Hub-and-Spoke Conspiracies

Barak Orbach takes on the issue of using vertical arrangements to infer horizontal agreements. Professor Orbach analyzes the foundational hub-and-spoke conspiracy cases and discusses recent important additions to the case law, including the eBook case. He argues courts should acknowledge that they have been inferring horizontal conspiracy from vertical coordination for decades.

Donald Trump’s Major Antitrust Encounters

Robert Skitol writes about three significant lawsuits that might have influenced presidential candidate Donald Trump’s views on competition law. Trump was charged with violations of the HSR Act, took on the role of private plaintiff in a lawsuit against the NFL, and defended allegations he unlawfully monopolized a casino market in New Jersey. The article contains a few predictions for a Trump Administration program based on these encounters.

Ginger Zhe Jin, Director, FTC Bureau of Economics: Information Asymmetries, Disclosure, and Economic Outcomes

Fei Deng and Qian Lu review the academic work of Ginger Zhe Jin, the Director of the FTC Bureau of Economics. Professor Jin, an empirical Industrial Organization economist, focuses her research on the effects of removing information asymmetries on economic agents’ behavior and outcomes. Her research, in areas such as restaurant hygiene, prescription drugs, health care, and e-commerce, is directly related to the consumer protection activities of the FTC.

Paper Trail: Working Papers and Recent Scholarship

Editor Bill Page reviews two papers whose common theme is to offer antitrust responses to the recent phenomenon of an increase in drug prices shortly after firms acquire their rights. The first, by Frederic M. Abbott, proposes to curtail high drug prices by interpreting excessive pricing of patented drugs as illegal in and of itself under U.S. antitrust law. The second, by Michael A. Carrier, Nicole Levidow, and Aaron S. Kesselheim, proposes challenging the restricted distribution of drugs by brand-name companies as an exclusionary practice under Section 2 of the Sherman Act.
Hub-and-Spoke Conspiracies

Barak Orbach

In antitrust law, a hub-and-spoke conspiracy is a cartel in which a firm (the hub) organizes collusion (the rim of the wheel or the rim) among upstream or downstream firms (the spokes) through vertical restraints. Such a conspiracy may be illegal per se under antitrust law where the horizontal agreement among the spokes (the rim) is per se unlawful, such as fixing prices or allocating territories or customers among competing spokes.

Hub-and-spoke cartels have drawn considerable attention since the 1930s, long before the conspiracy gained its name. Their architecture reduces the need for coordination among the spokes by centralizing at least some of the cartel functions at the hub. As a result, evidence of agreement among the spokes is often found in vertical coordination between the hub and the spokes, not in horizontal coordination. Yet the question of how to use vertical relationships to infer horizontal conspiracy has proved confusing and deserves clarification. In this article, I explain the analysis of hub-and-spoke cartels under antitrust law, clarify the meaning of the “rim requirement” (proof of an agreement among the spokes), and advocate that courts clearly state why and how they use vertical coordination to infer a horizontal conspiracy.

Cartels Facilitated Through Vertical Relationships

*The Reduced Need for Horizontal Coordination.* Three key problems influence firms’ ability to form and maintain cartels: (1) the problem of selecting and coordinating collusive strategies; (2) the problem of monitoring members and deterring defections; and (3) the problem of preventing entry or expansion of non-members.¹ To address these problems, cartels adopt various mechanisms, including use of third parties to provide certain collusive functions.² Such third parties may mitigate the problems cartels face by centralizing those functions and reducing the costs of coordination and monitoring. For example, in *American Column & Lumber*, a trade association appointed a “Manager of Statistics” to serve as a “clearing house of the members, for information on prices, trade statistics, and practices,” facilitating an exchange of information among competitors.³ Similarly, in *Appalachian Coals*, 137 coal producers formed an “exclusive selling agency” that facilitated price fixing.⁴

Hub-and-spoke conspiracies likewise use upstream or downstream firms to produce collusive efficiencies. The hub facilitates and enforces the collusion, or key aspects of the collusion, through

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² See Masaki Aoyagi, Collusion Through Mediated Communication in Repeated Games with Imperfect Private Monitoring, 25 ECON. THEORY 455 (2005) (discussing the role of third parties in facilitating collusion); Levenstein & Suslow, supra note 1, at 69–70 (summarizing cartel studies showing that the reliance on third parties, such as joint sales agencies and trade associations, tends to reduce defections).
⁴ Appalachian Coals v. United States, 288 U.S. 344, 357 (1933).
its vertical relationships with the spokes, thereby reducing the need for horizontal coordination. For example, geographic restraints set by the hub may replace negotiations over horizontal market division and resale price maintenance (RPM) policies may replace coordination over price fixing. Enforcement in these cartels is relatively efficient since the hub can terminate and punish spokes that do not comply with its policies. For its services, the hub collects some of the collusive profits and may also strategically use the cartel to raise rivals’ costs.5

Vertical relationships can be put to the service of a cartel in structures less centralized than a classic hub-and-spoke arrangement as well. For example, in JTC Petroleum, Judge Richard Posner examined a cartel of six road contractors that allegedly “enlisted [three] producers in their conspiracy, assigning them the role of policing the [contractors’] cartel by refusing to sell to [a contractor] who defied the cartel.”6 Similarly, in MM Steel, two steel distributors conspired to pressure several steel manufacturers to boycott a newly formed steel distributor.7 The important point is that cartels face organizational challenges that may be mitigated through the use of vertical relationships. Hence, in appropriate circumstances, vertical coordination may provide evidence of the existence of a horizontal conspiracy. The problem is identifying when and how it is appropriate to make that link.

The Problem of Ambiguity. Firms often use similar vertical restraints in their relationships with multiple upstream or downstream trading partners, and those trading partners often respond to the restraints in a similar manner. Practices that illustrate this phenomenon include manufacturers’ geographic restraints, exclusivity clauses, RPM, most-favored-nation (MFN) clauses, and loyalty discounts.8 These practices may divide territories among competitors, set retail prices, or require a group of firms not to deal with rivals. For antitrust analysis, the phenomenon of sets of vertical relationships that result in parallel conduct among competitors presents complexities. The arrangements may generate both pro- and anticompetitive effects; also, the arrangements may exist for independent reasons and yet may be consistent with the successful organization of a cartel.9

To avoid stifling potentially procompetitive conduct, antitrust law limits the range of permissible inferences that may be drawn from ambiguous conduct.10 Proof of a set of vertical relationships and any resulting parallel conduct, standing alone, cannot conclusively establish an antitrust violation.11 Rather, the “correct standard is that there must be evidence that tends to exclude the pos-


6 JTC Petroleum Co. v. Piasa Motor Fuels, Inc., 190 F.3d 775, 778 (7th Cir. 1999).

7 MM Steel, L.P. v. JSW Steel (USA) Inc., 806 F.3d 835 (5th Cir. 2015).

8 See, e.g., Asker & Bar-Isaac, supra note 5; Fiona M. Scott Morton, Contracts that Reference Rivals, ANTITRUST, Summer 2013, at 72.


sibility of independent action by the [defendants].” More precisely, there must be direct evidence of communication or indirect evidence that goes beyond parallel conduct.

In reality, even after discovery, plaintiffs rarely can obtain direct evidence of communication. They therefore try to prove conspiracy by showing parallel conduct and “plus factors”—“economic actions and outcomes that are largely inconsistent with unilateral conduct but largely consistent with explicitly coordinated action.”

Courts have repeatedly recognized, however, that where a set of vertical relationships may have facilitated a horizontal conspiracy, the necessary plus factors may be found in that vertical coordination even though the vertical relationships themselves are ambiguous. This is because even though “antitrust law [draws] a distinction . . . between agreements that are made between competitors (horizontal agreements) and agreements between manufacturers and customers (vertical agreements),” sometimes “the vertical participants . . . actually join the horizontal conspiracy.” Moreover, courts point out that hub-and-spoke cartels demonstrate that the distinction between vertical and horizontal agreements while “sharp in theory” can blur in reality. Stated simply, as the Supreme Court noted in _Leegin_, vertical arrangements may produce “useful evidence for a plaintiff attempting to prove the existence of a horizontal cartel.”

The “Rim Requirement”

_The Rim_. Under antitrust law, the characteristic that separates an unlawful conspiracy facilitated through vertical relationships from a lawful vertical arrangement is proof of a horizontal “agreement” among competitors. In hub-and-spoke conspiracies, this agreement is the “rim” that connects the spokes. Without the rim, an alleged hub-and-spoke cartel is merely a set of vertical relationships (or restraints) that result in parallel conduct and does not establish a horizontal conspiracy.

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12 _Monsanto_, 465 U.S. at 768; _see also_ _Twombly_, 550 U.S. at 554 (“The inadequacy of showing parallel conduct or interdependence, without more, mirrors the ambiguity of the behavior: consistent with conspiracy, but just as much in line with a wide swath of rational and competitive business strategy unilaterally prompted by common perceptions of the market.”).

13 _Monsanto_, 465 U.S. at 768 (“[T]here must be direct or circumstantial evidence that reasonably tends to prove that the [defendants] had a conscious commitment to a common scheme designed to achieve an unlawful objective.”).

14 _In re_ Musical Instrs. and Equip. Antitrust Litig. ( _Guitar Center_), 798 F.3d 1186, 1194 (9th Cir. 2015); _see also_ _City of Tuscaloosa v. Harcros Chems._, Inc., 158 F.3d 548, 572 (11th Cir. 1999): “[In the absence of direct evidence,] the plaintiffs first must produce evidence showing that the defendants engaged in consciously parallel action. Second, the plaintiffs must show “plus factors” that tend to exclude the possibility that the defendants merely were engaged in lawful conscious parallelism. One prominent “plus factor,” to which antitrust plaintiffs often take recourse, is a showing that the defendants’ behavior would not be reasonable or explicable (i.e. not in their legitimate economic self-interest) if they were not conspiring to fix prices or otherwise restrain trade—that is, that the defendants would not have acted as they did had they not been conspiring in restraint of trade. See _generally_ William E. Kovacic et al., _Plus Factors and Agreement in Antitrust Law_, 110 MICH. L. REV. 393 (2011).

15 _MM Steel_, 806 F.3d at 849.


18 With the exception of tying, the legality of all vertical restraints is reviewed under the rule of reason. Tying is supposedly unlawful per se, but in practice the proving of unlawful tying is similar to a rule of reason inquiry. _See_ _ANTITRUST LAW DEVELOPMENTS_, supra note 15, at 136, 154, 175–78.
Proving a hub-and-spoke conspiracy thus requires evidence of the rim that connects the spokes. The “rim requirement” is well established under antitrust law, but the question remains how the requirement may be satisfied.

**Rimless Wheel Theories.** To the extent that any court ever ruled that a rimless hub-and-spoke arrangement can constitute a conspiracy under Section 1, such a decision is inconsistent with the “agreement requirement” of Section 1 and with the overwhelming majority of the decisions.²⁰ Yet plaintiffs continue to put forward rimless hub-and-spoke conspiracy theories. The primary reason is that “[t]he prospect of establishing a violation per se is much more appealing to plaintiffs than the potential difficulty and costliness of proving a Section 1 claim under the rule of reason.”²¹ Another reason is for plaintiffs to avoid the considerable, formalistic hurdles to plead conspiracy that do not necessarily correspond to the understanding (or perceptions) of market participants.

A final reason is that the hub-and-spoke metaphor itself causes some confusion because the original meaning of a hub-and-spoke conspiracy in general criminal law was a conspiracy in which the only common point of connection was the hub, conspiring with the individual spokes. However, when courts use the metaphor for the purpose of antitrust hub-and-spoke conspiracies, they have in mind a wheel enclosed by a rim that connects its spokes.²²

**The Standards of Proof.** Courts typically reject rimless wheel theories on the basis that those theories omit the required element of horizontal agreement,²³ but such attempts to draw a sharp distinction between the rim requirement and rimless wheel theories are misleading. Circumstantial evidence (plus factors) may be used to establish the existence of the rim, and vertical coordination is a critical aspect of that circumstantial evidence. As a result, in their actual practice, going back nearly 80 years, courts have developed an inference standard that permits finding of the existence of the rim from vertical coordination. Nonetheless, this inference standard remains vague and confusing.

**The Origins of the Metaphor**

The Supreme Court first used the metaphor “hub-and-spoke conspiracy” outside the antitrust context in *Kotteakos v. United States.*²⁴ The owner of a construction company defrauded the federal government by serving as a broker in securing, for each of several customers, multiple loans in violation of the National Housing Act. The Supreme Court observed that “the pattern was that of separate spokes meeting at a common center though . . . without the rim of the wheel to enclose the spokes.”²⁵ Because the pattern lacked a rim, the Court held that each set of loans constituted a separate conspiracy, between the hub and the individual spokes.

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²¹ *Guitar Center,* 798 F.3d at 1192 n.3.

²² *Id.* (asking, “for what is a wheel without a rim?”).

²³ See supra note 20.


²⁵ *Id.* at 755.
What are now called hub-and-spoke cartels in antitrust law existed, of course, long before courts adopted the metaphor and even before Congress enacted the Sherman Act. For example, Elizabeth Granitz and Benjamin Klein showed that, in the 1870s, Standard Oil acquired dominance in the oil industry by serving as “a [railroad] cartel enforcer located at a hub and connected by spokes to a horizontal conspiracy among the railroads along the rim.”

The metaphor crept slowly into antitrust as private plaintiffs tried to use Kotteakos to advance “rimless wheel” theories of conspiracy. Under these theories, courts could infer from a set of vertical agreements that result in parallel conduct a conspiracy among the spokes in violation of Section 1 of the Sherman Act. Rimless wheel theories interpret Kotteakos to allow inference of a single conspiracy where there is no evidence to prove a rim.

Courts, however, have almost unanimously rejected rimless wheel theories, although in 2010, the Third Circuit stated that “[t]here is arguably some support for what amounts to a ‘rimless’ conspiracy,” citing Kotteakos and a 2002 decision of the Fourth Circuit, Dickson v. Microsoft Corp.

Neither case, however, supports rimless wheel conspiracy theories. Kotteakos was not an antitrust case and, thus, cannot offer guidance for the inference of antitrust conspiracy, which is a specific deductive process. Also, Kotteakos’ ruling provides that, without the rim, there is no conspiracy among the spokes. Likewise, Dickson stressed that a rimless hub-and-spoke arrangement consisted of several conspiracies and, therefore, does not permit inference of conspiracy among the spokes:

A rimless wheel conspiracy is one in which various defendants enter into separate agreements with a common defendant, but where the defendants have no connection with one another, other than the common defendant’s involvement in each transaction. In Kotteakos, the Supreme Court made clear that a rimless wheel conspiracy is not a single, general conspiracy but instead amounts to multiple conspiracies between the common defendant and each of the other defendants.

The metaphor became a recognized antitrust concept when, in 1998, the FTC successfully challenged the relationships of Toys “R” Us with its suppliers. Cases referring explicitly to a hub-and-spoke arrangement are thus relatively new to antitrust, appearing mostly in cases in the last two decades.

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27 See, e.g., PepsiCo, 315 F.3d at 110–11; Dickson, 309 F.3d at 198–205; Impro Products, 715 F.2d at 1279–80; Elder-Beerman Stores, 459 F.2d at 153–54; Mylan Labs., 770 F. Supp. 1053.

28 Howard Hess, 602 F.3d at 256.

29 309 F.3d at 203.

30 Id. (internal citation omitted).

31 Toys “R” Us, Inc., 126 F.T.C. 415, 574–75 (1998), aff’d, TRU, 221 F.3d 928.

32 See, e.g., Impro Products, 715 F.2d at 1279 n.14 (“There is some question whether the conspiracy provisions of Sections 1 and 2 of the Sherman Act apply to a hub-and-spoke conspiracy. We believe that they do. Two federal courts addressing this question have recognized—at least implicitly—that such a conspiracy is cognizable under the Sherman Act if the plaintiff introduces sufficient evidence to demonstrate that one exists.”); Redbox Automated Retail LLC v. Universal City Studios LLLP, Civ. No. 08-766, 2009 WL 2588748, at *5 (Aug. 17, 2009) (finding that the plaintiff sufficiently pleaded that a manufacturer orchestrated a conspiracy among distributors by analogy to classic several hub-and-spoke cases).
Several courts have observed that the metaphor could be confusing, especially because it contributes to rimless wheel theories. The metaphor, however, has served the development of antitrust law by allowing courts to identify a specific type of cartel, learn its unique characteristics, and develop adequate standards for finding a violation.

The Inference Standard: Supreme Court’s Landmarks

Between 1939 and 1966, the Supreme Court handed down five decisions that courts now identify as precedents for antitrust hub-and-spoke conspiracies: Interstate Circuit, Masonite, Klor’s, Parke Davis, and General Motors. In these cases, the Court inferred a horizontal conspiracy from sets of vertical relationships. The five opinions were written before the Supreme Court drew a clear distinction between vertical and horizontal restraints. But as already noted, in the context of hub-and-spoke conspiracies, the distinction is misleading. Further, the Court has not overruled any of these decisions and, in fact, has expressly endorsed all five of them in the modern era. Thus, although the decisions are old, courts still apply the inference standard that they outline for evaluating hub-and-spoke conspiracies.

*Interstate Circuit (1939).* Interstate Circuit is understood to involve three key aspects: (1) a monopolist movie exhibitor communicated simultaneously to eight movie distributors a demand to set minimum admission prices and prohibit “double features” (offering two movies for the price of one); (2) each distributor knew that the demand was communicated to the other distributors and accepted it; and (3) the Supreme Court held that the acceptance established a conspiracy under Section 1 of the Sherman Act. Today, courts interpret *Interstate Circuit* to say that a conspiracy may be inferred where (1) two or more competitors enter into vertical agreements with a single upstream or downstream firm; (2) the vertical agreements could benefit each competitor only if its rivals enter into similar agreements; and (3) the firm that facilitates all the vertical agreements persuades each competitor that its competitors will take a similar action.

33 See, e.g., *The eBook Case*, 791 F.3d at 314 n.15 (“[T]he ‘hub-and-spoke’ metaphor is somewhat inaccurate—the plaintiff must also prove the existence of a ‘rim’ to the wheel in the form of an agreement among the horizontal competitors.”); *Guitar Center*, 798 F.3d at 1192 (“Of course, homespun metaphors for complex economic activities go only so far.”).


36 See, e.g., *Business Electronics*, 485 U.S. at 735 (stressing that Parke Davis and General Motors involved horizontal conspiracies and should not be understood as cases of vertical restraints); *Brown v. Pro Football, Inc.*, 518 U.S. 231, 241 (1996) (noting that *Interstate Circuit*, Masonite, and General Motors illustrate that “[a]ntitrust law . . . sometimes permits judges or juries to premise antitrust liability upon little more than uniform behavior among competitors, preceded by conversations implying that later uniformly might prove desirable, . . . or accompanied by other conduct that in context suggests that each competitor failed to make an independent decision.”) (internal citations omitted); *NYNEX Corp. v. Discon, Inc.*, 525 U.S. 128, 134 (1998) (describing the facts of *Klor’s*, noting that “undisputed evidence” showed that an agreement between a retailer and distributors “hurt only one competitor,” and explaining that “this evidence was beside the point” because such agreements are illegal per se.).

37 See, e.g., *TRU*, 222 F.3d. at 935–36; *The eBook Case*, 791 F.3d at 319–20.
may be and often is formed without . . . agreement on the part of the conspirators."

**Masonite (1942).** Masonite involved licensing agreements between a patent holder and wallboard manufacturers that set prices of the final products. The agreements were negotiated while the patent holder resolved infringement disputes with some of the licensees. The Supreme Court found that each licensee “acted independently of the others, negotiated only with [the patent holder], desired the agreement regardless of the action that might be taken by any of the others, did not require as a condition of its acceptance . . . an agreement with any of the others, and had no discussions with any of the others.” Yet, the Court applied Interstate Circuit, holding that it was “not clear at what precise point of time each [licensee] became aware of the fact that its contract was not an isolated transaction but part of a larger arrangement. But it [was] clear that as the arrangement continued each became familiar with its purpose and scope.” Masonite, therefore, reaffirmed Interstate Circuit’s inference standard.

**Klor’s (1959).** In Klor’s, a relatively prominent California retailer required several suppliers “either not to sell . . . or to sell . . . [on] highly unfavorable terms” to a store that operated next to one of its branches. The suppliers agreed to limit their dealing with that rival. The Supreme Court concluded that the “allegations” disclosed a “concerted refusal to deal,” that the “defendants did not dispute these allegations,” and that the allegations involved “a wide combination consisting of manufacturers, distributors and a retailer.” Such a conspiracy, the Court held, was illegal per se.

Today, courts cite Klor’s for the rule that a group boycott is illegal per se and to illustrate unlawful hub-and-spoke conspiracies. The reliance on Klor’s should be qualified, however. The Court inferred conspiracy in Klor’s when the defendants for their own reasons did not challenge the allegations and instead only argued that their conduct did not cause harm to competition. The allegations themselves depicted an ambiguous pattern of a set of vertical restraints organized by a single firm, which resulted in parallel conduct. In essence, this arrangement is equivalent to a rimless wheel conspiracy. Modern courts are unlikely to apply this inference standard.

**Parke, Davis & Co. (1960).** In Parke, Davis, the Supreme Court held that a horizontal agreement may be inferred where the acceptance of a policy involved active exchanges between a manufacturer and downstream firms. Parke, Davis, a pharmaceutical company, was troubled by discounters that sold its products below its suggested retail prices (MSRP). It informed its wholesalers that it would terminate any wholesaler that sold its products to discounters, and enforced this policy. Additionally, the company discussed the policy with its wholesalers and retailers to secure adherence, brokered an agreement among retailers not to advertise products at prices below MSRP, and amended its policy to reflect the negotiations.

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> [T]he *Interstate Circuit* case continues to fascinate the cognoscenti and to mislead the unwary. The fascination lies in working one’s way through the conspiracy finding. Equally intriguing and potentially misleading is the Court’s language that traditional conspiracy is unnecessary for a Shearman Act Section 1 violation.

39 *Masonite*, 316 U.S. at 275.

40 Id.

41 *Klor’s*, 359 U.S. at 209.

42 Id. at 209–10, 212–13.

43 *Parke, Davis*, 362 U.S. 29.
The Supreme Court found that Parke, Davis “sought assurances of compliance and got them, as well as the compliance itself.”\(^ {44}\) It, therefore, held that “[i]t was only by actively bringing about substantial unanimity among the competitors that Parke Davis was able to gain adherence to its policy.”\(^ {45}\) Thus, while unilateral refusals to deal are protected by the *Colgate* doctrine,\(^ {46}\) the Court ruled that “Parke Davis went beyond the limits of the *Colgate* doctrine.”\(^ {47}\)

**General Motors (1966).** *General Motors* involved an organized effort of rival dealers to address the problem of discounters by securing from a manufacturer RPM and assistance in enforcing the RPM policies against the price cutters. The defendants argued that the arrangement was a set of separate vertical agreements that were necessary to protect “the franchise system of distributing automobiles.”\(^ {48}\) The Court rejected the argument, finding that the individual dealers did not act “independently or separately” and that “[t]he dealers collaborated . . . among themselves and with [the manufacturer] both to enlist the aid of [the manufacturer] and to enforce dealers’ promises to forswear the discounters.”\(^ {49}\) The Court further emphasized that the manufacturer did not “confine its activities to the contractual boundaries of its relationships with individual dealers.”\(^ {50}\)

The conspiracy in *General Motors* sought to address a free-riding problem. The manufacturer’s warranty required “franchise dealers” to service new cars regardless of where they were purchased, and the discounters did not provide such services. The Court expressly rejected the justifications for the conspiracy. The case, therefore, emphasizes that, where vertical relationships facilitate a conspiracy, their procompetitive effects are irrelevant to the legality of the horizontal agreement.

**Summary of the Inference Standard as Crafted by the Supreme Court.** Between 1939 and 1966, before the “hub-and-spoke-conspiracy” metaphor entered the antitrust lexicon, the Supreme Court examined such conspiracies in five landmark decisions. These decisions permit inference of a per se unlawful horizontal agreement from an arrangement of vertical relationships. With the exception of *Klor’s*—a decision that is somewhat perplexing—the decisions emphasize that it is not the vertical relationships themselves but the totality of the communication and circumstances that may provide circumstantial evidence (namely, the plus factors) proving a conspiracy.

**The Inference Standard: Modern Hub-and-Spoke Cases**

In the modern era, since antitrust endorsed the distinction between vertical and horizontal restraints, five hub-and-spoke conspiracy cases stand out: *Toys “R” Us v. FTC (TRU)*, *Dickson v. Microsoft*, *PepsiCo v. Coca-Cola Co.*, *United States v. Apple (The eBook Case)*, and *In re Musical Instruments and Equipment Antitrust Litigation (Guitar Center)*. These cases are important for the following reasons: *TRU* articulated the legal standards for and popularized the use of the concept of a hub-and-spoke conspiracy; *Dickson* and *PepsiCo* firmly rejected “rimless wheel” conspiracy claims; *The eBook Case* challenged the law of hub-and-spoke conspiracies; and *Guitar Center* illustrated the ambiguity of the rim requirement.

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\(^ {44}\) *Id.*

\(^ {45}\) *Id.* at 46.


\(^ {47}\) *Parke, Davis*, 362 U.S. at 46; see also *Business Electronics*, 485 U.S. at 735 (emphasizing that *Parke, Davis* included vertical interactions that went beyond termination threat).

\(^ {48}\) *General Motors*, 384 U.S. at 142.

\(^ {49}\) *Id.* at 143.

\(^ {50}\) *Id.*
**Toys “R” Us (7th Cir. 2000).** In the 1980s, TRU was the largest toy retailer in the United States. Responding to the emergence of low-priced warehouse clubs, in the late 1980s TRU started aggressively negotiating vertical agreements with toy manufacturers pressuring them not to deal with warehouse clubs. The FTC determined that these vertical agreements violated Section 1.51 It also concluded that “TRU organized and enforced a horizontal agreement among its various suppliers.”52 Although TRU held “considerable market power, key toy manufacturers were unwilling to refuse to sell to or discriminate against the clubs unless they were assured that their competitors would do the same.”53 The FTC found that TRU “acted as the central player in the middle of what might be called a hub-and-spoke conspiracy, shuttling commitments back and forth between toy manufacturers and helping to hammer out points of shared understanding.”54

The Seventh Circuit affirmed, holding that the case was “a modern equivalent of the old Interstate Circuit decision.”55 Quite importantly, the Seventh Circuit also affirmed the FTC’s determination that a hub-and-spoke conspiracy may be illegal per se, though the court did not use the term “hub-and-spoke” itself. Considering the negotiations between the alleged hub and spokes, TRU shares more similarities with Parke Davis than with Interstate Circuit.

**Dickson (4th Cir. 2002) and PepsiCo (2d Cir. 2002).** Dickson and PepsiCo, decided a few weeks apart, involved high-profile alleged hub-and-spoke conspiracies, in which the plaintiffs invoked rimless wheel theories. Relying on well-established antitrust principles, the Second and Fourth Circuits emphasized that proof of hub-and-spoke conspiracy requires evidence of the rim that connects the spokes.

In Dickson, a software manufacturer argued that the distribution agreements between Microsoft and three original equipment manufacturers (OEMs)—Compaq, Dell, and PB Electronics—established a conspiracy among the OEMs. The district court granted the defendants’ motion to dismiss, holding that “a rimless wheel antitrust conspiracy is not actionable.”56 The Fourth Circuit upheld, firmly rejecting the proposition that rimless wheel theories may establish antitrust conspiracies.57

PepsiCo was similar in many ways. Coca-Cola’s vertical agreements with distributors included loyalty clauses that forced distributors to decide between the company and PepsiCo. PepsiCo challenged the legality of these clauses by arguing that they established a hub-and-spoke conspiracy, among other things. The district court granted summary judgment for Coca-Cola58 and the Second Circuit upheld that decision, stressing the rim requirement.59

**The eBook Case (2d Cir. 2015).** In 2009, when preparing for the release of the iPad, Apple decided to enter into new digital content distribution markets. The market for ebooks appeared

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51 Toys “R” Us, 126 F.T.C. at 569–74. The determination, followed by a consent order, imposed restrictions on TRU’s relationships with suppliers. In April 2014, the FTC relaxed some of the restrictions as TRU’s market position weakened. Toys “R” Us Inc., FTC Docket No. 9278, 2014 WL 1630469 (Apr. 11, 2014).

52 Toys “R” Us, 126 F.T.C. at 574.

53 Id.

54 Id.

55 Toys “R” Us, 221 F.3d at 935.


57 Dickson, 309 F.3d at 203–05.


59 PepsiCo, 315 F.3d at 110–11.
particularly promising, but entry into this market required recruitment of the large publishers. The titles of the six largest publishers (the Big Six) accounted for the overwhelming majority of best-sellers in the United States. Amazon sold over 90 percent of the ebooks of these publishers. The horizontal relationships among the Big Six were uncomfortably close from an antitrust perspective: their CEOs met a few times a year “in the private dining rooms of New York restaurants . . . to discuss common challenges . . . [and] felt no hesitation in freely discussing Amazon’s prices . . . and their joint strategies for raising those prices.”60

Apple approached the Big Six and was able to enlist five of them to enter into agency distribution agreements with MFN clauses.61 Under the agreements, the publishers retained the right to set prices of ebooks, but committed to caps at $14.99, $12.99, and $9.99, depending on the book’s hardcover price. The pricing structure created strong incentives to increase prices and, indeed, the publishers raised prices. The MFN clauses, in turn, required the publishers to change their relationships with other retailers to avoid losses.

At trial, Apple challenged the law of hub-and-spoke conspiracies, including the established inference standard that permits finding a horizontal agreement based on vertical coordination. Although the company’s “defense . . . somewhat shifted over time,” it primarily focused on “the Supreme Court’s decision in Monsanto . . . to assert that . . . the evidence [did] not ‘tend to exclude’ the possibility that Apple [had] acted in a manner consistent with its lawful business interests.”62 In Monsanto, the Supreme Court held that a firm may have “legitimate reasons” to be interested in a policy that advances parallel conduct among its distributors (or suppliers).63 The district court, however, found that the evidence unambiguously demonstrated that Apple orchestrated a cartel among the publishers.64 The court, therefore, condemned Apple’s arrangement with the publishers as a per se unlawful hub-and-spoke conspiracy, rejecting Apple’s arguments that the per se rule should not apply to schemes with vertical agreements and that the ruling would deter innovation.65 The Second Circuit upheld. The judges on the panel disagreed about the applicability of the per se rule to hub-and-spoke conspiracies but agreed that it was appropriate to infer a conspiracy from vertical coordination.66 As discussed below, the dissenting judge argued that the rule of reason should apply to cartels facilitated through vertical restraints.

**Guitar Center (9th Cir. 2015).** Guitar Center is the largest retail seller of musical instruments in the United States. It pressured the five leading guitar manufacturers to set the lowest prices at which any retailer could advertise their products, and the manufacturers adhered to this minimum-advertised-price (MAP) policy. The policy apparently intended to address free-riding problems that Guitar Center faced. The policy was also supported by the trade association of musical instrument manufacturers, which, a few years earlier, had negotiated industrywide MAP policies

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60 The eBook Case, 791 F.3d at 300.
61 Id. at 302–04. In the agency model, the publisher sets the price and pays a commission to the retailer, whereas in the wholesale model the retailer sets the retail price and the publisher receives its designated wholesale price for each book.
63 Monsanto, 465 U.S. at 762–63.
64 The SDNY eBook Case, 952 F. Supp. 2d at 694–99.
65 Id. at 706–07.
66 Compare The eBook Case, 791 F.3d at 319, 323–29 (rejecting Apple’s argument that “each piece of evidence standing alone [was] ‘ambiguous’ and therefore insufficient to support an inference of conspiracy” and applying the per se rule), with id. at 340, 345–48 (Jacobs, J., dissenting) (accepting the findings of fact of the district court, but rejecting application of the per se rule).
that it agreed to abandon in a consent decree with the FTC.\footnote{In re Nat’l Ass’n of Music Merchants, Inc., No. 1-0203, 2009 WL 641814 (FTC Mar. 4, 2009).} Guitar Center introduced its policy shortly thereafter. The plaintiffs saw a classic hub-and-spoke conspiracy, but the district court and the Ninth Circuit disagreed.

The plaintiffs did not have direct evidence of horizontal conspiracy, but instead alleged as plus factors that “the MAP policies were similar and adopted around the same time (tending to negate independent action); . . . the MAP policies were against [the] manufacturers’ individual self-interest and would succeed only if all manufacturers participated; [the] manufacturers’ key decision-makers met at summits or trade shows; and . . . show announcements and open discussions were designed to signal, announce, and police compliance.”\footnote{In re Nat’l Ass’n of Music Merchants, Musical Instrs. and Equip. Antitrust Litig., MDL No. 2121, 2012 WL 3637291, at *3 (S.D. Cal. Aug. 20, 2012), aff’d, Guitar Center, 798 F.3d 1186.}

The district court applied the \textit{Twombly} pleading standard to the alleged hub-and-spoke conspiracy and ruled that the complaint did not “answer the basic questions: who, did what, to whom (or with whom), where, and when?”\footnote{Id. (quoting Kendall v. Visa U.S.A., Inc., 518 F.3d 1042, 1048 (9th Cir. 2008)).} The Ninth Circuit recognized that “the line between horizontal and vertical restraints can blur” in hub-and-spoke conspiracies, but rejected the plaintiffs’ argument that the circumstances of the adoption of and compliance with the MAPs was sufficient to plead an actionable rim under \textit{Twombly}.\footnote{Guitar Center, 798 F.3d at 1192.} Thus, although the court recognized that hub-and-spoke conspiracies blur the distinction between vertical and horizontal agreements, in effect the court was unwilling to recognize that vertical restraints reduce the need for horizontal coordination. Instead, the Ninth Circuit made the error of trying to break the alleged conspiracy “into its constituent parts, the respective vertical and horizontal agreements.”\footnote{Id.} The court’s analysis, therefore, would seem to demand that plaintiffs offer at the pleading stage evidence of direct horizontal coordination, yet doing so provides something of a free pass to hub-and-spoke conspiracies where vertical communications may have dispensed with the need for such horizontal coordination.

\textbf{Beyond Proof of the Rim}

The discussion thus far has focused on the existence of the rim requirement and the inference standard that permits the use of vertical coordination as plus factors. Plaintiffs have a separate burden to show that a conspiracy constitutes a violation. Where the restraint is unlawful per se, the plaintiff need only to prove that the defendants colluded. But where the restraint is evaluated under the rule of reason, the plaintiff must also prove anticompetitive effects.

In cases of alleged hub-and-spoke conspiracies (and any other cartels facilitated through vertical relationships), defendants have incentives to argue that the rule of reason applies because analysis under the rule of reason is disproportionately favorable for defendants. However, the argument that the rule of reason should apply to hub-and-spoke conspiracies is fundamentally flawed in several ways.

First, the five Supreme Court landmark cases involving alleged hub-and-spoke conspiracies unequivocally established that the per se rule applies to horizontal agreements facilitated through vertical relationships. Most recent hub-and-spoke conspiracy decisions continue to state that such arrangements are unlawful per se.\footnote{The eBook Case, 791 F.3d at 321–29; Big Apple BMW, Inc. v. BMW of North Am., Inc., 974 F.2d 1358, 1376–77 (3d Cir. 1992); Rossi v. Standard Roofing, Inc., 156 F.3d 452, 461–65 (3d. Cir. 1998); see also Toys “R” Us, 126 F.T.C. at 569, 589–91.} As the Sixth Circuit explained:

\begin{quote}
[T]he argument that the rule of reason should apply to hub-and-spoke conspiracies is fundamentally flawed... 
\end{quote}
There is no special exception for applying per se status just because there is a hub and spoke conspiracy; the complaint still must show some horizontal relationship [among the spokes]. . . . [T]he critical issue for establishing a per se violation with the hub and spoke system is how the spokes are connected to each other.73

Second, GTE Sylvania, Business Electronics, and Leegin—the opinions that mark the adoption of the distinction between vertical and horizontal agreements—apply the rule of reason to vertical agreements but recognize that when vertical agreements facilitate a horizontal conspiracy the per se rule may apply.74 Specifically, in Business Electronics, the Court emphasized that the per se rule applied in Klor's, General Motors, and Parke, Davis because they involved horizontal conspiracies.75

Arguments in favor of applying the rule of reason to hub-and-spoke conspiracies disregard the exceptions recognized by the Supreme Court. Instead, some proponents of the rule of reason find support in a passage from Leegin stating:

A horizontal cartel among competing manufacturers or competing retailers that decreases output or reduces competition in order to increase price is, and ought to be, per se unlawful. . . . To the extent a vertical agreement . . . is entered upon to facilitate [a] cartel, it . . . would need to be held unlawful under the rule of reason.76

This passage, however, does not bear the weight given it by proponents of using the rule of reason. Leegin concerned the analysis of RPM arrangements under antitrust law, not cartels facilitated through vertical agreements. In this dictum, the Court recognized that vertical agreements may facilitate cartels.77 The proposition that with one line in this dictum the Court implicitly overruled established precedents is somewhat radical.78 Nevertheless, a 2008 Third Circuit decision interpreted the dictum to provide that “the rule of reason analysis applies even when . . . the purpose of the vertical agreement . . . is to support illegal horizontal agreements.”79 It is far from clear that the Third Circuit is committed to this interpretation, since at least two more recent decisions of the Third Circuit held that hub-and-spoke conspiracies may be unlawful per se, emphasizing the “long history [of hub-and-spoke conspiracies] in antitrust jurisprudence.”80 Another decision of the Third Circuit even suggests that there may be support for rimless wheel theories.81 The Second and

73 Total Benefits, 552 F.3d at 435–36.
74 See GTE Sylvania, 433 U.S. at 58 n.28 (“There may be occasional problems in differentiating vertical restrictions from horizontal restrictions . . . but we do not regard the problems of proof as sufficiently great to justify a per se rule.”); Business Electronics, 485 U.S. at 734–35 (explaining the ruling in light of Klor's, Parke Davis, and General Motors); Leegin, 551 U.S. at 892–94 (describing how RPM may be used to facilitate collusion).
75 Business Electronics, 485 U.S. at 734–35.
76 Leegin, 551 U.S. at 893.
77 Id. at 893–94.
78 See, e.g., The eBook Case, 791 F.3d at 324 (“This position relies on a single sentence from [Leegin]. . . . If the Supreme Court meant to overturn General Motors and Klor’s—precedents that it has consistently reaffirmed—this cryptic sentence was certainly an odd way to accomplish that result.”); MM Steel, 806 F.3d at 849 (“We decline to hold that [in Leegin] the Supreme Court silently overruled [a] line of cases by stating that vertical agreements to regulate prices that facilitate horizontal agreements to regulate prices ‘too, would need to be held unlawful under the rule of reason.’”).
80 Insurance Brokerage, 618 F.3d at 327; Total Benefits, 552 F.3d at 435–36.
81 Howard Hess, 602 F.3d at 256; see supra notes 28–30 and accompanying text.
Fifth Circuits have expressly rejected the view that *Leegin* intended to apply the rule of reason to cartels facilitated through vertical relationships, such as hub-and-spoke conspiracies.82

Third, rule of reason is often described as an elaborate balancing process of evaluating competitive effects, in which “the factfinder weighs all of the circumstances of a case in deciding whether a restrictive practice should be prohibited as imposing an unreasonable restraint on competition.”83 In practice, however, a rule of reason inquiry typically does not involve evaluation of net competitive effects.84 As antitrust evolved, the application of the rule of reason analysis to vertical restraints effectively came to mean that these restraints are presumptively lawful.85 Thus, considering how antitrust jurisprudence has developed in recent decades, claims that alleged hub-and-spoke conspiracies should be evaluated under the rule of reason effectively mean that this type of alleged conspiracy should be assessed under a presumption of legality. Stated differently, these claims imply that cartels facilitated through vertical relationships tend to be procompetitive, since this is the meaning of the legality presumption.

Finally, the application of the per se rule to cartels facilitated through vertical relationships has a very narrow meaning: it condemns only those aspects of the arrangement that facilitate a conspiracy among upstream or downstream firms, but may not reach to the vertical relationships themselves. For example, where a manufacturer facilitates a cartel among its distributors through an MFN or RPM policy, antitrust law may condemn the facilitating policy but not the vertical relationships between the manufacturer and its distributors. Thus, the application of the per se rule to cartels facilitated through vertical relationships, such as hub-and-spoke conspiracies, does not compromise the ability of firms to take advantage of the procompetitive effects that vertical agreements may offer.

*The eBook Case* illustrates how the argument for the application of the rule of reason may confuse courts. In June 2015, the Second Circuit upheld the district court’s ruling that Apple’s arrangement with book publishers was illegal per se and, therefore, proof of competitive effects was not needed. The split among the judges on the panel, however, demonstrates continuing confusion regarding the application of the per se rule to hub-and-spoke conspiracies. The majority judges agreed that price-fixing hub-and-spoke conspiracies are unlawful per se and that the per se rule was appropriate to the arrangement that Apple set up.86 They disagreed, however, over the question of whether an abbreviated rule of reason (quick look) may apply as well.87 The dissenting judge rejected the application of the per se rule to hub-and-spoke conspiracies, writing that “[a] vertical relationship that facilitates a horizontal price conspiracy does not amount to a per se violation.”88 He reached this conclusion using the (misguided) premise that “every challenged restraint is . . . classified as either horizontal or vertical”89 and the premise that vertical restraints

82 *See The eBook Case*, 791 F.3d at 324; *MM Steel*, 806 F.3d at 849.
83 *GTE Sylvania*, 433 U.S. at 49.
84 *See Barak Orbach, Antitrust Stare Decisis, ANTITRUST SOURCE*, Oct. 2015, at 6–8 (describing the structural analysis under the rule of reason and explaining why it is considerably more favorable to defendants), http://www.americanbar.org/content/dam/aba/publishing/antitrust_source/oct15_orbach_10_19f.authcheckdam.pdf.
87 Id. at 329–30 (plurality opinion as to Part II.B.2 applying the rule of reason).
88 Id. at 345 (Jacobs, J., dissenting).
89 Id. at 346.
are likely to be procompetitive even when they facilitate cartels: “the vertical nature of [an] agreement is its salient feature . . . [and, therefore,] influence of a vertical arrangement on a horizontal cartel . . . does not render the vertical arrangement *per se* unlawful.” In March 2016, the Supreme Court denied Apple’s petition for certiorari.\(^9\)

The proposition that proof of hub-and-spoke conspiracies requires showing of competitive effects where the underlying horizontal restraint is unlawful *per se* presses antitrust formalism to the extreme: it insists that there is a sharp distinction between vertical and horizontal arrangements and that vertical arrangements are likely to be procompetitive even when they facilitate cartels.\(^9\) For good reasons, most courts have rejected this proposition.

**Conclusion**

A hub-and-spoke-conspiracy has four elements: (1) a “hub,” which is the facilitating firm; (2) “spokes,” which are upstream or downstream firms; (3) vertical restraints that connect the hub and the spokes; and (4) the “rim” that connects the spokes. Properly understood, these conspiracies have a narrow meaning that refers to the practices that facilitate the collusion among the spokes at the rim, not to the arrangement of vertical relationships between the hub and the spokes.

Hub-and-spoke conspiracies are well recognized in antitrust jurisprudence and, overall, their analysis under antitrust law has been relatively stable during the past eight decades. Although courts sometimes get distracted on these issues, the rim requirement and the per se rule have applied to hub-and-spoke conspiracies since *Interstate Circuit*. Courts, however, still grapple with the meaning of the rim requirement or, more precisely, with the inference of the rim derived from circumstantial evidence. Courts have always intuitively recognized that vertical relationships may facilitate horizontal conspiracies and may be used to reduce the need for and even replace horizontal coordination. The case law of hub-and-spoke conspiracies reflects this understanding, but courts have not yet expressly articulated why and how to use vertical arrangements as plus factors to infer a horizontal conspiracy.

The analysis of hub-and-spoke conspiracies seems in tension with certain aspects of the Supreme Court’s antitrust jurisprudence, since it rejects drawing a sharp distinction between vertical and horizontal agreements and it focuses on anticompetitive effects of vertical relationships, rather than on procompetitive ones.\(^9\) But that tension does not arise from a disregard of developments in antitrust law in recent decades. Instead, it stems from recognition that the antitrust jurisprudence of vertical restraints is too rigid and inadequate for cartels facilitated through vertical relationships. In this sense, the analytical framework courts use to analyze hub-and-spoke conspiracies underscores some of the limits of the antitrust jurisprudence of vertical restraints.

Arrangements of vertical relationships that result in parallel conduct among competitors are a common phenomenon that often promotes efficiency but may also facilitate cartels. What distinguishes a potentially efficient and permissible arrangement from unlawful conspiracy is a conscious horizontal agreement; such horizontal agreement may be facilitated and find expression in

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\(^9\) Id.


\(^9\) See id. (analyzing the limits of antitrust formalism).
vertical relationships. The “rim requirement” reflects this economic insight: proof of a hub-and-spoke conspiracy requires evidence of a horizontal agreement. At least since the late 1930s, courts have been willing to infer a horizontal agreement from vertical arrangements and the circumstances under which those arrangements come into existence. Courts can and should expressly acknowledge this inference standard; they not only have been using it for eight decades, but it best fits with modern economic theory as to the actual character of hub-and-spoke cartels.
Donald Trump’s Major Antitrust Encounters

Robert A. Skitol

Donald Trump, in the course of his campaign for President, has not yet provided much if any indication of the likely shape of a Trump Administration’s antitrust enforcement program. Nor, prior to his current campaign, did he have occasion to offer public opinions about antitrust issues or antitrust’s role in economic affairs. On the other hand, he has had three major antitrust encounters in the course of his business career, and they may provide a clue or two about his general attitude toward antitrust law. These encounters are: the joint Federal Trade Commission and Department of Justice enforcement action against him in 1988 for alleged violations of the Hart-Scott-Rodino Antitrust Improvements Act (HSR); the 1980s litigation between the United States Football League and the National Football League; and the 1990s litigation between and among the Sands Resorts, Penthouse, and Trump interests in Atlantic City hotel casinos.

HSR Act Violations

The HSR Act requires any party with sales or assets exceeding specified minimums to notify the FTC and DOJ of its intent to acquire stock or assets of another party whose sales or assets also exceed specified minimums and to refrain from consummating the contemplated transaction during a specified “waiting period.” During that waiting period, one or the other of these enforcement agencies will review the transaction and determine whether it should be challenged because of perceived anticompetitive effects. In 1988, both agencies charged Trump with violations of the HSR Act as a result of his acquiring—both directly and through his investment banker, Bear Stearns & Co.—stock in two gaming companies, Holiday Corp. and Bally Manufacturing Corp., without making the required HSR filing and without regard to applicable waiting periods.

Trump appears to have relied on “put-call option agreements” with Bear Stearns under which he acquired beneficial ownership of the shares purchased in Bear Stearns’ name. Bear Stearns apparently relied on either the investment exemption under Section 802.9 or the institutional investor exemption under Section 802.64 of the HSR Rules to treat these purchases as exempt from the reporting and waiting period requirements. The FTC’s Bureau of Competition, however, saw this more as a “device entered into or employed for the purpose of avoiding” HSR obligations and thus covered by Section 801.90 of the HSR Rules.

1 His website does, however, include an endorsement of a procompetitive step in health insurance markets: “Modify existing law that inhibits the sale of health insurance across state lines. As long as the plan purchased complies with state requirements, any vendor ought to be able to offer insurance in any state. By allowing full competition in this market, insurance costs will go down and consumer satisfaction will go up.” https://www.donaldjtrump.com/positions/healthcare-reform.


Trump was one of only three parties charged with that kind of improper use of put-call option agreements in 1988.\textsuperscript{4} Trump settled the charges in his case by paying a civil penalty in the amount of $750,000.\textsuperscript{5}

\textbf{USFL v. NFL}

The USFL was founded in 1982 as a spring football league. Trump was not part of the founding group of team owners but became an owner upon his purchase of the New Jersey Generals in 1983. He quickly became a dominant force in league decision-making and strategy. Most importantly, he prevailed over all of the owners to move the league games to a fall schedule and thus in much more direct competition against the NFL. While many and perhaps most of the owners had serious reservations about this change, Trump had no doubt whatsoever about it. He was quoted as saying that “if God wanted football in the spring, He wouldn’t have created baseball.”\textsuperscript{6}

Indeed, the schedule change became part of a reported broader Trump plan to effectuate a merger between the NFL and the USFL, a plan that included a USFL lawsuit against the NFL for unlawful monopolization of major league professional football.\textsuperscript{7} The USFL complaint alleged a broad array of exclusionary acts contributing to the monopolization, including entering into contracts with all three of the major television networks that prevented the USFL from contracting for effective TV coverage, attempting to “co-opt” USFL owners including Trump, attempting “to preclude the USFL’s New Jersey Generals from moving to New York City,” an NFL “Supplemental Draft of USFL players,” the NFL’s move to a 49-man roster, and “NFL’s activity directed at specific USFL franchises such as the Oakland Invaders.”\textsuperscript{8}

The jury found that the NFL had willfully acquired or maintained monopoly power over the relevant market in violation of Section 2 of the Sherman Act. But the jury awarded damages of only one dollar, trebled to three dollars, finding in essence that the USFL’s failure was caused by its own mismanagement rather than by the NFL’s conduct. (The district judge awarded attorneys’ fees of $5.5 million.) The district court upheld the jury verdict and declined to issue any injunction; the Court of Appeals for the Second Circuit affirmed in all respects. The USFL played its last game in 1985, having lost approximately $200 million after three seasons and getting nothing out of its antitrust suit.

As the court of appeals observed, “The USFL failed because it did not make the painstaking investment and patient efforts that bring credibility, stability and public recognition to a sports league”; it “abandoned its original strategy of patiently building up fan loyalty and public recognition by playing in the spring”; faced with rising costs “and some new team owners impatient for immediate parity with the NFL, the idea of spring play itself was abandoned even though network and cable contracts were available”; and these actions “were taken in the hope of forcing a merger with the NFL through the threat of competition and this litigation.”\textsuperscript{9} As the court of appeals


\textsuperscript{7} Id. at 2, 9.

\textsuperscript{8} U.S. Football League v. Nat’l Football League, 842 F.2d 1335, 1341–42 (2d Cir. 1988).

\textsuperscript{9} Id. at 1341.
noted, to grant the requested relief would “reward [the USFL’s] impatience and self-destructive conduct with a fall network contract”; the USFL was thus seeking “through court decree the success it failed to achieve among football fans.”

The court of appeals came back to that same theme at the end of its opinion:

The jury . . . obviously found that patient development of a loyal following among fans and an adherence to an original plan that offered long-run gains were lacking in the USFL. Instead, the USFL quickly changed to a strategy of competition with the NFL in the fall, hoping thereby to force a merger of a few USFL teams out of large television markets and a resultant reduction in value of USFL games to television.

**The Atlantic City Hotel Casino Case**

Trump’s third antitrust adventure, beginning in 1989 and ending in 1993, forced him to defend himself against charges of: (1) attempting to monopolize casino gambling in a market defined as the “Central Boardwalk Area” of Atlantic City; and (2) conspiring with Penthouse and its owner, Robert Guccione, to suppress competition within that market in violation of the New Jersey Antitrust Act.

It evolved into a classic scorched-earth antitrust war.

The plaintiff, an affiliate of the Sands Resorts, wanted to purchase several parcels of land from Penthouse that it could develop into a hotel casino next to Trump’s existing hotel casino on that Atlantic City Central Boardwalk Area. The Sands affiliate had a contract with Penthouse to purchase those properties but a vast multitude of zoning, regulatory, financing, and other contingencies resulted in repeated and prolonged delays in the closing of the transaction. These delays created openings for Trump to persuade Guccione to allow Trump to replace the Sands affiliate as the buyer of the properties in question. This thereby enabled Trump to avoid new competition as well as to build his own third Atlantic City casino hotel. He already owned Trump Plaza within the Central Boardwalk Area and the huge Taj Mahal elsewhere in Atlantic City.

The ensuing antitrust claims were part of a massive array of legal claims asserted between and among the plaintiff, Penthouse, and Trump interests in the Chancery Division of the Atlantic County Superior Court of New Jersey: many varieties of alleged breach of contract, tortious interference, fraud, civil conspiracy, violations of the New Jersey Racketeering Influence and Corrupt Organizations Act, and more. But the antitrust claims enabled the Sands interests to assert entitlement to an award against Trump of $2.1 billion—treble the alleged damages of $700 million.

With stakes that high, it is not surprising that both Sands and Trump retained true giants in the antitrust economics field as expert witnesses: Yale University’s Paul McAvoy for Sands and Cornell University’s George Hay for Trump. As with most complex antitrust claims, relevant market definition became the core issue in the litigation, with McAvoy supporting and Hay contesting the proposition that the relevant market was hotel casinos within the Central Boardwalk Area of Atlantic City, thereby excluding hotel casinos within other parts of Atlantic City.

The trial consumed a full ten months in 1992, and Judge L. Anthony Gibson released a 109-page decision on March 25, 1993. The court flatly rejected Sands’ attempt to define the geographic market as limited to the Central Boardwalk Area of Atlantic City. It further ruled that, even if the market were as alleged, and even if Trump’s actions “were motivated by an effort to reduce

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10 *Id.*

11 *Id.* at 1379.
“[T]he claims in this case went too far, cost too much, took too long and proved too little . . .”

The court nonetheless emphasized that “the most fundamental flaw” in the antitrust case was the alleged market definition. The conclusion was that the relevant market was “at least the City of Atlantic City” based on “the ease with which casino customers can and do move from casino to casino” and “choices customers make on subsequent trips.” The court was also “influenced by the role of the Casino Control Commission,” the agency “with the primary responsibility for regulating the conduct of casinos,” noting that it “recognizes a city-wide market and evaluates competition within that context.” Another consideration was “the absence of physical and economic barriers that might otherwise prevent consumers from turning to other casinos.” Thus, “even if Trump had raised ‘prices’ as part of his alleged anticompetitive conduct, other choices were readily available to casino customers, in and out of the Central Boardwalk Area.”

According to one close observer of the case, it “dragged on four long years, racked up more than 15,000 pages of court transcripts, and cost, by some estimates, $50 million for all the paperwork and all the lawyers”; the lawyers themselves “were enough to fill out four baseball diamonds.” Judge Gibson was quoted as saying he believed “the claims in this case went too far, cost too much, took too long and proved too little”; the “big loser . . . was the Sands Hotel Casino, which was ordered to pay more than $8 million in penalties for what Judge Gibson called breach of contract.” According to one report, the lawyers for Trump and Guccione “were openly gleeful”; a Trump lawyer said “Trump’s out clean”; close observers said the suit “should have been settled long ago” but “the easily bruised egos of the principals” kept the litigation going by “trading personal insults”; and, “in the end, the case was more about pride than property, more about ego than economics.”

Conclusion
So what do Trump’s three antitrust encounters tell us to expect from a Trump Administration’s antitrust program over the course of the next four years? Alas, not much, but here are a few predictions.

First, the FTC/DOJ action in 1988 for violation of HSR reporting and waiting period requirements has probably left Trump with a bad attitude toward the HSR “regulatory” scheme. He may now be pretty hostile toward HSR limitations on deal-making.

Second, the USFL/NFL litigation ended badly for Trump’s side but was, in all likelihood, an adventure from his standpoint. Perhaps the main lesson for a President Trump is that private par-

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13 Id.
14 Id. at 65–66.
16 Id.
17 Id. at 2.
ties injured by antitrust violations should not look to the government for redress; they can follow his example by filing their own antitrust suits.

Finally, Trump’s scorched-earth defense against claims of attempted monopolization of the hotel casino business in a major part of Atlantic City revealed a determination to spare no expense in defense of his plan to add a third hotel casino to his empire. All indications would seem to be that he strongly supports empire-building, at least on his own terms. From this perspective, it is difficult to imagine that a Trump Administration brings any big Section 2 cases.
Ginger Zhe Jin, Director, FTC Bureau of Economics: Information Asymmetries, Disclosure, and Economic Outcomes

Fei Deng and Qian Lu

Professor Ginger Zhe Jin started her new role as Director of Bureau of Economics at the FTC in January 2016, succeeding Francine Lafontaine. Professor Jin was born and received her earlier training in economics in China. She came to the U.S. for graduate study and earned her Ph.D. in economics from the University of California, Los Angeles in 2000. She then began her professional academic career at the University of Maryland, College Park (UMD), where she has been a Professor in the Department of Economics since 2012.

In addition to fulfilling her teaching and student advisory responsibilities at UMD and serving as an editor for several economics journals, she has been actively involved in an initiative to build and publish a digitized nationwide database of food safety inspections of restaurants. She is a co-founder and chief data scientist of Hazel Analytics, a food safety inspection data gathering and analytics company, established in October 2014. The company is a direct outgrowth of research Professor Jin and co-authors have conducted in the area of food safety inspections.

As an empirical Industrial Organization economist, Professor Jin’s research is characterized by compelling questions, large and original datasets, and effective application of econometric techniques. A recurring theme in her research is the effect of correcting information asymmetries among economic agents. A majority of her published papers study the effect that information disclosure has on economic agents’ behavior and economic outcomes. This has direct application to the consumer protection activities of the FTC, which have the goal, among other things, of ensuring that companies provide consumers with accurate information. In the rest of the article we discuss her research broken down by industry.¹

Restaurant Hygiene

Professor Jin has more than a decade of research experience studying the effects of the introduction of restaurant hygiene information disclosure policies. She and her co-authors collected original data on restaurant inspection records and food-born hospitalization rates, and used these data to study empirically a wide range of topics, such as how restaurants responded to the introduction of a mandatory or voluntary hygiene information disclosure policy; how the policy affected consumer health in the short run and in the long run; and whether reputational incentives were effective in disciplining restaurants to maintain good hygiene quality. She and her co-authors’ research in this area have significant policy implications, and have won several research grants from the National Science Foundation, Sloan Foundation, and Maryland Innovation Initiative.

¹ We cover a majority, but not all, of Professor Jin’s research in this article. For a full list of her publications, please refer to her curriculum vitae at http://kuafu.umd.edu/~ginger/cv/jincv-02262016.pdf.
In her earliest and most-cited paper, Jin and Leslie (2003), Professor Jin and her co-author studied the effect of the introduction of a mandatory policy in Los Angeles County in December 1997, requiring restaurants to post hygiene quality grade cards in their windows. They found that this policy was very effective: in 1998, the year following the implementation of the policy, the public display of restaurant hygiene grade cards led to an increase in inspection scores, consumer switching from poor hygiene restaurants to good hygiene restaurants, and a 20 percent decline in food-borne hospitalizations. In a follow-up paper, Professor Jin and her co-authors extended the study by examining the long-run policy effect, and found that the public health benefit of the policy was long lasting—the decrease in the number of foodborne-disease hospitalizations in Los Angeles County was sustained over the next two years (1999–2000).

In addition to mandatory information disclosure, Professor Jin and her co-authors also looked at the effect of voluntary information disclosure in a recent study. They studied how restaurants reacted after the adoption of a voluntary disclosure policy of restaurant hygiene using letter grade cards in Maricopa County, Arizona, in 2011, and found that the voluntary disclosure policy led to a disclosure rate of 57.6 percent, and more surprisingly, “48% of non-disclosing restaurants would have posted an A grade if they had chosen to disclose.” They further reasoned that this surprising result might be explained by countersignaling—when information is coarse, restaurants with the best quality (A plus grade) may choose to use non-disclosure as a countersignal to distinguish themselves from eager-to-disclose medium-quality (A minus and B grades) restaurants, while medium-quality restaurants used disclosure to stand out from lower-quality restaurants.

Another finding of Jin and Leslie (2003) is that 25 percent of restaurants in Los Angeles had very good hygiene even before the mandatory display of hygiene grade cards. This interesting fact indicates that there are market-based incentives that drive restaurants to maintain good hygiene even in the absence of the policy. In Jin and Leslie (2009), Professor Jin and her co-author tested the extent to which reputational incentives were effective at disciplining restaurants to maintain good hygiene quality. They found that reputation was an effective discipline incentive—but only for a subset of restaurants, such as chain restaurants and restaurants located in areas with more repeat customers. This is because the amount of information disclosed by reputation and the degree of consumer learning from reputation varies substantially across restaurants. Thus, their findings highlight the importance and benefit of policy intervention in food safety, despite the existence of reputational incentives.

Inspections require costly manual effort and the results may be subject to measurement error and bias. Professor Jin evaluated these issues by comparing the inspection results and restaurant responses before and after an upgrade of the restaurant hygiene detection technology to portable digital assistants (PDAs) in Florida in November 2003. Before the introduction of PDAs,

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5 Id. at 3.
inspectors needed to manually mark 31 categories of critical violations and 24 non-critical violations on a standardized form. With a PDA, inspectors could rely on a list of 1000 possible violations with a detailed explanation of each violation, retrieve past reports, and upload the current inspection results immediately to a database. Professor Jin and her co-author found that the adoption of PDAs led to an 11 percent increase in detected violations at first, and a 5.4 percent decline in violations subsequently, suggesting that restaurants gradually increased their compliance efforts. They also found that the adoption of PDAs was associated with fewer restaurant-related food-borne disease outbreaks.

As an extension to Professor Jin and her co-authors’ published research in the restaurant hygiene area, they took on a project of building and publishing a digitized nationwide database of food safety inspections of restaurants. This now-established database contains historical and current records of nationwide restaurant food safety inspection results and can be accessed by the public. This project demonstrates Professor Jin’s first-hand experience dealing with issues related to big data, such as standardization of public information, which provides useful background for her in dealing with information issues at the FTC.

**Prescription Drugs**

In addition to restaurant food safety, Professor Jin has also studied various aspects of information asymmetry in the prescription drug market in terms of drug quality and factors that affect consumers’ choice of prescription drug.

In a series of papers, Professor Jin and her co-authors used hand-collected data from developing countries and examined how drug quality is associated with price and other observable attributes of the drug, local regulation, and other characteristics, such as local consumer income and educational level. Although these studies do not address the U.S. drug industry directly, U.S. consumers rely heavily on imported drugs—80 percent of the ingredients and 40 percent of final medications come from abroad, notably India and China. Thus, a better understanding of the global prescription drug supply chain and the effects of regulatory quality control policies would ultimately benefit U.S. consumers as well.

In the first of this series of papers, Professor Jin and her co-authors constructed an original dataset containing a sample of 899 prescription drugs sold in 17 developing countries between 2008 and 2010, and tested drugs for accuracy of package information, the presence and relative concentration of active ingredient, and drug formulation. Their analysis shows that poor-quality drugs were priced 13.6–18.7% lower than good-quality drugs of the same drug type. In addition, they found that although consumers were likely to suspect low quality for drugs with a lower market price, a brand other than the innovator, and the look of the pharmacy, none of these signals could perfectly identify poor-quality drugs. Their results suggest that the information asymmetry between consumers and drug manufacturers cannot be totally solved by the signaling effect of

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8 https://hazelanalytics.com/.


11 Fifteen percent of the sample failed in at least one test and were classified as “poor-quality” drugs. The rest of the sample that passed all tests were classified as “good-quality” drugs. Id. at 1155.
price and other observable characteristics of the drug, leaving room for post-market inspection of drug quality and education of consumers on identifying drug quality as means to maintain drug quality in developing countries.

In a follow-up study, Professor Jin and her co-authors further categorized poor-quality drugs as either “falsified” (a drug contains zero correct active ingredient) or “substandard” (a drug contains a nonzero but incorrect amount of the active ingredient) and explored how price and non-price signals can help distinguish between falsified, substandard, and good-quality drugs. They found that while substandard drugs are on average cheaper than good-quality generics in the same city, and thus can be identified based on the price, falsified drugs are more likely to mimic good-quality generic versions of the drugs in terms of both price and packaging, thus making it difficult for consumers to identify them ex ante. Similar to the results in Professor Jin’s earlier paper, this finding suggests the importance of regulatory oversight when the signaling effect of price and other characteristics cannot fully solve information asymmetries.

A recent work by Professor Jin expands her study of prescription drugs to online drug markets. While online purchase of prescription drugs may attract consumers due to convenience and possible cost savings, it also raises quality and safety concerns due to information asymmetry. In Bate, Jin, and Mathur (2013), Professor Jin and her co-authors examined why consumers chose to shop for prescription drugs online and the role of public and private certification agencies in delivering quality information. They found that the certification agencies, although some are not endorsed by the FDA, play an active role in both the demand and the supply of online drugs. On the demand side, the certification agencies provide U.S. consumers with useful quality information about different websites. On the supply side, the authors found no failure of authenticity within the samples that they tested, as long as the drugs were from certified websites, whether FDA-endorsed or not.

Another focus of Professor Jin’s research on prescription drugs is the role of information in drug diffusion, including how direct-to-consumer advertising of prescription drugs affects the behavior of doctors and patients and how patient satisfaction affects diffusion of prescription drugs. In Iizuka and Jin (2005), Professor Jin and her co-author studied how an increase in direct-to-consumer advertising (DTCA), driven by a policy change regarding the advertising content requirement, affected doctor visits. Their findings suggest a market expansion effect—higher DTCA expenditures were associated with increased doctor visits, presumably due to the fact that ads inform consumers of new treatment options. Iizuka and Jin (2007) extended this study by looking at whether DTCA affects physician prescription choice once the patient visits a doctor, and found that DTCA has little effect on the choice of prescription drug, while detailed advertising to physicians has a much larger and longer-lasting effect.

All together, these two papers show that DTCA expands the market for prescription drugs but does not distort prescription drug choice once the patient arrives at the physician’s office. This finding provides important policy implications in support of the use of DTCA. Chintagunta, Jiang,

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13 Roger Bate, Ginger Zhe Jin & Aparna Mathur, In Whom We Trust: The Role of Certification Agencies in Online Drug Markets, 14 B.E. J. ECON. ANALYSIS & POL’Y 111 (2013).
and Jin (2009) further explores the diffusion of prescription drugs by studying whether it depends solely on advertising and updates from the Food and Drug Administration (FDA) or if the market can also learn the efficacy of new drugs through physician learning. They found that prescription choice is sensitive to many sources of information, including physician’s learning from patient satisfaction, academic articles, news articles, and FDA updates, but these channels do not necessarily substitute for each other since they may reflect different dimensions of drug quality.

**Health Care**

Professor Jin has also conducted research in the health care area, studying use of voluntary quality disclosure by health maintenance organizations (HMOs) as a form of differentiation, the effect of contribution scheme design (e.g., employer premium contribution) on health care plan pricing, and the effect of disclosed health plan ratings on individuals’ plan enrollment decisions.

In Jin (2005), she investigated why only half of health maintenance organizations (HMOs) chose to disclose quality information under a voluntarily disclosure policy, and more specifically, how competition affected their disclosure incentives. She found that HMOs used voluntary disclosure decisions to differentiate themselves from their competitors and that competition provided incentives for differentiation. When ratings for HMOs were first introduced, the earliest disclosures appeared in the most competitive markets because good-quality HMOs in these markets had the strongest incentives to differentiate themselves from non-disclosing lower-quality HMOs in the same area. However, as the number of competitors increased, HMOs in highly competitive markets had stronger incentives to use non-disclosure as counter-signaling, presumably due to limited degree of differentiation among disclosed qualities. Thus, areas with more HMOs ended up having a smaller proportion of disclosing HMOs. Interestingly, her findings here are consistent with her findings in the area of restaurant hygiene voluntary disclosure policies.

Professor Jin has also looked at how health plan ratings affect individuals’ plan enrollment decisions, and found that higher publicized ratings increased enrollment, especially for individuals who chose a plan for the first time. More recently, Professor Jin and her co-author analyzed how the design of the employer premium contribution scheme can affect health plan pricing by studying the effect of a premium subsidy policy change in the Federal Employees Health Benefits Program (FEHBP). Their findings suggest that an increase in employer premium contribution percentage leads to a higher health insurance premium, partly because consumers are less price sensitive when only a part of the premium increase falls on them, partly because it creates an incentive for health plans to strategically set the premium in order to obtain more premium contribution from the employer.

**E-Commerce**

Issues related to information sharing faced by e-commerce firms are similar to the issues faced by firms in traditional markets, but with some distinct characteristics. For online platforms, the issue of information asymmetry is exacerbated by the fact that the sellers and/or buyers are often

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18 Bederson et al. (2015), supra note 4.
anonymous, which can make adverse selection problems more likely. On the other hand, the Internet also enables each individual to have access to a large amount of information when making a decision. However, the abundance of information could also be a double-edged sword: it might be time-consuming and difficult for a consumer to process all the information. Therefore, how to aggregate, interpret, and present the information has strategic importance for online platforms.

One type of online platform Professor Jin studied is peer-to-peer (P2P) lending. In a P2P market, both lenders and borrowers are anonymous, and only part of borrower’s credit history is disclosed to lenders. Therefore, there might be adverse selection on the borrowers’ side—those who choose to borrow through P2P may do so because their credit history is sufficiently poor that they cannot get a loan in traditional lending markets.

In Freedman and Jin (2011), Professor Jin and her co-author studied how sellers overcome the information asymmetries about borrower risks using market-level information. Using daily transactional data on lenders’ portfolios and the loan payment history of a leading P2P lending website, Prosper.com, they found that lenders, especially those that joined Prosper.com early, underestimated borrower risk and suffered accordingly in the beginning. Over time, lenders learned to reduce the risk from their own mistakes, as well as from the portfolio performance of other lenders in the market. Because of this learning by doing process, the P2P market over time excluded risky borrowers and converged towards the traditional lending market.

In a later study, Freedman and Jin (2015), Professor Jin and her co-author further examined the value of information disclosed from social network features instituted by Prosper.com. The social networks on Prosper.com are in the form of friend connections and group memberships, mainly functioning via informal borrower credit endorsement and lending activity updates. The authors found that although network affiliated loans were more likely to get funded and get lower interest rates, only social ties involving friends who also contributed to the loan produced better ex post performance.

Another online platform that Professor Jin studied is sports card trading. In Kato and Jin (2006), Professor Jin and her co-author analyzed if the ratings and quality claims of sellers can be used to infer product quality in online baseball card trading. They designed a field experiment to obtain the “true product quality,” where they bid on and purchased ungraded cards from auctions on eBay.com weekly during December 8, 2001 and March 18, 2002 from sellers with different claimed product qualities, and then had the cards professionally graded. Combined with additional data obtained from eBay.com from April to December 2001 on features, such as final price, number of bids, shipping cost, length of auction, seller ratings, and card grades, they found that buyers paid more for cards with high seller-claimed quality, but that higher seller-claimed quality was more likely to be associated with lower actual card quality and even fraud. Additionally, they found that reputable sellers suggested by online seller ratings were less likely to make high self-claims and less likely to engage in fraud, and buyers were more willing to bid on items and purchase from reputable sellers. Moreover, conditional on the auction being completed, seller reputation had no significant impact on winning prices.

23 Andrew Kato & Ginger Zhe Jin, Price, Quality and Reputation: Evidence from an Online Field Experiment, 37 RAND J. Econ. 983 (2006).
In another working paper, Professor Jin and her co-authors looked at how buyer protection mechanisms could affect buyers, sellers, and market outcomes for Eachnet.com, an eBay-equivalent Chinese online trading website.\textsuperscript{24} They found that, early on, the adoption of a money-back buyer protection mechanism had a negative effect on seller ratings and the number of sellers and listings. The rationale behind this result is that, all else equal, buyer protection increases buyers’ willingness to buy and the expected profit of sellers, and this then disproportionally motivates strategic sellers (in contrast to honest sellers) to enter and cheat. The authors suggest that in order for a trust-enhancing mechanism to work, it needs to not only protect buyers, but also to penalize cheating sellers.

With the enormous amount of information online, how to aggregate and interpret information is a key question faced by many online platforms. In a recent working paper, Professor Jin and her co-authors proposed an alternative “optimal” method of averaging consumer reviews with weights accounting for reviewer biases, reviewer heterogeneity, and the changing quality of restaurants over time, rather than the simple arithmetic average used by websites like Yelp.com.\textsuperscript{25} They found that the results from their proposed methodology can differ significantly from that of the simple average: for 19 to 41 percent of restaurants in their sample, there was a difference of more than 0.15 stars and for 5 to 19 percent of restaurants there was a difference of 0.25 stars. They explained that most of the difference is driven by the evolution in a restaurant’s quality over time—the simple average weights a restaurant’s first review the same as it weights the thousandth review. In contrast, their algorithm reduces the weight assigned to early reviews and hence more quickly adapts to changes in quality. It is worth noting that although their algorithm is derived from Yelp reviews, it could be applied to virtually any website that relies on consumer ratings to convey information about product or service quality. It is also interesting to note that although the optimal methodology is arguably better in terms of accounting for the evolution of restaurant quality and reviewer preferences and heterogeneity, most review websites, such as Yelp, Amazon, and TripAdvisor, currently are still using the simple arithmetic average. One possible reason, as the authors noted, might be that arithmetic averages are transparent and uncontroversial, and are thus at lower risk of antitrust or unfair competition allegations. The paradox is that the risk minimizing methodology may not generate an outcome that produces the best information for consumers, contrary to the ultimate goal of antitrust and consumer protection.

**Conclusion**

A review of Professor Jin’s academic work shows that she has extensive empirical research experience in many industries, focusing on the effect of information disclosure on economic agents’ behavior and economic outcomes. Most of her research has involved collecting and building innovative and original datasets and cleverly exploiting natural experiments to answer complex and puzzling questions. Her deep involvement with the construction and publication of digitized nationwide database of restaurant hygiene inspections gives her an insider’s perspective on issues surrounding big data, her rich research experience studying policy effects in health care, prescription drug, e-commerce, and other industries prepares her well for her new role at the FTC.


Paper Trail: Working Papers and Recent Scholarship

Editor's Note: Editor Bill Page reviews two recent papers proposing antitrust responses to increases in the prices of drugs shortly after firms acquire their rights.

Send suggestions for papers to review to: page@law.ufl.edu or jwoodbury@crai.com.

—WILLIAM H. PAGE AND JOHN R. WOODBURY

Recent Papers

Frederick M. Abbott, Excessive Pharmaceutical Prices and Competition Law: Doctrinal Development to Protect Public Health

Michael A. Carrier, Nicole Levidow & Aaron S. Kesselheim, Using Antitrust Law to Challenge Turing’s Daraprim Price Increase

These two papers propose antitrust responses to recent highly publicized increases in the prices of drugs shortly after firms acquired their rights. In one episode, “pharma bro” Martin Shkreli’s Turing Pharmaceuticals raised the price of Daraprim (pyrimethamine), a drug used to treat toxoplasmosis and whose rights the company had recently acquired, by 5,500 percent to $750 per dose. In a less notorious case, Gilead Sciences set the price of Sovaldi (sofosbuvir), used to treat Hepatitis C, at $84,000 over a 12-week regimen, more than double what the prior owner of the drug had planned to charge.

In Excessive Pharmaceutical Prices and Competition Law, Frederick Abbott takes the direct approach to high drug prices: he argues that excessive pricing of even patented drugs should be illegal under U.S. antitrust law and the competition laws of other countries. He recognizes that American antitrust law has never prohibited a lawful monopolist from charging high prices. Courts here, he says, take the “philosophical market” view that the reward of higher prices is the very incentive that drives innovation and any effort to cap prices would dampen those incentives; the courts also consider themselves ill-equipped to regulate prices in antitrust litigation. Abbott argues, however, that the law should be different, especially in the case of pharmaceuticals, because (1) excessive pricing of drugs is particularly harmful to human health, given that patients cannot substitute the most effective drug for a less effective drug based on price alone, and (2) characteristics of the pharmaceutical market give patent owners unusual protection against the usual mechanisms that correct unilateral monopoly pricing, especially entry.

He also argues that the fact that a drug is patented should not insulate it from excessive pricing claims. He concedes that rival drugs to Sovaldi, the drug on which he focuses, entered the

1 Abbott is the Edward Ball Eminent Scholar Professor of International Law at Florida State University College of Law.
market a year and a half after Sovaldi, which tends to confirm “that market forces will act to constrain pricing power.” He nevertheless suggests that “Gilead charged an excessive price when it introduced the product and for more than one year (p. 5).” He reasons that Gilead consciously set out to extract the maximum price at the limits of US budgetary tolerance knowing that to do so would restrict access to the drug and knowing that it would place severe burdens on state public health budgets. It did not invent the drug. It was engaged in virtually pure financial engineering. Should it not under a rule of reason be required to justify its pricing to the satisfaction of judge and jury? (p. 10)

Given the failure of Congress to “act to control pharmaceutical prices,”2 Abbott proposes that the Sherman Act be enlisted to do so. He suggests that the courts’ claim of institutional incompetence is overdrawn and argues that they can calculate a “reasonable price” and use that to identify an “excessive price.”

Abbott’s proposed measure of excessive pricing depends on the relationship of the price to cost. (He does suggest as an alternative using the regulated prices of the drug in foreign countries as a benchmark because they provide a “decent profit.”3) He rejects using the value of the drug as a measure because that’s analogous to holding something essential hostage to extract the highest price. Instead, he suggests that a reasonable price should be set by reference to the cost of R&D, production, and some additional amount to cover “future R&D.” He describes what he calls the “basic principles of cost assessment.” In doing so, he suggests that it should be possible determine the “risk level” of the firm, based on the nature of treatment and the probability of success of a research program. He also suggests the cost of the drug should include the costs of clinical trials and production, but not the opportunity cost of capital, because the capital comes from investors and “if the company is successful, the share price increases, dividends are paid and the investor may get a return on its capital by selling its shares.” I might interject on this last point that investors certainly take account of their own opportunity costs in the use of their money; the producer would thus have to take into account its opportunity cost of capital in setting its prices in order to provide a return that would attract investors. If a firm’s prices are capped at an amount that covers only accounting costs, investors will look elsewhere.

Abbott goes on to suggest that an excessive price would be some multiple of the reasonable price. (“Five times would probably be excessive. Is three times excessive?” (p. 31)) But “in the cases where pharmaceutical pricing is ‘stratospheric,’ a judge or jury may not need a finally tuned methodology for determining when a price is unfairly excessive.” (Id.) Remedies could be treble damages4 or an injunction based on what the court determines to be a reasonable price.

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2 Congress has acted in the form of the Hatch-Waxman Act, which encourages generic entry into the pharmaceutical market—by allowing monopoly pricing. Drug Price Competition and Patent Term Restoration Act of 1984, Pub. L. No. 98-417, 98 Stat. 1585 (1984). The Abbreviated New Drug Application (ANDA) process under the Act rests on the premise that the first generic producer to receive approval gets a 180-day period of exclusivity, with attendant monopoly profits. 21 U.S.C. § 355(j)(5)(B)(iv). See, e.g., Yaniv Heled, Regulatory Competitive Shelters, 79 Ohio St. L. Rev. 299 (2015) (“Thus, the Hatch-Waxman Act itself provides incentives to challenge patents related to the original drug product. In this respect, the Hatch-Waxman Act seeks to abolish one monopoly by offering another, shorter one.”). It is not clear what Abbott would suggest about unreasonably high prices during the exclusivity period, but without that incentive, generics would be far less likely to enter. Regulating their prices would appear to contradict the purpose of the ANDA mechanism.

3 This proposal, which he does not pursue, overlooks the likelihood that the foreign prices are only low because American patients are subsidizing them. If antitrust prohibited higher American prices as well, incentives for research would diminish drastically. Whether that would lead foreign countries, in turn, to set higher regulated prices is unclear.

4 If a price is above a reasonable price, but not “unfairly excessive” by the suggested measure, then presumably it would be lawful. So one might infer that the measure of damages would be the difference between a fair unreasonable price and the unfair one.
Suffice it to say that these proposed standards of liability and the accompanying remedies are different from anything courts have ever adopted in Section 1 or Section 2 cases. No standard of liability turns on whether the price of a product is “reasonable.”\(^5\) So antitrust damages are never determined by the difference between reasonable prices and excessive prices—except to the extent a price is higher than it would otherwise be because of a collusive or exclusionary practice. Courts sometimes calculate a “fair, reasonable, and nondiscriminatory royalty” in enforcing the contractual commitment of a firm whose patent is included in an industry standard. Even in those cases, however, they determine reasonableness not based on cost, but by comparison to “benchmark royalties untainted by hold-up or stacking” attributable to inclusion in a market standard.\(^6\)

Carrier, Levidow, and Kesselheim\(^7\) suggest a more conventional antitrust response to high drug prices: challenging restricted distribution of branded drugs as an exclusionary practice under Section 2 of the Sherman Act.\(^8\) They use the 5,500 percent increase in the price of Daraprim as an example, focusing on the less well-known details of the changes in distribution that Turing made to pave the way for its action. Before the acquisition, Daraprim was sold to any patients with prescriptions through local drug stores and to any hospitals that wanted an available supply. “But,” the authors observe,

> in the months before the price hike, *apparently as a condition of the sale to Turing*, pyrimethamine was switched to a controlled distribution system called Daraprim Direct, in which prescriptions or supplies of the product could be obtained only from a single source, Walgreen’s Specialty Pharmacy. As a result, hospitals could no longer obtain the drug from a general wholesaler and patients could no longer find it at a local pharmacy. Instead, institutions and individuals were required to set up accounts through Daraprim Direct and patients were only able to receive the drug by mail order (pp. 1–2) (emphasis added).

Turing could use this control, the authors argue, to deny registration (and hence samples) to prospective rival manufacturers seeking to meet the FDA’s requirements for approval. Turing itself stated that it “would block [a] purchase’ of pyrimethamine if a generic manufacturer sought to order the pill, and conceded that Turing ‘would like to do our best to avoid generic competition.’” (p.16). Note that the prior producer of the drug had adopted Daraprim Direct, but, according to Carrier et al., it did so at the insistence of Turing during negotiations. This point is important to the authors’ antitrust argument, which works out its exclusion theory through Turing’s ability to use this

\(^5\) United States v. Trenton Potteries Co., 273 U.S. 392, 398 (1927) (“[I]n the absence of express legislation requiring it, we should hesitate to adopt a construction making the difference between legal and illegal conduct in the field of business relations depend upon so uncertain a test as whether prices are reasonable—a determination which can be satisfactorily made only after a complete survey of our economic organization and a choice between rival philosophies.”) Regulating prices is thought better left to agencies designed for that purpose with continuing supervisory authority. Cf. Chi. Prof’l Sports Ltd. P’ship v. Nat’l Basketball Ass’n, 95 F.3d 593, 597 (7th Cir. 1996) (“[T]he antitrust laws do not deputize district judges as one-man regulatory agencies.”).


\(^7\) Carrier is a law professor at Rutgers; Levidow and Kesselheim are on the faculty of the Program on Regulation, Therapeutics, and Law at Brigham and Women’s Hospital in Boston.

\(^8\) The authors cite Andrew Pollack, *New York Attorney General Examining Whether Turing Restricted Drug Access*, N.Y. Times, Oct. 13, 2015, at B4, http://www.nytimes.com/2015/10/13/business/new-york-attorney-general-examining-if-turing-restricted-drug-access.html?_r=0. See also Henry N. Butler, *REMS—Restricted Drug Distribution Programs and the Antitrust Economics of Refusals to Deal with Potential Generic Competitors*, 67 Fla. L. Rev. 977 (2015). Cf. FTC v. Lundbeck, Inc., 650 F.3d 1236 (8th Cir. 2011) (Defendant did not violate § 7 of the Clayton Act or § 2 of the Sherman Act by acquiring the only two drugs used to treat a heart condition in infants, then drastically increasing the price. The court accepted the district court’s finding that the FTC failed to prove the drugs were in the same market because the evidence showed that neonatologists choose drugs without regard to price.).
distributional control, which has no legitimate medical purpose, to deny to generic manufacturers the samples they would need to develop a generic equivalent to Daraprim.

Carrier et al., provide a host of interesting details about the history of the drug and the regulatory context. The developer of the drug, GlaxoSmithKline, sold it for $1 per pill for many years. Presumably because of this low price, even though the relevant patents expired in the 1970s, no generic entered the U.S. market as they have in other countries like India, where there are 40 generic producers. (Neither had a generic producer filed for ANDA, which would have given it six months of exclusivity, presumably because it would still have had to compete with the brand owner’s low price.) After explaining the state and federal regulatory background, Carrier et al. describe how a limited distribution arrangement like Daraprim Direct gives the manufacturer more control over individual patients’ use of the drug, which may be necessary if the drug has significant side effects that require monitoring. But it also limits access to the drug and generic competition.

Carrier et al. argue that Turing has monopoly power, evidenced both directly by the breathtaking price increase and consequent reduced output, and indirectly by its 100 percent market share sheltered by regulatory entry barriers. There is a compounded formulation of the drug, but it is (and is required to be) significantly different, both in composition and the extent of regulatory control for safety and effectiveness. In a later section, Carrier et al. show that imports from foreign countries are also not competitive constraints because of regulatory limitations, such as the fact that there is no FDA approval for the drugs that patients acquire through that channel.

The heart of the article is the argument that any refusal by Turing to sell samples to rivals to facilitate development of generic equivalents would violate Section 2 under the standards of Aspen,9 Otter Tail,10 and Trinko,11 even though the hopeful generic producer would have had no prior course of dealing with Turing. Carrier et al. summarize three pharmaceutical cases making essentially this argument that survived the pleading stage and were later settled. They point out that the Hatch-Waxman process assumes that potential rivals will get the samples they need to develop generic equivalents. For Turing not to provide them, the authors suggest, has no therapeutic justification and is only economically rational as a means of exclusion. Moreover, there is no reason to think in this case that required dealings would foster collusion, as the Court feared in Trinko.

In a concluding section, Carrier et al. broaden their argument to other concrete examples of both Turing and other firms using the strategy of controlled distribution to limit generic entry. They conclude that “[r]estrictions of distribution systems that lack safety justifications and that are designed to restrict generic competition present conduct falling comfortably within the realm of exclusionary behavior that has been found to constitute monopolization.” Of course, the theory presupposes that (1) the compounding strategy will not be an adequate alternative to Daraprim, and (2) a true generic rival has an incentive to enter at the higher price, but really won’t be able get the needed supply of the drug for bioequivalence testing because of the restricted distribution strategy.

—William H. Page*  

* I thank Lars Noah for helpful comments.