen more quickly under this system because more and bigger players require advances in mobile device technology in order to keep up with their rivals. Rather than mobile device manufacturers alone seeking to gain the biggest share of the device market, wireless networks also directly benefit from innovation, and so are willing to share the costs and risks that would otherwise be borne only by device manufacturers. Such subsidization of innovation could take place directly, as a partnership between networks and manufacturers, or after the fact, in the form of wireless networks paying a premium price for the newest technologies.[155] In fact, there is evidence of acute competition between wireless networks for the hottest mobile devices. Apple was in talks with several wireless networks that were interested in iPhone exclusivity. These networks competed to offer Apple the most attractive deal, a competition that AT&T until recently won. Although the specifics of the deal have never been publicly released, commentators have speculated that for each AT&T customer that uses an iPhone, Apple receives a payment from AT&T—in addition to whatever profit Apple receives from selling the device itself.[156]

This front-end competition between wireless networks for hot mobile devices could produce identical results to traditional competition between mobile devices for consumers—the mobile devices that will draw the most and best consumers will fetch the highest prices. But a system with tying arrangements will add a second, important consumer to the mobile device market: wireless networks. Because wireless networks rely on hot devices to draw

[155] *See id.* (according to an AT&T executive, "[r]egulations that would prohibit or nullify these critical partnerships would serve only to harm consumers, as devices would devolve into the lowest common technological denominator and the key pillars of wireless competition would evaporate.").

[156] *See, e.g.*, *Who Is Getting Rich off the iPhone*, GIGAOM (Dec. 9, 2009), http://gigaom.com/2009/12/09/who-is-getting-rich-off-the-iphone/.

customers, they will be willing to pay for exclusivity on the hottest devices—perhaps more than customers would be willing to pay for the devices absent the tie.[157] Such a system raises the benefits for mobile device manufacturers, as well as the incentives to create the hottest new mobile device. In this context, it is unlikely, and maybe even impossible for networks to stifle innovation. Technology writer David Pogue argues that prior to the iPhone, networks did act as gatekeepers to new features, but with the iPhone, Apple was able to break the anti-innovative cartel by offering consumers advances that they did not realize they wanted.[158] While the argument that networks will hold back innovations to technology is a tenuous one, Pogue demonstrates how a single innovator, in this case Apple with its iPhone, can break resistance to technological change.[159] And in the wake of the iPhone's release, all wireless networks were quick to seek their own innovative devices in order to compete with AT&T's exclusive deal on the iPhone.[160]

But a revolutionary device is not necessary to spur innovation. There are also secondary innovation markets that reduce the control that either wireless networks or device manufacturers have over the technological advances that consumers see. There is intense competition in the markets for mobile device applications, or "apps," and for operating systems.[161] Here, competition in the mobile device

[157] This is likely to be the case because, for a wireless network, each new customer significantly increases revenue, without meaningfully increasing costs. Thus, existing wireless networks would be willing to pass much of the rents that they receive from customers to mobile devices.

[158] Pogue, *supra* note 121.

[159] *Id.*

[160] *See* text accompanying notes 109–25.

[161] These markets are overlapping. In general, there are overlapping but separate markets for apps for each operating system. Some of the same apps are available for iOS, Android, and Blackberry operating systems, but in general, a specific app purchased or accepted for one of those operating systems cannot be used on another. A consumer with only one mobile device will only demand apps from one of these distinct markets.

market is beginning to take place on new axes. An overlapping but different set of firms from device manufacturers or wireless networks have begun to compete to draw customers to their operating systems. For the most part, operating system creators are the device manufacturers, but this pattern does not always hold. Apple makes both the iPhone and the iOS. Google created the Android operating system and has also created the Nexus S device, but many other devices created by other firms operate using Android. This third axis of competition and innovation reduces the ability of any one group to hold back innovation, or to channel it into streams that maximize its own profit or protect revenue streams that are becoming obsolete. Because each network offers devices by many manufacturers using many operating systems, it would take significant and unlikely coordination between networks, manufacturers, and operating systems to hold innovations back from consumers. An operating system or a device manufacturer that offers its product on a number of wireless services is likely to be willing to offer a new service, even if it carries the possibility of supplanting existing revenue streams. If it will draw new customers to the network, it will be attractive.[162] Notably, major innovations have recently stemmed from each of these axes. Not only have tying arrangements failed to stifle innovation, they may have fanned the flames of innovation. And even if they had the potential to stifle innovation, new areas of competition and innovation, in this case operating systems and apps, seriously undercut any party's ability to stifle innovation.

[162] This may be what happened with the iPhone. AT&T was among the big players, but it was not the best or the largest network when it won exclusivity with Apple's iPhone. A major player seeing its subscribership sliding is likely to be willing to accept deals that competitors on firmer footing will not.

### 2. Small Players

Protection of disadvantaged market competitors is at the heart of Supreme Court doctrine.[163] Some have argued that tying arrangements in the wireless industry are especially harmful to smaller competitors, by making it impossible for small networks to draw customers with high-end devices. For example, one regional wireless network executive complained that "[r]egional and rural carriers cannot gain access to the latest cutting-edge devices, which gives large carriers a key competitive advantage."[164] Large networks' advantage in getting exclusive arrangements is obvious—a device that could be very popular if not linked to any network will be unlikely to go exclusive with a network that can offer relatively few customers. Some have suggested that this is an unfair competitive advantage. But tying arrangements may be only a small challenge among several faced by small networks. Even in the absence of any tying arrangement, a very popular device maker might not bother to create a version of their device that is compatible with smaller networks.[165]

Large networks have other important advantages over regional and small networks. First, they have nationwide marketing and reputation. Mobile device manufacturers can take advantage of these resources, and in some cases can sell more devices by tying.[166] Second, wireless networks are an infrastructure-heavy endeavor. The costs of entering the industry are high, and well-established networks can add

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[163] *See supra* Part II.

[164] Bray, *supra* note 131.

[165] *See* Brad Reed, *How Ending Exclusivity Agreements Would Change the Telecom Industry: Small Wireless Providers Could Benefit from End of Exclusivity Deals for iPhones and Other Devices*, NETWORK WORLD (July 9, 2009, 10:01 AM), http://www.networkworld.com/news/2009/070909-telecom-exclusivity-deals.html.

[166] For example, Motorola's Droid Pro is exclusively available on the Verizon network. While Motorola itself has engaged in only modest marketing of its devices, Verizon has extensively marketed the Pro, as well as other devices that it offers exclusively, in order to draw customers to its network.

subscribers at low costs.[167] These advantages leave most small and regional wireless networks to compete by offering specialty services, or with low, or pay-as-you-go prices. That companies that compete by offering these valuable services cannot also offer the high-end mobile devices that are exclusive to the largest networks may not be a competitive problem. Customers may still select from a large number of price, feature, device, and network options.

Nor does the recent history of the industry suggest that smaller networks have been harmed by unfair competition. Over the past ten years, wireless networks other than the top eight networks have steadily declined in percentage of all U.S. subscribers while, like the overall industry, increasing their overall subscribership. However, the decline in the market share of small networks is not caused by the small networks being driven out of business, but instead it is caused by mergers with or acquisitions by larger networks. For example, between 2005 and 2009, the four largest networks merged with or acquired eight other networks, most of which were not among the largest networks.[168] Again, it appears that to the extent that wireless network industry concentration is a problem, merger policy, not antitrust scrutiny of tying arrangements, is the appropriate tool to combat the problem. Additionally, although the number of wireless service providers has declined over the past decade, the number of options available to the average consumer has increased as expanded coverage has put major networks into more direct competition.[169]

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[167] Nonetheless, entry does occur. In 2009, there were three major instances of either new entry into the industry or entry into new geographic areas. *See* FOURTEENTH REPORT, *supra* note 64, at 49–51.

[168] FOURTEENTH REPORT, *supra* note 64, at 53 tbl.9. This trend has continued with the recent acquisition of T-Mobile by AT&T. *See* Andrew Ross Sorkin, Michael J. de la Merced, and Jenna Wortham, *AT&T to Buy T-Mobile USA for $39 Billion*, DEALBOOK (Mar. 20, 2011, 2:37 pm), http://dealbook.nytimes.com/2011/03/20/att-to-buy-t-mobile-usa-for-39-billion/.

[169] *Id.* at 39–40.

### 3. Switching Costs in Wireless Device and Service Markets

Another method through which some commentators have suggested that tying arrangements may cause competitive harm is by increasing consumer switching costs. Wireless communications customers face meaningful costs when switching between networks or devices. Switching costs may stem from a variety of sources, including trust of current brands and brand loyalty, transaction costs, equipment investment, learning costs, and costs imposed by contracts.[170] All of these types of switching costs are present to some degree in the wireless communications industry.[171] These costs result from the nature of the product at issue, but other costs are imposed by the structure of the cell phone market, including multi-year contracts that most wireless customers sign with their service providers.[172] A typical contract termination fee is around $130.[173]

Professor Paul Klemperer has built a detailed model whereby firms use switching costs to their benefit.[174] In Klemperer's model, once switching costs are successfully integrated into a market, firms have some limited monopoly

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[170] Paul Klemperer, *Competition when Consumers have Switching Costs: An Overview with Applications to Industrial Organization, Macroeconomics, and International Trade*, 62 REV. ECON. STUD. 515, 518–19 (1995) [*hereinafter* Klemperer, *Competition*].

[171] For example, as in almost any consumer good that is offered via subscriptions, contracts, or monthly billing, customers who switch from one wireless provider to another will have to go through the process of changing accounts and setting up with a new company. Similarly, in switching phones, consumers must learn how a new phone works and transfer any contact information and phone numbers from one phone to another.

[172] FOURTEENTH REPORT, *supra* note 64, at 61.

[173] *See* Early Termination Fee Calculator, MyRatePlan.com, http://www.myrateplan.com/contract_termination_fees/ (last visited Apr. 14, 2011).

[174] *See, e.g.*, Klemperer, *Competition*, *supra* note 170; Paul Klemperer, *Markets with Consumer Switching Costs*, 102 Q. J. ECON. 375 (1987) [hereinafter Klemperer, *Markets*].

power and are able to charge monopoly rents.[175] Once firms have any meaningful market share in this scenario, it is more profitable for them to "act as a monopolist against [their] own customer base[s]"[176] than to compete to steal customers away from their competitors. This is the case because to lure a rival's customer, a firm must lower its price to a sufficiently low level that the customer makes up for the costs of switching with the savings from the lower price.[177] "If [the firm] must charge the same price to all its customers, such a large price cut gives up more profits on its own captive customers than it gains by stealing [its competitor's] customers, so [the firm] does better to act as a monopolist against its own customers."[178]

Because consumer switching costs present the possibility of monopoly profits once customers are established with a specific firm, Klemperer's model suggests that in order to capture the market and charge these monopoly rents, firms compete vigorously for their share of free customers. In other words, firms provide a "low price in the 'first period' followed by higher prices to exploit the mature market in the 'second period.'"[179] In order for the "bargain-then-rip-off" model to work firms must be able to distinguish between old and new customers, in order to bargain with the new customers and rip-off the old ones, who face high switching costs.[180] In the wireless services market, networks can easily

[175] Klemperer, *Competition*, *supra* note 170, at 519 ("The most obvious effect of switching costs is to give firms some market power over their existing customers, and thus to create the potential for monopoly profits."). Notably, the monopoly rents that firms may charge under Klemperer's model may not exceed the costs to consumers of switching to a new brand. If they do, the consumer will accept the switching costs in order to realize the savings available elsewhere. *Id.*

[176] *Id.*

[177] *Id.*

[178] *Id.*

[179] *Id.* at 523.

[180] If firms cannot charge different prices, they "must . . . balance the incentive to charge a high price to exploit its locked in customers, against the incentive to set a low current price to attract new customers that build

distinguish between old and new customers. A contract, or at least some agreement, is necessary for the consumer to connect their phone to the network that serves it.

Tying arrangements may raise switching costs by forcing some consumers to switch brands in two markets simultaneously. For example, an iPhone user who wishes to leave AT&T would (until recently) also have to purchase a new device. Tying arrangements also spread the bargain-then-rip-off model across two markets. Consumers may realize a bargain in purchasing their device (either getting a discounted device, obtaining a device only available on one network, or both) but then face a rip-off in the form of the limited monopoly that networks hold due to high switching costs.[181]

However, tying arrangements that raise switching costs are not necessarily anticompetitive. The bargain-then-rip-off model may not harm competition. The initial competition for customers may entirely make up for any decrease in later competition caused by high switching costs, leaving consumers and competition in general no worse off than in the absence of switching costs. Firms compete to offer the best bargain in order to reap the later rewards of the rip-off—given perfect competition, the value of the bargain will be equal to the cost of the rip-off and consumers will be no better or worse off.[182] In the wireless industry, there is competition both in benefits that consumers receive upon joining a network (such as free or discounted firms) and in the prices that consumers pay once they are locked in. Farrell and Klemperer caution that "one must not jump from

up the firm's current market share and so increase future profits." *Id.* at 525.

[181] This limited monopoly power can only harm consumers to the point of the switching cost. If a consumer can get a better deal elsewhere that makes up for the cost of switching, they will do so.

[182] *See* Joseph Farrell & Paul Klemperer, *Coordination and Lock-in: Competition with Switching Costs and Network Effects,* in 3 HANDBOOK OF INDUSTRIAL ORGANIZATION 1967 (Mark Armstrong and Robert H. Porter, eds., 2007). "[We] can here view the life-cycle . . . as the real locus of competition, and competition in *that* product has worked exactly as we would hope." *Id.* § 2.3.1.

the fact that buyers become locked in to the conclusion that there is an overall competitive problem."[183] Switching costs may have some pro-competitive effects. Farrell and Shapiro identify circumstances in which high switching costs promote market entry.[184] Their argument is intuitive: because firms that cannot adequately discriminate in price between new and old customers are likely to maintain high prices to exploit existing, high-switching-cost customers, there is an opportunity for new firms to compete for new customers:

> [T]he seller without a customer base . . . is willing to price more aggressively than the 'incumbent,' and so attracts the new, unattached buyers. . . . Far from forming an entry barrier, switching costs induce excessive entry: even when it would be more efficient for production to be concentrated in one firm, and the incumbent consequently has a cost advantage in serving unattached buyers, entry occurs.[185]

This model appears to describe the wireless service industry well, where most new entrants offer discounted or specialty services not offered by major networks to their locked-in customers. Thus, in the presence of new, unattached customers, switching fees may facilitate market entry by new firms and may allow small firms to continue to exist.[186]

As a potentially anticompetitive effect of switching costs, Klemperer argues that "when firms are artificially differentiated by switching costs, they have less incentive to differentiate themselves in any real way . . . ."[187] This is a sort of muting effect that switching costs could have on competition. Since it is expensive to lure competitors' customers, firms tend to simply maintain their existing,

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[183] *Id.* § 2.9.

[184] Joseph Farrell & Carl Shapiro, *Dynamic Competition with Switching Costs*, 19 RAND J. ECON. 123 (1988).

[185] *Id.* at 124–25.

[186] In this way, small firms may be undertaking a shortsighted strategy in seeking the end of exclusivity deals, which inflate switching costs.

[187] Klemperer, *Competition*, *supra* note 170, at 532.

locked-in customers, rather than compete for new ones. This eliminates the incentive to engage in either price or quality competition. However, in the wireless communications industry, this does not appear to be the case. Wireless networks actively seek to differentiate themselves by offering different exclusive devices and different service plans.[188] In fact, as discussed above, wireless networks may seek to promote innovation precisely in order to overcome the switching costs that their competitors have imposed on their customers.

Iacobucci proposes a final way in which sellers may use tying arrangements in markets with switching costs to their advantage.[189] Iacobucci begins with the recognition that under the bargain-then-rip-off model, some customers may be more valuable to a firm than others: those that accept the bargain and then consume the good at high levels during the rip-off period.[190] According to Iacobucci, tying arrangements may allow a firm to ensure that switching costs attach primarily to desirable customers, particularly those who will have high consumption levels once locked in.[191] They do this by attaching a good that is likely to be desired primarily by high value customers to the good that has switching costs and is offered at a bargain.[192] In Iacobucci's example, a seller might bundle a warranty with a good that attaches switching costs offered at a bargain, under the theory that the warranty would be most valuable to high-consuming consumers.[193] Similarly, in the wireless communications industry, wireless sellers may seek to tie communications devices to their wireless networks that will draw in the highest-consuming customers. Tying arrangements do appear to aim to draw consumers who will pay a premium for data and high-speed internet plans, those who will pay

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[188] *See* Hermalin & Katz, *supra* note 133, at 1–5.

[189] Edward Iacobucci, *A Switching Costs Explanation of Tying and Warranties*, 37 J. LEGAL STUD. 431 (2008).

[190] *Id.* at 432.

[191] *Id.*

[192] *Id.* at 432–44.

[193] *Id.*

for unlimited text messages, or those who use special social-networking and chat functions provided by some wireless devices. These features are worth very little to the user who simply wants a mobile telephone and to pay a small amount for wireless service. By establishing tying arrangements with high-end devices, wireless service providers compete for the high-consumption consumer.[194]

## IV. IPHONE EXCLUSIVITY HAS ENDED AND THE COURT'S FEARS WERE NEVER REALIZED: THE TIME HAS COME TO ABANDON CATEGORICAL SCRUTINY OF TYING ARRANGEMENTS IN FAVOR OF A CONTEXT-SPECIFIC APPROACH

The most notorious and lamented tying arrangement of the early twenty-first century only lasted four years, yet in that time we would expect to have seen some undesirable results if tying arrangements are as bad as the Court believes that they are. The Court, individual justices, and other commentators have identified a number of harms that may stem from tying arrangements and may justify the quasi-per se rule. This Part revisits those harms and finds that for the most part they have not occurred in the wireless telecommunications industry. It then argues that it is time for the Court to abandon the quasi-per se rule in favor of a more context-specific approach, similar to the one proposed by Justice O'Connor in *Jefferson Parish*.[195]

### A. The Potential Harms of Tying Arrangements that Underlie the Quasi-Per Se Rule Have Not Come to Pass in Wireless Telecommunications

The Court's tying decisions rest on a strong desire to stop one competitor from gaining an advantage over another through actions or success in a second market. This desire to ensure even footing in competition has led the Court to take

[194] *See id.*

[195] Jefferson Parish Hosp. Dist. No. 2 v. Hyde, 466 U.S. 2, 36 (1984) (O'Connor, J., concurring).

a strong stance against tying arrangements, condemning them with a rule that imposes per se liability once three threshold factors are met.[196]

However, in the wireless communications industry, it is not clear that AT&T or the other wireless networks that have engaged in tying arrangements have gained any real lasting or important advantage by tying.[197] AT&T attracted many new subscribers to its network by exclusively offering the iPhone, but these customers came with a cost that was paid directly to Apple. While it is not known exactly what AT&T gave to Apple in the iPhone exclusivity deal, it is certain that Apple received something of value.[198] If competition for the iPhone exclusivity were perfect, AT&T's successful offer for the iPhone exclusivity would be exactly equal in value to what it gained from the deal—new subscribers and greater lock-in for existing subscribers. This is the reason that AT&T may not have pulled away from its competitors: though it gained subscribers during its iPhone exclusivity, those new subscribers did not necessarily translate into greater profits that could allow the network to grow and outpace its competitors technologically. In fact, during the exclusivity period, AT&T faced strong complaints about its service, and did not keep pace with other networks' technological advances.[199] For example, AT&T is somewhat behind other major networks in establishing 4G service.[200]

That AT&T had to compete to obtain iPhone exclusivity is also the reason that the tying arrangement was unlikely to transform the iPhone's market power into two monopoly

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[196] *See supra* Part II.

[197] Most of these tying arrangements would fail on one of the three threshold criteria—that the tying good have "economic power"—but others, most notably the iPhone exclusivity, would not.

[198] *See supra* Part III.B.1.

[199] *See, e.g.*, Besta Shankar, *Blogs Rip Apart Apple, Make It Most Criticized Brand: Report*, INT'L BUS. TIMES (Aug. 9, 2010, 5:31 AM), http://www.ibtimes.com/articles/41863/20100809/apple-twitter-facebook-bbc-iphone-ipad-mac-brandwatch-social-media.htm.

[200] *See* David Goldman, *AT&T, Verizon and Sprint 4G: Not So Fast*, CNNMONEY.COM (Feb. 23, 2010, 12:23 PM), http://money.cnn.com/2010/02/23/technology/4g_networks/.

profits—one drawn from the device market, and the other from the wireless market. Even if AT&T had been able to leverage the iPhone's early market power into complete domination of the wireless network market, it still would have had to pay a large portion, if not all, of that value to Apple. Given that AT&T certainly paid a hefty price for exclusivity, and that it has failed to pull away from its competitors, it is not obvious that the advantage that it gained by tying with a product in the device market caused the problem of unfair competition that the Court's doctrine is based on. Nor does it appear that the iPhone tying arrangement has reduced innovation in the industry. On the contrary, during the period in which AT&T exclusively offered the iPhone, innovation has flourished in the network and device markets, and it is likely that the iPhone/AT&T tying arrangement has promoted this innovation.[201]

## B. It is Time to Abandon the Quasi-Per Se Rule

Though in its early days, AT&T's iPhone exclusivity was exactly the type of tying arrangement that the Court has historically harshly scrutinized, none of the harms that the Court or commentators predicted have come to pass. Now that iPhone exclusivity has ended without major harm, it is time to re-evaluate the quasi-per se rule. Not only did the expected harms never come to pass, but the exclusivity appears to have had many pro-competitive effects, especially on innovation in the mobile device market. Given that the iPhone tying arrangement appears to have had these positive effects, it is inappropriate to apply a categorical rule against them, because in some situations, as with the iPhone, a tying arrangement may improve the competitive environment by serving as a method for wireless networks to differentiate themselves. Therefore, it is time for the Court to abandon the quasi-per se rule. To abandon the quasi-per se rule would be at once a radical departure from the Court's tying cases, and at the same time a logical outgrowth of the Court's broader antitrust jurisprudence in which it has

[201] *See supra* Part III.B.4.

moved away from idealized images of competition or protection of competitors in order to focus on consumer or total welfare.

This is not to say that tying arrangements are strictly pro-competitive, or that they should never receive antitrust scrutiny. Sometimes they should. The "distortions" identified by Justices White and O'Connor provide a guide to the places that Courts should look for anticompetitive effects of tying arrangements.[202] The most important of these harmful market distortions occur when a tying arrangement forecloses all or most of a market to a tying party's competitors, forcing them out of the market, or when the arrangement meaningfully raises barriers to entering a market.[203] Notably, neither of these distortions appears to have been caused by AT&T's iPhone exclusivity. Market consolidation that occurred during the exclusivity period appears to be caused by mergers, not the tying arrangement, and wireless market entry, already a difficult process, continued at a very slow pace.[204] But just because these distortions did not occur in the wireless telecommunications industry during the duration of iPhone exclusivity does not mean that other tying arrangements could not have these negative effects. The iPhone drew many customers to AT&T, but not enough to force other networks out of the market. But had the device been significantly more revolutionary or popular, it is possible that it could have drawn so many Verizon, Sprint, and Alltel customers to shut down one or more of those networks. In such a situation, antitrust scrutiny might be warranted.[205] For this reason, courts

[202] *See supra* text accompanying notes 58–62.

[203] *Id.*

[204] *See supra* text accompanying notes 93–97.

[205] For example, there may be some technological advances that are so unique and inimitable that they have the ability to lock competitors out of a market for decades. But the Court's market power test is a very poor one for identifying the goods that may have such effects in tying arrangements, and the iPhone clearly is not one. In under a year, AT&T's major competitors were all offering their own exclusive devices, and only four years later, the iPhone is only one among many high-end mobile devices.

examining tying arrangements should look for these distortions on a case-by-case basis rather than applying a categorical rule that condemns tying arrangements without closely examining their effects and limits their use even when they have pro-competitive effects.

## C. Other Possible Reforms

The appropriate reform of the system is to adopt the framework promoted by Justice O'Connor in *Jefferson Parish*. Under this model, the entire quasi-per se rule would be a threshold to finding an antitrust violation, but once that threshold has been met, the defendant could demonstrate pro-competitive effects that counterbalance any anticompetitive effects of the tying arrangement.[206]

In examining the wireless telecommunications industry, this Article has demonstrated that tying arrangements, and the tying arrangement between AT&T and the iPhone in particular, have not caused major anticompetitive harm or resulted in the problems that the Court envisions from tying arrangements. It has not, however, demonstrated that the wireless telecommunications industry is one with no competition problems, only that these problems are poorly addressed by tying doctrine.

The industry *is* comprised of concentrated markets. To the extent that market concentration among wireless networks is a problem, the best policy solution is likely to be found in examining mergers, not in regulating tying arrangements. During the period examined in this Article, most concentration stems from major network mergers.[207] Similarly, this examination of tying arrangements has found that they may exacerbate the already high consumer switching costs in the industry. There are many policy levers that can lower switching costs without punishing pro-competitive tying arrangements. Some of these, such as number portability, are already in place. The easiest way to reduce switching costs would be to regulate the penalties for

[206] *See supra* text accompanying notes 58–62.

[207] *See supra* text accompanying notes 90–97.

breaking contracts with wireless networks, but this might not ultimately benefit consumers. Instead of offering a good deal up front to customers before they are locked in, wireless networks would then have to simply charge a higher price at all time periods. Ultimately, though the industry is concentrated, consumers are not severely harmed by tying arrangements. Consumers may choose between many combinations of wireless service providers and mobile devices. In the face of myriad options, that a specific combination of device and service is unavailable is a de minimis competition problem.

## V. CONCLUSION

Four years of iPhone exclusivity on the AT&T network has just come to an end. This event has provided an opportunity to re-examine the Supreme Court's tying jurisprudence, and to consider whether any of the harms the Court identifies in tying arrangements have come to pass. In the case of iPhone exclusivity, they have not. Instead, iPhone exclusivity has had meaningfully pro-competitive effects in fostering innovation and differentiation among wireless networks.

This Article has examined the Court's principal rationales for imposing a quasi-per se rule on tying arrangements, and then applied those rationales to tying in the wireless telecommunications industry. The Court's reasons for tough scrutiny of tying arrangements do not stand up. Tying with high-end devices has become just one among several methods in which wireless networks attempt to differentiate themselves in order to compete.[208] The Court, in its zeal to ensure even competition, has mistaken product differentiation for unfair competition, and in so doing has put tying in the wireless industry at risk for antitrust scrutiny without any evidence that the Court's primary fear has come to pass—uneven or unfair competition in the wireless network industry that "'tend[s] to create a monopoly,' and it is immaterial that the tendency is a

[208] *See* Hermalin & Katz, *supra* note 133, at 1–5.

creeping one rather than one that proceeds at full gallop; nor does the law await arrival at the goal before condemning the direction of the movement."[209] It is time for the Court to abandon this enterprise, and to make it clear that tying arrangements that have meaningful pro-competitive effects will be free from intense antitrust scrutiny. Clear rules allowing most tying arrangements will pave the way for robust development and marketing of new innovations—for example tablet PCs that are just beginning to be offered exclusively on some networks. Without exclusive offerings, networks will have little incentive to promote the development and marketing of these devices.

The Court's quasi-per se rule stems from an uncertain and misguided view of tying arrangements. The Court has long been skeptical of such arrangements, but has never brought this skepticism in line with the broader goals of antitrust law and competition policy. This examination of tying in the wireless communications industry demonstrates that the Court's aimlessness in analyzing tying arrangements has born bitter fruit, and that it is time for the Court to articulate a clear purpose for scrutinizing tying arrangements in order to create reasonable doctrine.

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