

Analyzing Incentives and Liability in “Hub-and-Spoke” Conspiracies

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In most antitrust conspiracies, all of the alleged conspirators operate at the same level of distribution. For example, a group of manufacturers may reach an agreement that each will limit its output, or a group of retailers may each agree not to price below price \$X for a particular product. The incentives in such “horizontal” conspiracies tend to be obvious. By reducing competition at their level of distribution, the conspirators can each expect to receive profits above the competitive level or to exert greater market power. Questions of liability also tend to be straightforward in such horizontal conspiracies. Are the actions of each alleged conspirator the result of independent conduct or the result of coordination with competitors?² And where the actions result from coordination with competitors, is such activity the type that is per se unlawful, or is it instead subject to the rule of reason?

Some antitrust conspiracies, however, involve both a horizontal conspiracy and at least one participant operating at a different level of distribution. For example, a conspiracy might involve several manufacturers and a common distributor. Such conspiracies are often labeled “hub-and-spoke” conspiracies, because, using the analogy of a wheel, the common distributor is analogized to the “hub” of a wheel, its vertical agreements with the manufacturers are analogized to the “spokes” of a wheel, and a horizontal

agreement among the manufacturers is analogized to the “rim” of a wheel. Such a conspiracy can take a variety of forms. For example, the hub could instead be an upstream manufacturer and the spokes could be its agreements with competing downstream retailers. Or the conspiracy can involve multiple entities at each level of distribution, in which case the conspiracy looks more like a matrix than a wheel. The distinguishing feature of these conspiracies, however, is that they involve both horizontal and vertical relationships.

Incentives in such hub-and-spoke conspiracies are much less obvious. Indeed, the existence of such conspiracies is counterintuitive. Why would an entity at one level of distribution want to facilitate an increase in the market power of upstream or downstream entities that are likely to be counterparties in a future contractual negotiation?³ As detailed below, there can be a wide range of answers, and the incentives depend heavily on the particular type of hub-and-spoke conspiracy.

Analyzing liability in a hub-and-spoke conspiracy can also be complicated. Just as the incentives in a hub-and-spoke conspiracy can vary widely, the complicity of each alleged co-conspirator can vary widely depending on both the type of hub-and-spoke conspiracy and the role of each participant. The analytical tools typically applied to hub-and-spoke conspiracies are borrowed

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2 Of course, answering those questions tends to be intensely fact-specific and questions concerning sufficiency of proof and the inferences to be drawn from certain evidence can be complex.

3 We exclude from the definition of a hub-and-spoke conspiracy those conspiracies facilitated by trade associations or other entities whose interests are derivative of the interests of the horizontal conspirators, and focus instead on conspiracies in which the vertical participant has an interest independent of the horizontal participants.



from analysis of horizontal conspiracies (independent vs. coordinated conduct) and from criminal conspiracies (knowledge and facilitation) and are not particularly useful in distinguishing between procompetitive and anticompetitive conduct. And the analysis is further complicated by the question of whether the vertical relationships in the conspiracy should be treated as per se unlawful if the horizontal aspects of the conspiracy are per se unlawful.

This article attempts to bring some order to the analysis of hub-and-spoke conspiracies by analyzing the incentives of the participants and explaining how those incentives should inform the analysis of liability. Because we find that the incentives change dramatically from one type of hub-and-spoke conspiracy to the next, we first propose a taxonomy that divides hub-and-spoke conspiracies into three classes based on whether the harm to competition occurs at the level of the vertical participant, at the level of the horizontal participants, or at both levels, and we provide representative examples of each class. We then proceed to explain the incentives in each class of hub-and-spoke conspiracy and finish by discussing how these incentives should impact the analysis of liability.

I. A Proposed Taxonomy for Hub-and-Spoke Conspiracies

Courts and parties to litigation tend to treat hub-and-spoke conspiracies as monolithic. But having analyzed the incentives of the participants in such conspiracies, we believe it is important to distinguish between three classes of such conspiracies. Our taxonomy focuses on whether the harm to competition or the increase in market power occurs at the horizontal level, the vertical level, or at both levels.⁴

A. Class One – Conspiracy Primarily Increases Market Power or Reduces Competition at the Level of the Vertical Participant

Class One in our taxonomy involves conspiracies that primarily increase the market power or reduce competition at the level of distribution in which the vertical participant in the conspiracy operates.

For example, in the diagram above, Distributor D acts as a hub that organizes a horizontal conspiracy among its upstream suppliers, Manufacturers A, B, and C. Although the horizontal agreement exists at the manufacturer level, the conspiracy primarily

⁴ Our classes do not depend on whether the horizontal conspiracy occurs upstream or downstream of the vertical participant. We find that this has little impact on the incentives. For example, a dominant distributor could organize a boycott of its rivals either at the retailer level or at the manufacturer level and our analysis would be the same.

harms competition at the level of Distributor D. This is typically achieved through an agreement that Manufacturers A, B, and C will take some action to foreclose rival distributors from being able to compete effectively with Distributor D.

Examples in this class are group boycotts like the one alleged in *Toys “R” Us v. FTC*.⁵ In that case, the Federal Trade Commission found that retailer Toys “R” Us (“TRU”) entered into separate vertical agreements with toy manufacturers that limited their distribution of products to lower priced warehouse club stores that threatened TRU’s position. Key to the FTC’s analysis was that TRU “was not content to stop with vertical agreements” and that TRU also organized horizontal agreements among its suppliers to boycott the club stores, because the suppliers would only join in the boycott “on the condition that their competitors would do the same.”⁶

Note that in the TRU hub-and-spoke conspiracy, although the horizontal agreement was among the upstream toy manufacturers, the agreement was primarily intended to protect TRU’s market power in downstream competition for retail sales. The members of the horizontal agreement had little to gain from participation. In fact, these upstream suppliers lost the opportunity to sell additional volume to the club stores as a result of the conspiracy. The existence of the horizontal agreement may have mitigated those losses on a relative basis by assuring the toy manufacturers that their competitors also would not be able to sell to the club stores, but the manufacturers’ only benefit from participation in the conspiracy was that it prevented them from losing TRU’s business. The benefit thus was an avoided punishment.

In the Class One hub-and-spoke conspiracy, the incentives and liability of the vertical participant

(e.g., TRU) tend to be obvious. The more interesting questions are:

- Why do the horizontal participants agree to facilitate this conspiracy?
- What role, if any, does the horizontal agreement play in making such a conspiracy more stable or likely to form?
- What level of knowledge do the horizontal participants need to have about their competitors’ participation (e.g., imputed knowledge, actual knowledge, requested assurances, conditional participation) before we will find that a horizontal agreement exists?
- Given that the same harm to competition could feasibly occur as a result of individual vertical agreements without a horizontal agreement, should the application of per se treatment depend on the existence or non-existence of a horizontal “rim” to the wheel? Is the horizontal component so important to the conspiracy that it should be virtually outcome determinative?
- Assuming that there is a horizontal agreement, what level of complicity must the horizontal participants have before we will hold them liable? Do they have to gain in some way or will we hold them liable simply for capitulating to the market power of the hub?

B. Class Two – Conspiracy Primarily Increases Market Power or Reduces Competition at the Level of the Horizontal Participants

Class Two in our taxonomy involves conspiracies that primarily increase the market power or reduce competition at the level of distribution at which the horizontal participants in the conspiracy operate.

5 221 F.3d 928 (7th Cir. 2000); *see also* *Klors, Inc. v. Broadway-Hale Stores, Inc.*, 359 U.S. 207 (1959) (retailer organizes horizontal conspiracy among appliance manufacturers to boycott rival retailer); *Interstate Circuit v. United States*, 306 U.S. 208 (1939) (exhibitors of films organize horizontal conspiracy among film distributors to boycott theatres that sell below a certain price).

6 *Toys “R” Us*, 221 F.3d at 932.



For example, in the diagram above, Distributor D acts as a hub that facilitates a horizontal conspiracy among its upstream suppliers to reduce competition at the supplier level. Unlike a Class One hub-and-spoke conspiracy in which the vertical participant has an obvious incentive to organize the hub-and-spoke conspiracy, the vertical participant in a Class Two hub-and-spoke conspiracy is more likely to act as a facilitator than as the impetus for or organizer of the conspiracy.

There are a variety of conspiracies that could fit this model. For example, flipping the diagram above so that the horizontal conspiracy is among downstream participants, a classic example of a Class Two hub-and-spoke conspiracy is one in which a manufacturer’s downstream retailers conspire to reduce intrabrand competition amongst themselves at the retail level and achieve that goal by convincing their common upstream manufacturer to impose a resale price maintenance policy or agreements.⁷

Another example of a Class Two hub-and-spoke conspiracy is the alleged conspiracy in *In re Insurance Brokerage Antitrust Litigation*, in which downstream insurance brokers were alleged to have facilitated a bid rigging conspiracy among upstream insurance companies. According to the allegations, the insurance brokers protected incumbent insurers by submitting actual bids only from the incumbent insurer while submitting

intentionally higher-priced “sham” bids from competing insurance companies, such that each incumbent insurer faced no actual competition for renewal business.⁸ As argued by the DOJ, *United States v. Apple*, (hereafter “*e-books*”) is also an example of a Class Two hub-and-spoke conspiracy because DOJ alleged that Apple facilitated a price fixing conspiracy among upstream publishers.⁹

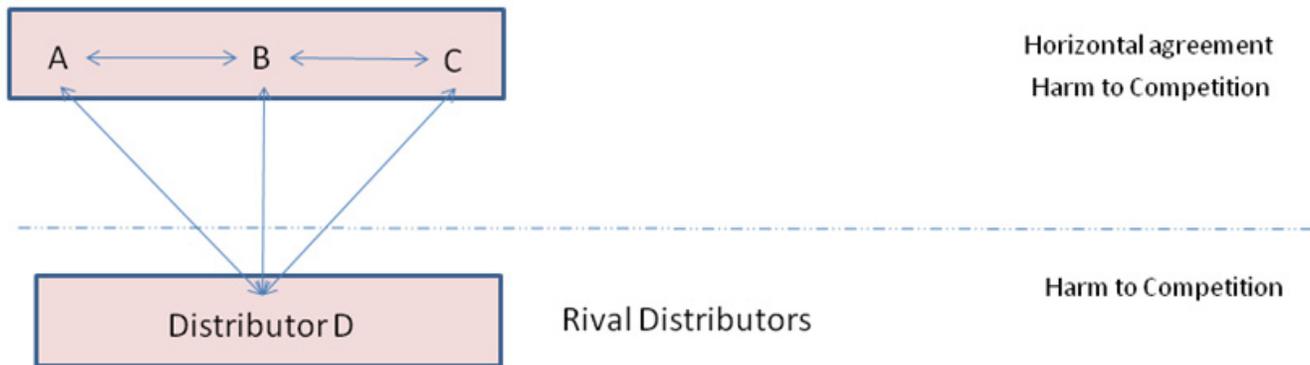
In Class Two hub-and-spoke conspiracies, the incentives and liability of the horizontal participants will ordinarily not be controversial. Rather, the more interesting questions are:

- Why does the vertical participant agree to facilitate the conspiracy?
- Given that horizontal conspiracies often occur without facilitation of a hub, how exactly does the vertical participant facilitate the conspiracy, and does it matter whether the vertical entity’s participation is more incidental than integral to the success of the conspiracy?
- To hold the vertical participant liable for the conspiracy, is it enough for the vertical participant to know about the conspiracy, or must the vertical participant benefit in some way from the unlawful effects of the conspiracy in order to be held liable?

⁷ See, e.g., *Toledo Mack Sales & Serv., Inc. v. Mack Trucks, Inc.*, 530 F.3d 204 (3d Cir. 2008) (plaintiffs allege that purpose of manufacturer’s vertical resale price maintenance agreement is to support illegal horizontal agreements between competing dealers).

⁸ *In re Insurance Brokerage Antitrust Litig.*, 618 F.3d 300, 311-312, 327-347 (3d Cir. 2010) (affirming dismissal of most claims alleging broker-centered hub-and-spoke conspiracies, but not those based on facilitated bid rigging).

⁹ *United States v. Apple, Inc.* 952 F. Supp. 2d 638 (S.D.N.Y. 2013). Although *e-books* was characterized as a price-fixing conspiracy among the upstream publishers, the court found that the harm was to price competition at the downstream retail level. An alternative way to look at the allegations in *e-books* is that DOJ was essentially arguing that Apple organized a coordinated refusal to deal with Amazon and other retailers on wholesale terms. Under this theory, the case would be better characterized as a Class One hub-and-spoke conspiracy in which the alleged harm to competition was at the level of the vertical participant, Apple.



- Assuming that the horizontal conspiracy is per se unlawful, is the vertical participant’s facilitation of the conspiracy also per se unlawful or subject to the rule of reason?

C. Class Three – Conspiracy Increases Market Power or Reduces Competition at Both Levels

Class Three in our taxonomy involves conspiracies that increase the market power or reduce competition at both levels of distribution.

For example, in the diagram above, Distributor D acts as a hub that facilitates a horizontal conspiracy among its upstream suppliers to reduce competition at the supplier level, and in exchange, Suppliers A, B, and C, agree to take some action that helps Distributor D reduce competition with rival distributors at the distributor level.

Although more rare than the other types, a Class Three hub-and-spoke conspiracy can evolve out of a Class Two type conspiracy because, as discussed below, one benefit that might be offered to the vertical participant in exchange for its agreement to facilitate the horizontal conspiracy is some preferential treatment or competitive advantage relative to its rivals. An example of this is in *Columbus Drywall v. Masco*, in which plaintiffs alleged that, during a time of decreased demand and excess supply, a downstream fiberglass insulation contractor acted as a hub in facilitating a coordinated price increase by upstream manufacturers in exchange for the

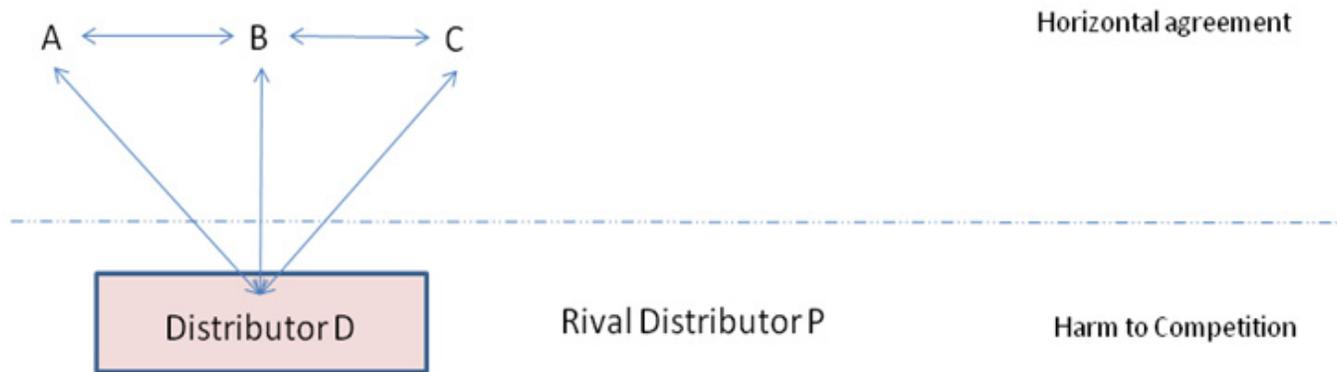
manufacturers’ agreement to maintain a spread between prices charged to the hub and higher prices charged to rivals contractors.¹⁰

Class Three hub-and-spoke conspiracies raise fewer questions since the incentives of the participants and the grounds for their liability tend to be more obvious. Perhaps the more difficult question is distinguishing between a Class Two conspiracy (no harm to competition at level of vertical participant) and Class Three conspiracy (harm at both levels). As discussed in the incentives section below, in virtually all Class Two situations, the vertical participant will receive some competitive benefit from its relationship with the horizontal participants in the conspiracy. But that competitive benefit could increase, reduce, or have no effect on competition at the level of the vertical participant. For example, in *e-books*, it was heavily disputed whether competition at Apple’s level of distribution was ultimately improved or harmed as a result of the alleged conspiracy among the publishers.

II. Incentives in Hub-and-Spoke Conspiracies

When considering the incentives of firms to participate in a conspiracy, it is important to recognize that a firm will only have an incentive to participate if it receives a net benefit from doing so. In a simple horizontal price fixing conspiracy, the incentives of the parties to

¹⁰ Columbus Drywall & Insulation, Inc. v. Masco Corp., 2009 U.S. Dist. LEXIS 30937 (N.D. Ga. 2009).



participate are clear: by working together, the members of the conspiracy earn profits above the competitive level, which benefits all of the participants. However, the incentives of firms at different levels of the supply chain to engage in a conspiracy are not clear because the profits of firms in a buy-sell relationship will be differentially affected by a conspiracy. For example, consider the simplest case in which a group of sellers is engaged in a conspiracy to fix prices. In such a case, a buyer who was forced to purchase at these higher prices (and received no other benefit from the conspiracy) would have no incentive to facilitate or participate in the conspiracy. Holding all else equal, the buyer will be worse off from the higher price while the seller will be better off.

In order to analyze the incentives of market participants to engage in a conspiracy of each class in the taxonomy, it is helpful to consider the simple model illustrated above in which there are three manufacturers (labeled A, B, C) and a distributor, labeled D, who are alleged to participate in a conspiracy, and a rival distributor, labeled P. For each class, we will use this simple model to ask what has to be true for each member of the alleged conspiracy to benefit from participating in the conspiracy.

A. Incentives in Class One

A Class One conspiracy primarily increases the market power or reduces competition at the level of the vertical

participant. In our example, plaintiffs would allege that Distributor D has market power and has worked with Manufacturers A, B and C to exclude rival Distributor P or otherwise to increase Distributor D's market power. These allegations appear to have an uphill battle because it is unclear why Manufacturers would engage in conduct that increases the market power of Distributor D, when doing so could result in Distributor D exerting monopsony power, or charging a higher markup on the Manufacturers' products, which would reduce their sales volume. In addition, these cases tend to require the Manufacturers to forego sales to Distributor P as part of the exclusionary conduct, which would further reduce the Manufacturers' sales volume.

Plaintiffs may offer two explanations for why the Manufacturers would be parties to this conspiracy. Plaintiffs could allege that the Manufacturers A, B, and C agreed to the conspiracy to avoid being punished by Distributor D. As an alternative theory, Plaintiffs could allege that Manufacturers A, B, and C agreed to the conspiracy in return for a share of Distributor D's supracompetitive profits.

Note, however, that, in order for the conspiracy above to be a "hub-and-spoke" conspiracy (as opposed to multiple individual vertical agreements), it must also be the case that there is a horizontal "rim" agreement that links the Manufacturers.¹¹ For example, Plaintiffs may argue that the Manufacturers agreed to accept Distributor

¹¹ If each Manufacturer acquiesces to Distributor D's demands, irrespective of what the other two Manufacturers do, then there may be three separate vertical conspiracies, but there is no rim combining them.

D's demands only on the condition that the other two manufacturers agree to the same demands. Thus, to explain a plausible hub-and-spoke conspiracy, plaintiffs must explain why the Manufacturers have both (1) an incentive to facilitate the increase in Distributor D's market power and (2) an incentive to coordinate their participation with rival manufacturers.

1. Theory 1: Participation to Avoid Punishment

In an "avoidance of punishment theory," plaintiffs may claim that Distributor D threatened to punish each of Manufacturer, A, B, and C, by refusing to purchase products from any Manufacturer that does not agree to take some action to exclude rival Distributor P. Such exclusionary action could be refusing to sell to Distributor P or agreeing to deal with Distributor P only on less favorable terms.

At first glance, the "avoidance of punishment" theory appears to be a plausible answer to the question of why manufacturers would agree to increase the market power of a distributor. However, this theory requires that each Manufacturer finds Distributor D's threat to be credible. That is, each Manufacturer must believe that Distributor D will carry out the punishment. Such a threat is credible only if Distributor D would lose more from Distributor's P entry than from cutting off the Manufacturer.

To illustrate, consider an extreme version of the *Toys "R" Us* case. Suppose the largest toy retailer, Kids-R-Us, told all toy manufacturers that it would stop carrying all of the products of any toy manufacturer that sold products to a new entrant, Toy-Mart. A small toy manufacturer may believe that Kids-R-Us would follow through with its threat, because Kids-R-Us's lost sales from removing a small toy manufacturer's products from its shelves may be relatively small. However, suppose that in addition to numerous small toy manufacturers, there are three large toy manufacturers, each of which accounts for 25% of Kids-R-Us's sales. It is unlikely that these large

toy manufacturers would find Kids-R-Us's threat to be credible. In particular, it is highly likely that these large manufacturers would each recognize that Kids-R-Us would lose more money from pulling one of the three large manufacturers' products from its shelves than Kids-R-Us would lose from the entry of Toy-Mart. As a result, the large manufacturers would have no incentive to follow Kids-R-Us's demands not to sell to Toy-Mart.

A related problem with this theory is that if Kids-R-Us cannot entirely foreclose Toy-Mart's entry because the larger toy manufacturers refuse to acquiesce, then refusing to purchase the smaller toy manufacturers' products after Toy-Mart's entry would simply hurt Kids-R-Us without actually forestalling entry. Thus, a threat that is not credible as to the large manufacturers is likely to be futile as applied to smaller manufacturers. Given that the advantages of scale are often important in manufacturing, many industries are characterized by the presence of large manufacturers that would undermine the credibility of an "avoidance of punishment" theory.

In addition, for the "rim" conspiracy to form there must be an incentive for the manufacturers to coordinate their activity with other manufacturers. In an "avoidance of punishment" theory, conditioning participation on other manufacturers' participation does not make much sense for two reasons.

First, it makes no sense for manufacturers to engage in a horizontal conspiracy to acquiesce to Distributor D's threat in a Class One hub-and-spoke conspiracy. If there is any incentive to coordinate with rival manufacturers, it would be to coordinate collective resistance to Distributor D's threat.

Second, if Manufacturer A lacks the ability to refuse Distributor D's demands (i.e., because Distributor D's threat to cut off Manufacturer A is credible), Manufacturer A would have little power to insist that its participation in the conspiracy be conditional on Manufacturer B's participation. Conversely,

if Manufacturer A does have the power to refuse Distributor D's demands (i.e., because Distributor D's threat to cut off Manufacturer A is not credible) it makes little sense for Manufacturer A to capitulate just because Manufacturer B does. If anything, Manufacturer A would presumably benefit from continuing to sell to both Distributor D and Distributor P while Manufacturer B is forced to sell only to Distributor D.

2. Theory 2: Rent Sharing

As an alternative theory for a Class One hub-and-spoke conspiracy, Plaintiffs may claim that Manufacturers A, B, and C agree to help Distributor D exclude Distributor P in return for Distributor D sharing some of its profits with the Manufacturers. This could be accomplished by agreeing to pay a higher price for the Manufacturers' products. For this type of theory to make economic sense, however, it must be the case that Distributor D is able to transfer enough of its monopoly rents to each of Manufacturer A, B, and C so as to make the Manufacturer better off than each Manufacturer would be if it agreed to sell products to Distributor P. It is important to recognize that Distributor P could also offer one or more of the manufacturers a "payment" to carry its products. This means that Distributor D not only has to make each Manufacturer better off than it would be after Distributor P's entry, but also better off than it would be if the Manufacturer accepted a payoff from Distributor P.¹² Distributor D would have to weigh the cost of making this superior payment to the Manufacturers against the cost of having Distributor P enter.

B. Incentives in Class Two

A Class Two hub-and-spoke conspiracy primarily increases the market power or reduces competition at

the level of the horizontal participant. In our example, Manufacturers A, B, and C are involved in a horizontal conspiracy, such as price fixing, and Distributor D is alleged to play some part to facilitate the collusive agreement. Distributor D could either simply "convey" messages for the Manufacturers or it could take a more active role in terms of "policing" the conspiracy.

In a Class Two conspiracy, the motivations of the upstream Manufacturers tend to be obvious, but Plaintiff must answer why the Distributor agrees to participate in a conspiracy that presumably increases the prices it must pay to the Manufacturers in the future. Again, the only answer that makes economic sense is that Manufacturers A, B and C must in some way make Distributor D better off. And again, the spectrum of benefits runs from "avoiding punishment" to "rent sharing."

It is important to note that if Distributor D is a monopolist that faces no threat of entry, then it would have no incentive to assist the manufacturers in setting the prices. The reason for this is that, if Distributor D is a monopolist, it is already earning the "one monopoly rent" that is available for the market and, thus, cannot increase industry profits by helping the manufacturers collude. Alternatively, if Distributor D is a monopolist and would find it profitable to charge higher prices in the output market, it could do so without involving the manufacturers.

This indicates that in order for Distributor D to have an incentive to participate in the conspiracy, it must face competition. Thus, it is necessary to update the simple model that we are considering to include competing distributors that are not part of the conspiracy. This is shown below by adding three smaller boxes next to Distributor D labeled Distributors E, F and G.

¹² For a formal analysis of a similar model in which a monopolist manufacturer shares profits with downstream retailers in return for foreclosing a rival distributor see John Asker and Heski Bar-Isaac, *Raising Retailers' Profits: On Vertical Practices and Exclusion of Rivals*, 104(2) *American Economic Review*, 672 (2014).



In this new model, Manufacturers A, B, and C could compensate Distributor D through some form of lump sum payment. In this case, Manufacturers A, B, and C would charge all distributors the same fixed price, but then would give Distributor D a rebate such that profits from joining the conspiracy are higher than the profits Distributor D would make if there were no price fixing conspiracy. In this example, Manufacturers A, B, and C are effectively taking some of the collusive profits they made on distributors E, F and G and transferring those to Distributor D.

Alternatively, the Manufacturers could charge Distributor D a price that is higher than the non-collusive price, but lower than the collusive price the Manufacturers charge rival Distributors E, F, and G. By charging Distributors E, F, and G higher prices than Distributor D, Manufacturers A, B, and C would raise the costs of Distributor D's rivals, which could allow Distributor D to become more competitive and gain market share in the distribution market. One interesting thing to note is that when the Manufacturers share the price-fixing rents with Distributor D by raising Distributor D's rivals' costs, a Class Two conspiracy becomes a Class Three conspiracy because the cost advantage will increase Distributor D's market share and change the market structure.

Note, however, that the "benefit" received by Distributor D does not have to consist of rent sharing. For example, if Distributor D had a pre-existing relationship with Manufacturers A, B, and C that Distributor D finds

important to its ability to compete at the downstream distribution level, Manufacturers A, B, or C, could coerce Distributor D into facilitating their conspiracy by threatening to terminate Distributor D. As in the Class One examples, Distributor D will only have an incentive to participate in the conspiracy if the threat that is made by Manufacturers A, B and C is credible. If the threat is not credible, then Distributor D would have no reason to acquiesce to Manufacturers A, B, and C demands.

Or the vertical participant could just be a company that provides a service to the Manufacturers at market rates, which happens to facilitate the conspiracy. For example, the vertical participant might be a price-checking company that is just charging the Manufacturers market rates for price-checking services. Absent the conspiracy, the price-checking company's services may actually facilitate competition among the Manufacturers, but after the Manufacturer conspiracy forms, the price-checking company is instead facilitating the conspiracy with no change in its compensation.

C. Incentives in Class Three

Class Three conspiracies intuitively make more sense because the goal is to increase the market power of the participants at both levels of the distribution chain. However, as noted above, in order for the vertical player to have an incentive to facilitate the conspiracy, it must face competition. In the simplest model, if the vertical

player is already a monopolist, the one monopoly rent theory suggests that it cannot increase its profits by conspiring with the horizontal players.

III. Analysis of Liability in Hub-and-Spoke Conspiracies

As discussed above in the incentives section, there can be a wide variation in incentives of the participants in hub-and-spoke conspiracies. On the “more complicit” end of the spectrum, there are participants that seek to enhance their market power or reduce competition at their level of distribution and there are participants at another level of distribution that facilitate such harm in exchange for a share of rents or for help in reducing competition at their own level of distribution. On the other end of the spectrum are alleged participants that are merely seeking to avoid a punishment or are performing a regularly provided service at market rates that happens to facilitate a conspiracy.

The existing tests for liability in hub-and-spoke conspiracies, which are borrowed from analysis of per se unlawful horizontal conspiracies (coordinated vs. independent conduct) or from criminal law (knowledge and facilitation = liability) are blunt tools that do a poor job of recognizing different levels of complicity. In addition, in some situations, these tests are more difficult on the party that is facilitating the conspiracy than for the one that primarily benefits from the conspiracy.

A. Liability in Class One

Recall that in a Class One conspiracy, market power increases at the level of the vertical participant but is facilitated by a horizontal agreement among its upstream suppliers or downstream retailers, as in *Toys*

“*R*” *Us*. Liability in these cases depends heavily on a finding of a horizontal “rim” agreement.¹³ Absent such a rim agreement, there are only a series of exclusive dealing contracts (or other contracts that reference rivals) between the “hub” and the various upstream or downstream entities at the other end of the “spokes.” Standing alone, these agreements are analyzed under the rule of reason, and are often lawful if they do not result in substantial foreclosure.¹⁴ In contrast, if a rim agreement is found, the same conduct is likely to be found to be a per se unlawful group boycott. Thus, the existence or non-existence of the rim tends to be outcome determinative in Class One.

Courts have found the existence of a rim agreement on the thinnest of evidence. For example, in *Interstate Circuit v. United States*, an owner of a chain of theatres (vertical participant) sent letters to eight film distributors (horizontal participants) demanding that they boycott certain rival theatres that were undercutting the vertical participant.¹⁵ The Court found a horizontal conspiracy among the upstream distributors simply because the vertical participant’s demand letter copied all eight distributors.¹⁶ Similarly in *Klors v. Broadway-Hale Stores* the Court found a group boycott to exist simply because multiple manufacturers were involved. The Court conducted no analysis of whether there was any actual understanding reached among the manufacturer defendants or whether any defendant’s participation was contingent on participation of its rivals.¹⁷ Over time, what has developed in the case law of Class One conspiracies is that a rim agreement can simply be inferred from allegations that each horizontal participant has knowledge that its rivals are agreeing to similar terms.¹⁸

13 See *Total Benefits Planning Agency, Inc. v. Anthem Blue Cross & Blue Shield*, 552 F.3d 430, 436 (6th Cir. 2008) (“The critical issue for establishing a *per se* violation with the hub and spoke system is how the spokes are connected to each other.”).

14 See *Dickson v. Microsoft Corp.*, 309 F.3d 193 (3d Cir. 2002) (affirming dismissal on the pleadings of a hub-and-spoke conspiracy because the wheel was rimless, and refusing to aggregate the foreclosure effect of the various individual exclusive dealing contracts absent a rim tying them together).

15 306 U.S. 208 (1939).

16 *Id.* at 222.

17 See *Klors*, 359 U.S. at 212-213 (“Plainly the allegations of this complaint disclose such a boycott. This is not a case of a single trader refusing to deal with another, nor even of a manufacturer and a dealer agreeing to an exclusive distributorship. Alleged in this complaint is a wide combination consisting of manufacturers, distributors and a retailer.”).

18 See, e.g., *Laumann v. Nat’l Hockey League*, 907 F. Supp. 2d 465, 486 (S.D.N.Y. 2012) (although it was not plausible that there were actual agreements among the horizontal participants, their knowledge that rivals were agreeing to similar terms makes plausible that their participation in the conspiracy was contingent on participation of rivals).

This approach to Class One conspiracies is likely to result in numerous false positives. Many companies seek consistent terms with counterparties at the same level of distribution. For example, companies often have standard supplier agreements or standard dealer agreements. Indeed, in the typical Class One context where the hub is dominant at its level of distribution, one would expect contract negotiations to be based off the hub's standard agreement. If knowledge that the hub signs similar contracts with other counterparties is sufficient to convert an otherwise lawful distribution agreement into a per se unlawful hub-and-spoke conspiracy, the effect on chilling procompetitive business arrangements could be substantial.

Moreover, as discussed in *Twombly*, without more, parallel conduct by rivals is not a sufficient basis from which to infer the existence of a horizontal agreement.¹⁹ Given the many lawful ways in which rival firms may sign similar contracts with the same counterparty, the inference of a horizontal agreement from parallel contracts seems even less appropriate.²⁰

A relatively recent case in which the court's analysis is more consistent with our understanding of the horizontal participants' incentives in a Class One conspiracy is *Howard Hess Dental Labs v. Denstply*.²¹ In this case, the Third Circuit affirmed dismissal of claims that dealers of manufacturer Denstply had engaged in a hub-and-spoke conspiracy to exclude products manufactured by rival manufacturers. Addressing the plaintiffs' claims about the incentives of the dealers (the horizontal participants), the Third Circuit characterized plaintiffs' theory as one in which the dealers supposedly had an incentive to "create and maintain a regime in which Denstply reigned and the dealers did its bidding."²²

This motive hardly seems attractive from the dealers' perspective.

The Court went on to consider whether the dealers' actual motives were "to keep Dentsply's business" (avoiding punishment) or to "charge the elevated prices Denstply imposed" (rent sharing) but concluded that such incentives are explained by the dealer's independent motives and do "not give rise to a plausible inference of an agreement among the dealers themselves."²³ The Third Circuit went on to hold that "Plaintiffs' allegations do not offer even a gossamer inference of any degree of coordination among the Dealers."²⁴

The *Dentsply* decision is more consistent with our analysis of the incentives in a Class One conspiracy. Generally, the horizontal participants are going to have little to gain from facilitating the conspiracy, and generally they will have only the weakest incentives to coordinate their participation in the conspiracy with their rivals. As such, the existence of a horizontal rim should not be so easily inferred from parallel contracts with the same counterparty, especially given that the existence or non-existence of the rim tends to be the dispositive factor for liability in a Class One conspiracy.

What appears to be driving the courts' concern in Class One cases is the aggregate foreclosure effect of multiple exclusive dealing contracts on rivals of a dominant hub, which can occur without any horizontal agreement among the parties at the other end of the spokes. If that is the concern, analysis of exclusionary conduct under Section 2 or of substantial foreclosure under Section 1 would enable a more targeted analysis than an all or nothing determination of per se liability based on the fiction of a horizontal rim inferred from parallel contracts.

19 See *Bell Atlantic Corp. v. Twombly*, 550 U.S. 544 (2007) (Without more, allegations of parallel conduct are not sufficient to plausibly state a claim for a Section 1 violation).

20 See *In re Insurance Brokerage*, 618 F.3d at 328. ("Plaintiffs' logic would divine a horizontal agreement from virtually any parallel [agreements] on the mistaken ground that a firm would not [enter into that contract] in the absence of an agreement with its competitors to enter into similar contracts with the same [] company.")

21 *Howard Hess Dental Labs v. Dentsply*, 602 F.3d 237 (3d Cir. 2010).

22 *Id.* at 255.

23 *Id.*

24 *Id.* at 256.

B. Liability in Class Two

In a Class Two hub-and-spoke conspiracy, the increase in market power or reduction in competition occurs at the level of the horizontal participants, but a vertical participant facilitates the conspiracy in some way. The incentives of the horizontal participants tend to be obvious and the analysis of their liability tends to be straightforward. What is more difficult is analyzing the liability of the vertical participant that does something to facilitate the conspiracy. Another disputed question is when per se treatment should apply to the vertical relationship.

Given that most vertical contracts will provide some benefit to each counterparty, the vertical participant will virtually always obtain some benefit from its relationship with the alleged horizontal conspirators. But is this enough to assume that the vertical participant has joined in the conspiracy? At the more complicit end of the spectrum, the vertical participant might share in the proceeds of the unlawful conspiracy, or might receive some competitive advantage that reduces competition at another level of distribution. In the middle of the spectrum, the vertical participant might receive some desirable contract term or other benefit that is unrelated to the anticompetitive effect of the conspiracy, but which the vertical participant may not have received absent its role in the conspiracy. And at the less complicit end of the spectrum, the vertical participant may only avoid a termination of a relationship it needs to compete effectively, or may only obtain the same market rates for its services or other contract terms that it would obtain absent a conspiracy.

Despite the wide variety in the degree of complicity, the two primary tests for assessing the liability of the vertical participant in Class Two conspiracies apply broad all-or-nothing frameworks that largely ignore the benefit received by the vertical participant or its motivations for facilitating the anticompetitive effects of the conspiracy.

These tests present considerable risk for companies that, in the process of engaging in ordinarily lawful relationships or contracts, may find that they are held liable for the full consequences of a per se unlawful conspiracy.

A good example of such a case is *e-books*, in which the district court explicitly found that there was nothing unlawful about the terms of Apple's distribution contracts with the publishers but nonetheless held Apple liable for a per se violation because those otherwise lawful contracts were allegedly used by publishers to facilitate a per se unlawful price fixing conspiracy.²⁵ Using *e-books* as an example, we discuss below how the tests for liability in a hub-and-spoke conspiracy may prove exceedingly difficult for the vertical participant, regardless of what benefit it receives in consideration for its role in the alleged conspiracy.

1. Independent vs. Coordinated Conduct

Class Two hub-and-spoke conspiracies are often analyzed under the framework that has been developed to analyze horizontal conspiracies. Since many horizontal conspiracies are per se unlawful, that framework does not focus on competitive harm, but instead focuses on the threshold question of whether an agreement exists. And because there is rarely direct evidence of a horizontal agreement, determining whether it exists often requires drawing inferences from circumstantial evidence. Typically, the central question is whether a participant's conduct is consistent with its independent interest or whether it can only be explained by coordinated conduct with the other co-conspirators.²⁶

While this framework may apply well to the horizontal participants in a Class Two conspiracy, the framework is ill-suited to determine liability of the vertical participant. Most vertical relationships involve a high level of coordination, if not an explicit agreement, between the upstream and downstream participants, and yet each

²⁵ Apple, 952 F. Supp. 2d at 698.

²⁶ For example, to survive summary judgment, a plaintiff must produce evidence that tends to exclude the possibility that the alleged conspirators acted independently. *Matsushita Electric Industrial Co. v. Zenith Radio Corp.*, 475 U.S. 574, 575 (1986).

party enters into such an arrangement in its independent interest. Indeed, whereas independent interest could be used to show absence of a horizontal agreement, the independent interest of the vertical participant might instead show motive to join or to facilitate a hub-and-spoke conspiracy.

For example, in *e-books*, Apple argued that it could not be found liable for facilitating the publishers' alleged price fixing conspiracy if it entered into agreements with publishers for a "legitimate, independent reason."²⁷ The district court, however, rejected this argument, finding that "it is not surprising that Apple chose to further its own independent economic interests. Such a motivation, however, does not insulate a defendant from liability for illegal conduct."²⁸ Pointing to the actual explicit agreements that Apple signed with publishers, the district court further held that the question of independent incentives does not even apply in this context because the direct evidence "overwhelmingly demonstrates" that Apple did not act independently but instead worked with the publishers to achieve what Apple could not achieve alone.²⁹

The *e-books* approach presents the worst of both worlds for the vertical participant. The existence of the vertical agreement will often be undisputed, and thus the vertical participant's independent motivations for its conduct (or its lack of intent to facilitate the conspiracy) are not relevant as they would be under an analysis of liability for the horizontal participants. And since the horizontal aspect of the hub-and-spoke conspiracy is per se unlawful, the actual procompetitive rationale for and effects of the vertical agreement are not relevant as they ordinarily would be in an analysis of a standalone vertical agreement. Under the *e-books* approach, a plaintiff simply needs to point to the undisputed existence of a vertical contract and then argue that this contract

facilitated a horizontal conspiracy. The only defense available to the vertical participant would be to disprove the existence of the upstream or downstream conspiracy or, as discussed below, show that it had no knowledge of the conspiracy.

2. Knowledge and Facilitation

Another test that the *e-books* district court applied is: "Where a vertical actor is alleged to have participated in an unlawful horizontal agreement, plaintiffs must demonstrate both that a horizontal conspiracy existed, and that the vertical player was a knowing participant in the scheme."³⁰ At oral argument in the *e-books* appeal, the DOJ defended the appropriateness of the knowledge and facilitation test by analogy to criminal law in which a person who knowingly drives a drug dealer to a drug deal is guilty of the full extent of the criminal conspiracy.³¹ With respect to the knowledge component, the DOJ distinguished between an "unwitting dupe" who drives a friend to an undisclosed meeting from a person who "understands the nature of the enterprise that he is facilitating" by driving a person to a place where he knows a drug deal will occur. A judge on the Second Circuit panel quipped that drug trafficking is one industry in which the law does not look with favor on new entrants.

Although made partially in jest, the judge's joke reveals an important truth. What is lawful and unlawful in criminal law is far more clear than what is procompetitive or anticompetitive in complex business practices. Given that a wide variety of ordinarily procompetitive business practices could potentially facilitate some other entities' conspiracy, a test that requires only knowledge and facilitation would appear unduly harsh as applied to entities that only incidentally facilitate the conspiracy or that derive no ill gotten gain from it. Even under

²⁷ Apple, 952 F. Supp. 2d at 695-696.

²⁸ *Id.* at 698.

²⁹ *Id.*

³⁰ *Id.* at 690. In deriving this formulation, the *e-books* district court relied on *Toys "R" Us* and *Interstate Circuit*, which were both Class One cases where the vertical participant's liability was clear because the very purpose of the conspiracy was designed to increase the market power of the vertical participant. These cases are inapposite to an analysis of the liability of a vertical participant in Class Two conspiracy.

³¹ All quotations in this section are based on audio recording of the Dec. 15, 2014 hearing.

criminal law, despite knowledge and facilitation being established, prosecutors and courts certainly would distinguish between a taxi driver receiving only the regular fare for driving a drug dealer to a place where drug deals are known to occur, and a henchman who is paid thousands of dollars to drive a drug dealer to and from a drug deal.

Another problem with the knowledge and facilitation standard is that there is rarely direct evidence of a horizontal antitrust conspiracy. Unlike an unambiguous drug deal, a horizontal antitrust conspiracy is often inferred from ambiguous circumstantial evidence. The vertical participant in a Class Two conspiracy thus faces the risk that it will be held liable for the full extent of a per se unlawful conspiracy based only on imputed knowledge of an inferred agreement. This in fact appears to be the case in *e-books* in which there was apparently no “smoking gun” but a series of simultaneous contract negotiations and extensive inter-publisher communications that were used to infer a horizontal agreement among the publishers.

Thus, at the very least, the analysis of the vertical participant’s liability in a Class Two hub-and-spoke conspiracy should not end with knowledge and facilitation but should also consider what incremental benefit, if any, the vertical participant obtained for facilitating the horizontal conspiracy, and whether the vertical participant’s participation was integral to the success of the conspiracy or merely incidental. As applied to *e-books*, this would at least permit an opportunity to examine whether the benefit that Apple received for facilitating the alleged conspiracy was merely market rate commissions for agency distribution contracts, or whether Apple somehow obtained a share of a supracompetitive profit as a result of the alleged “price fixing.”³²

3. Rule of Reason vs. Per Se Treatment of Vertical Agreement

Another issue disputed in *e-books* is whether a vertical agreement should be treated as per se unlawful or analyzed under the rule of reason if it facilitates a horizontal conspiracy. The district court treated Apple’s otherwise lawful vertical distribution agreements as per se unlawful because they were used knowingly to facilitate the alleged horizontal conspiracy of the publishers.

The DOJ on appeal attempted to defend the district court by arguing that participation by a vertical middle-man does not convert a per se unlawful horizontal conspiracy into one to be analyzed under the rule of reason.³³ While that may be true, that is not the relevant question. The relevant question is not whether a vertical agreement sanitizes a per se unlawful horizontal conspiracy, but whether the per se unlawful horizontal conspiracy infects the vertical agreement.

In *Leegin v. PSKS*, the Supreme Court held that, “to the extent a vertical agreement setting minimum resale price is entered upon to facilitate [] a cartel, it, too, would need to be held unlawful under the rule of reason.”³⁴ Subsequent courts have interpreted this statement to indicate that a vertical agreement that facilitates a horizontal conspiracy is still analyzed under the rule of reason.³⁵

On appeal in *e-books*, however, the DOJ attempted to limit the holding in *Leegin* by interpreting *Leegin* to hold only that “a party who enters into a vertical agreement that facilitates a horizontal conspiracy, but does not join the horizontal conspiracy itself, would be subject to liability under the rule of reason.” While it is a positive sign that the DOJ is apparently recognizing that there are differences in levels of complicity of the vertical participant in a Class Two hub-and-spoke conspiracy, the

32 This would depend on whether one views Amazon’s loss leader pricing on bestsellers and new releases as the competitive or infracompetitive price and whether Amazon’s negative margin on such sales is viewed as the competitive or infracompetitive level of distributor compensation.

33 See Final Form Joint Brief for Plaintiffs-Appellees United States and Plaintiff-States, *United States v. Apple*, No. 13-3741(L), pp. 46-47 (2d Cir. July 15, 2014).

34 *Leegin Creative Leather Products, Inc. v. PSKS, Inc.*, 551 U.S. 877 (2007) (emphasis added in underline).

35 See, e.g., *Toledo Mack Sales & Serv., Inc. v. Mack Trucks, Inc.*, 530 F.3d 204, 225 (3d Cir. 2005).

DOJ's formulation provides little practical guidance for companies in conducting their future affairs. How is one to distinguish between a vertical participant that "joins" a horizontal conspiracy and one that merely facilitates it? Is it a question of intent? Is it a question of whether the vertical participant benefits from that which makes the horizontal conspiracy per se unlawful (e.g., rent sharing)? At the very least, it should require more than knowledge and facilitation and more than the mere existence of an otherwise lawful vertical contract.

Given the difficulty of determining when and how to apply the per se rule and the potential for false positives, it would appear that the better approach is to apply the rule of reason to the vertical agreement but to consider, when weighing the potential harms of the agreement

against its procompetitive effect, whether the agreement facilitates a horizontal conspiracy at another level of distribution.

IV. Conclusion

Hub-and-spoke conspiracies are not monolithic. The participants' incentives and levels of complicity vary significantly depending on the particular type of conspiracy and the circumstances of the participants at each level. Understanding the different types of hub-and-spoke conspiracies and the incentives of the alleged participants in each class can help practitioners more plausibly frame arguments and courts more correctly assess liability of the individual participants.