

---

15 November 2017

**DIRECTORATE FOR FINANCIAL AND ENTERPRISE AFFAIRS  
COMPETITION COMMITTEE**

**Cancels & replaces the same document of 14 November 2017**

**Suggestions for competition authorities when assessing vertical restraints in multi-sided platforms - Note by Paul A. Johnson**

**Hearing on Re-thinking the use of traditional antitrust enforcement tools in multi-sided markets**

**21-23 June 2017**

This paper by Paul A. Johnson was submitted as background material for Item 8 at the 127th meeting of OECD Competition Committee on 21-23 June 2017. This is the final version. The authors were given an opportunity to review and finalise the paper after the discussion.

The opinions expressed and arguments employed herein do not necessarily reflect the official views of the Organisation or of the governments of its member countries.

More documents related to this discussion can be found at [www.oecd.org/daf/competition/rethinking-antitrust-enforcement-tools-in-multi-sided-markets.htm](http://www.oecd.org/daf/competition/rethinking-antitrust-enforcement-tools-in-multi-sided-markets.htm)

**JT03422938**

## *Suggestions for competition authorities when assessing vertical restraints in multi-sided platforms*

Note by Paul A. Johnson<sup>1,2</sup>

1. This note discusses some key questions that investigations should consider when assessing vertical restraints in multi-sided platforms. It is composed of three main sections. The first formulates a threshold question: when should we apply the economics of platforms to an analysis of vertical restraints? The last two sections, assuming the previous question has been answered affirmatively, address the economic assessment of anticompetitive and procompetitive effects of vertical restraints in platforms.

### **1. Preliminaries: when should we apply the economics of platforms?**

2. Platforms, equivalently termed “two-sided markets” or “multi-sided markets,” are *intermediaries*. While the economic literature does not provide a consensus definition, Marc Rysman takes the pragmatic view that the definition should be one of degree: “The interesting question is often not whether a market can be defined as two-sided—virtually all markets might be two-sided to some extent—but how important two-sided issues are in determining outcomes of interest.”<sup>3</sup>

3. For an example that is technically a platform but where there is no need to apply the economics of platforms, Rysman provides the example of a given make of automobile where the two users are consumers and mechanics. To some extent, the more consumers purchase automobiles of the make, the more mechanics will specialize in servicing that make and vice-versa: usage by either side of the “automobile platform” increases with usage on the other side. But while an automobile may technically be a platform, an analysis of vertical restraints in the sale of automobiles can ignore the mechanic side because it is unlikely that quantities on one side significantly affect quantities on the other side.

4. At the other extreme is a platform where the quantity on one side necessarily increases with quantity on the other side. For example, every (non-carpooling) ride facilitated through a ride-sharing service involves *exactly* one driver and *exactly* one (paying) rider. Similarly, a payment card platform has the property that literally every purchase involves exactly one merchant and exactly one consumer. Because a merchant cannot transact without a consumer, there is no sense in which a “merchant transaction” can happen without a “consumer transaction.” Nor is there necessarily a sense in which one user is more important than the other: the platform provides a transaction service

---

<sup>1</sup> Partner, Bates White Economic Consulting and T.D. MacDonald Chair in Industrial Economics, Competition Bureau of Canada. Email: [paul.johnson5@canada.ca](mailto:paul.johnson5@canada.ca).

<sup>2</sup> The views expressed in this article are my own and do not necessarily represent the views of Bates White, the Commissioner of Competition, The Competition Bureau, Department of Justice, or the Public Prosecution Service of Canada. Any mistakes and omissions are mine alone.

<sup>3</sup> Marc Rysman. “The economics of two-sided markets.” *The Journal of Economic Perspectives* 23, no. 3 (2009): 125-143, 127.

jointly and indivisibly to both merchants and consumers. Similarly, while a merchant pays the network a “merchant price,” for every merchant price it receives, the platform also receives a “consumer price” (which can be a negative price indicating that consumers are paid to use the card). By providing the transaction service, the platform retains the sum of the two prices, a property first recognized by then-US Department of Justice Assistant Attorney General Baxter.<sup>4</sup> Correctly defining the notion of “price” is critical when assessing whether a vertical restraint allows a payment card platform to expand or preserve its market power (i.e., charge a supracompetitive price).

5. Other examples lie between that of an “automobile platform” and a ride-sharing or payment card platform. For example, a newspaper can change the number of advertisements it sells without the number of subscribers automatically changing, and vice-versa. The Google search engine is similar in that advertisements do not always appear after a search. Moreover, the Google platform is broad in that it offers a number of other services to consumers beyond search. Some of these services, like Google Scholar, never appear to show advertising. Thus, Google can change the number of advertisements it shows to users without users changing the intensity of their engagement with the platform. Amazon is similar. While every transaction on Amazon Marketplace involves exactly one consumer and one third-party merchant, Amazon earns revenues from multiple products (e.g., retail offerings offered by Amazon, streaming video, an appstore, tablets). Amazon could draw more users to its platforms with these other products and thereby increase third-party merchant sales on Amazon marketplace. However, such an increase is not an automatic and necessary result of increased user participation on the platform.

6. The difference in these examples can be appreciated without resorting to sophisticated or nuanced economic reasoning. Instead, the difference is driven by the degree to which quantity transacted on one side changes with quantity transacted on the other side; “fixity of use” will refer to this degree. It differs from network effects, usually defined with reference to benefits of membership increasing as other users join, in that fixity of use emphasizes use.<sup>5</sup> The importance of fixity of use may not be always appreciated. For example, some maintain that a “mature” payment card network is not two-sided based on a claim that the magnitude of network effects diminishes as a

---

<sup>4</sup> William F. Baxter. “Bank interchange of transactional paper: Legal and economic perspectives.” *The Journal of Law & Economics* 26, no. 3 (1983): 541-588, 545. (“Perhaps the most intuitively appealing way to resolve the difficulties posed by this market model is to redefine what we mean as one unit of the product consumed. Rather than considering the demands of [the purchaser] P and [the merchant] M as demands for separate products, define one unit of product to consist of the bundle of transactional services that banks must supply jointly to P and M in order to facilitate the execution of one exchange of goods or services between P and M. Under this interpretation, the supply price of the product is the sum of the individual charges to P and to M. Furthermore, the demand for that product is a joint demand of P and of M: in combination they must make a payment of that magnitude to the banks to induce the necessary supply, but independently neither P nor M necessarily confronts any particular price as one he must pay in order to have his demand fulfilled.”)

<sup>5</sup> Michael L. Katz and Carl Shapiro. “Systems competition and network effects.” *The Journal of Economic Perspectives* 8, no. 2 (1994): 93-115, 94. (“Because the value of membership to one user is positively affected when another user joins and enlarges the network, such markets are said to exhibit ‘network effects,’ or ‘network externalities.’”)

platform “matures” (i.e., as network effects diminish).<sup>6</sup> That conclusion incorrectly ignores a platform’s need to encourage use by its members independent of its “maturity.” And, at a more basic level, that conclusion incorrectly ignores the fixed-proportions nature of a payment card platform and does not recognize the price the platform receives from facilitating a transaction.

7. To appreciate fixity of use further, recognize the difference between *use* of a service offered by a platform and *membership* on a platform. For example, riders and drivers can choose to become members of a ride-sharing platform after which they choose how intensively to use that platform. In that sense, there is not necessarily “fixity of membership” in a ride-sharing platform: the number of riders that have an Uber account can change without the number of drivers changing. Similarly, the number of merchants that accept a particular payment card can change independent of the number of consumers who hold the card. Depending on whether an investigation centers on transaction-specific fees or on the fees paid by users that are independent of usage, that distinction is important to recognize.<sup>7</sup> For example, suppose that it is determined that merchant acceptance of a payment card is not affected by a small change in the number of consumers who hold the card. In that case, an analysis of any membership fees merchants pay to accept the card need not consider annual fees paid by consumers. That conclusion, however, does not change the fact that every *usage* of the payment platform necessarily implicates exactly one merchant and exactly one consumer and that the payment platform retains the sum of the merchant and consumer prices.

8. The degree of fixity of use should be determinative of whether a platform’s services and prices are assessed akin to a payment platform (i.e., where multi-sided principles are important) or akin to an automobile “platform” (i.e., where multi-sided principles can be ignored).<sup>8</sup> As a simple illustration, suppose a platform seeks to improve the match between two sets of users, who are charged very different prices and offered very different services. As a first step, one might consider whether it is meaningful to consider the terms offered to one set of users independent of the terms offered to the other set of users. The degree of fixity of use should be determinant because the analysis should reflect the platform’s business realities: as fixity of use disappears, the platform treats the two sides independently.<sup>9</sup> In other words, if the two sides operate reasonably

<sup>6</sup> For example, see Alan S. Frankel and Allan L. Shampine. “The economic effects of interchange fees.” *Antitrust Law Journal* 73, no. 3 (2006): 627-673, 655. (“By its nature, a network externality is likely to become less important . . . as a network matures.”).

<sup>7</sup> For example, some credit cards charge consumers an annual fee that is independent of usage. In the United States, Visa charges some merchants a “fixed acquirer network fee” that may be independent of usage.

<sup>8</sup> Jean-Charles Rochet and Jean Tirole have defined a platform to be “one-sided” if the volume of transaction depends only on the aggregate price level and not on the structure. But because their focus appears to be mainly on payment platforms and other platforms where fixity of use is perfect (e.g., bilateral electricity trading), their definition identifies instances when parties can negotiate bilaterally to “undo” any particular price structure and not on the extent to which quantity on one side could increase independent of quantity on other sides. See Jean-Charles Rochet and Jean Tirole. “Two-sided markets: a progress report.” *The RAND Journal of Economics* 37, no. 3 (2006): 645-667, 648.

<sup>9</sup> To be more specific, consider a platform with two sides, A and B. To simplify, suppose that use by side B is relevant to side A, but use by side A is not relevant to side B. Costs to serving either side are zero. In this case the profit of the platform can be written as  $\pi = P_A Q_A(P_A, Q_B(P_B)) +$

independently, then an analysis can reliably analyze either side independent of the others. However, when the operations of both sides of the platform are reasonably tightly linked, a reliable analysis should consider both sides jointly. That statement operates independently of, for example, how antitrust markets are defined or how strong network effects are because it speaks to the *price* that is relevant to the platform. The overall price relevant to the platform can be calculated as the quantity-weighted average of prices paid by each side.<sup>10</sup>

## 2. Assessing the anticompetitive effects of vertical restraints in platforms

9. By definition, vertical restraints restrain some expression of competition. This section considers only these anticompetitive effects by suggesting three questions for competition authorities to consider.

### 2.1. Who are the victims and beneficiaries of the vertical restraint?

10. A coherent theory about the anticompetitive effects of a vertical restraint should identify the victims and the beneficiaries of that restraint in a manner consistent with economic logic. That logic starts with some results associated with the Chicago school and continues by leveraging insights developed in the literature since.<sup>11</sup>

11. One application of the famous Coase theorem is that a buyer and seller will trade when the buyer's valuation exceeds the seller's cost so long as information is complete and bargaining costs are small.<sup>12</sup> For this reason, modern antitrust holds a presumption that when sophisticated parties negotiate, they sign agreements that maximize the joint value available to them regardless of the relative bargaining power of the parties. In other words, signed contracts are presumed to be "bilaterally efficient." A corollary to this result is that a vertical restraint will appear in a contract if and only if it is bilaterally

---

$P_B Q_B(P_B)$ . The first-order condition of profit with respect to the side-B price is  $\frac{\partial \pi}{\partial P_B} = P_A \frac{\partial Q_A}{\partial Q_B} Q'_B(P_B) + Q_B + P_B Q'_B(P_B) = 0$ . The term  $\frac{\partial Q_A}{\partial Q_B}$  reflects fixity of use. The first term in the first-order condition approaches zero as fixity of use disappears leaving only the latter two terms. The latter two terms represent the standard first-order condition if side B were independent of A.

<sup>10</sup> For example, in a two-sided platform with sides A and B, the quantity-weighted average of the prices paid by each side is  $P = P_A \frac{Q_A}{Q_A + Q_B} + P_B \frac{Q_B}{Q_A + Q_B}$ .

In some cases, however, the price to one side may be set to zero and platforms compete by providing services to attract users. In theory, a platform's profits are affected in the same way whether it spends a dollar on providing a service or it spends a dollar lowering the price. In practice, quantifying the costs of providing these non-price attractions may be challenging.

<sup>11</sup> An excellent reference is Chapter 4 of Michael D. Whinston. "Lectures on Antitrust Economics." *MIT Press Books* 1 (2008).

<sup>12</sup> The proof is easy and instructive. A buyer and seller are negotiating to trade an item. The buyer values the item at  $v$  dollars; the seller values the item at  $c$  dollars. Suppose gains to trade exist (i.e.,  $v - c > 0$ ), but the parties do not trade. Either the buyer or seller could propose a price between  $c$  and  $v$  that, if accepted, would leave both sides strictly better off. Doing so is possible because  $c$  and  $v$  are common knowledge; doing so is also nearly costless because bargaining costs are small.

efficient.<sup>13</sup> That is *not* to say that all vertical restraints, or even all agreements more generally, are competitively benign. Even if a contract is bilaterally efficient, it can affect third parties. A very plain example is a cartel whose members agree to maximize producer surplus but, because consumers are not party to the cartel negotiations, do not agree to maximize total surplus. To take another example, a platform may sign a contract with one set of users that prevents other platforms from competing. That contract can make the platform and the set of users that signed the contract better off at the expense of other users of a platform as well as competing platforms. Effects on third parties, known as “contracting externalities,” are foundational to modern theories of harm from vertical restraints.<sup>14</sup>

12. Another important implication of economic logic is that a vertical restraint cannot be the source of bargaining power but is the result of bargaining power. That implication leads to the conclusion that a vertical restraint that limits one entity’s actions is accompanied by prices, or other terms, that compensate for that limitation.<sup>15</sup> For example, if a vertical restraint moves some risk from a buyer to a seller, then the price paid to the seller must increase in compensation. The inclusion of such a vertical restraint cannot somehow endow the buyer with bargaining power because such a claim is circular (i.e., the restraint would have to create the bargaining power that was necessary for its imposition in the first place).

13. The logic of the previous two paragraphs is not always explicitly recognized in economic models that study vertical restraints. That is not to say that the logic is not widely accepted—it is—rather, the omission reflects a deliberate choice to simplify and focus economic models on a small set of issues. For example, a model may analyze the effects of a vertical restraint by comparing outcomes with and without the vertical restraint while holding all else constant and imposing some restriction on the form that contracts can take (e.g., linear pricing). This analysis implicitly compares two very different settings (specifically, two very different extensive form games) where the relative bargaining power of the parties differs substantially. In richer settings, firms will react to a ban on the vertical restraint by changing aspects of their behavior that the model’s restrictive assumptions do not permit. For example, if an entity has power and the ability to impose a restraint, it also has the option to exercise that power differently—

---

<sup>13</sup> First suppose that the clause is in the contract but it is inefficient. The buyer and seller can both be made better off if the clause is taken out, so they will take it out. Next suppose that the clause is efficient but is not included in the contract. Again, by including the clause, each party can be made better off by including it, so they will include it.

<sup>14</sup> Whinston, *supra* note 11 at 140, writes “In recent years, a number of authors have shown how sensible alterations to this Chicago School model can make exclusive contracts a profitable strategy for excluding rivals. These models all have the feature that some form of externality arises from an exclusive contract signed by two parties onto other individuals, and this externality makes the contract jointly optimal for the contracting parties.”

<sup>15</sup> An exception involves an incumbent seller who can make sequential offers to a large number of buyers to exclude potential rival sellers. In that setting, the compensation to the buyers for signing an exclusive contract approaches zero. In this way, signatories to vertical restraints can be harmed not by their own restraints (which do not harm them but offer little compensation), but through the agreements others sign that foreclose entry. See Eric B. Rasmusen, J. Mark Ramseyer, and John S. Wiley Jr. “Naked exclusion.” *The American Economic Review* (1991): 1137-1145 and Ilya R. Segal and Michael D. Whinston. “Naked exclusion: comment.” *The American Economic Review* 90, no. 1 (2000): 296-309.

say simply by charging a higher price. While economic models may abstract away from such important issues relating to the existence of a vertical restraint, that abstraction does not allow enforcement authorities to do the same.

14. An interesting application of the logic of vertical restraints is evident in the United States Department of Justice (USDOJ) complaint against Blue Cross Blue Shield of Michigan (BCBSM).<sup>16</sup> BCBSM might be viewed as a platform because it serves two separate sets of entities: hospitals and payers of health insurance. USDOJ alleged that BCBSM signed contracts that included most favored pricing terms with certain hospitals in Michigan, which committed the hospitals to sell BCBSM medical services at prices that were lower than any other entity received. USDOJ alleged that the effect of these terms was to limit competition in certain markets by limiting the competition that BCBSM faced. Notably, the complaint alleged that BCBSM obtained most favored pricing terms from some hospitals “by agreeing to increase its payments to the hospital.”<sup>17</sup> The victims, thus, were not the hospitals who signed contracts with the vertical restraint—they received higher payments—but were third party payers of health insurance and competing health insurance providers.

15. This discussion implies that not only should competition authorities have a strong presumption that vertical restraints are bilaterally efficient (although not necessarily socially efficient), but that they should be cognizant that the complaints they hear may be driven by pre-existing market power rather than a legitimate harm to competition. Specifically, parties who have signed a vertical restraint may not be “happy” with the price or services they receive even if the vertical restraint is procompetitive. Ultimately, a complaint may simply reflect a perception of a lack of bargaining power and be unrelated to any anticompetitive effects of the vertical restraint. This danger is most acute when the complainants are managers whose job responsibilities are narrowly circumscribed to achieve as low (or high) a price as possible without having a broader understanding of their firm’s operations.

## 2.2. What nature of harm does the theory imply?

16. A platform serves at least two distinct users and, as such, charges at least two different prices. So long as quantity provided to one user increases significantly with the quantity provided to other users (i.e., fixity of use is significant), one can define an overall level of price, which determines the profitability of the platform, and describe how that overall price is allocated to the different users. A vertical restraint may also affect prices paid by those who do not use the platform. In assessing theories of harm, a competition authority should carefully consider whether those theories imply harm through an increase in the *overall* price, the *allocation* of that price, or an increase in the price to others.

17. The most straightforward theory of harm implies an increase to the overall price relevant to the platform, which is equivalent to the standard monopoly distortion. For example, one such theory might involve the use of exclusive dealing provisions that limits the ability of other platforms to compete. Such a loss of competition might lessen

---

<sup>16</sup> Complaint, *United States and State of Michigan v. Blue Cross Blue Shield of Michigan*. Case 2:10-cv-14155-DPH-MKM. Available at <https://www.justice.gov/atr/case-document/file/489536/download>.

<sup>17</sup> *Id.* ¶ 44. See also ¶¶ 40, 49, 58, 60, 68, 75.

an important competitive constraint on the platform and allow it to raise prices to all users and, thereby, the overall level of price.

18. A second and more subtle theory of harm considers no increase in the overall price, and hence no increase in the profits of the platform, but, instead, focuses on how that overall price is allocated among different users. More specifically, the theory holds that the vertical restraint distorts the allocation of prices among different users without leading to additional profits for the platform. This type of distortion is akin to that described in the literature on “aftermarkets,” which involve complementary goods or services purchased by a single user, so are not a platform. An important question in that setting is whether antitrust should be concerned with market power in an aftermarket when competition in a “foremarket” is vigorous. Perhaps the most widely studied example of aftermarkets stems from the US Supreme Court’s *Kodak* decision,<sup>18</sup> which analyzed the effects of tying aftermarket maintenance (maintenance of copiers) to purchases in a foremarket (purchase of a copier). Carl Shapiro has shown that tying an aftermarket to a competitive foremarket causes there to be “too much” consumption in the foremarket and “too little” consumption in the aftermarket (e.g., new copiers are purchased too frequently and existing copiers are serviced too infrequently). He argues, however, that these distortions in how the overall price is allocated result in *de minimis* loss and are not worthy of attention from antitrust.<sup>19</sup>

19. A third theory of harm highlights the implications to parties not bound by the vertical restraint. While such theories adopt strong simplifying assumptions, they still face hurdles due to the complicated nature of the environments in which platforms operate.

20. As an example, consider the model proposed by Marius Schwartz and Daniel Vincent that investigates the welfare effects of a vertical restraint—a no surcharge rule or “NSR”—in the context of a highly stylized model of a payment card network.<sup>20</sup> The model imposes the NSR so cannot answer the questions highlighted above in section 2.1. Some intuition can be gleaned by recognizing that an NSR effectively sets a price ceiling for one good that is no higher than prices of other goods. In the Schwartz and Vincent model, the two goods are the act of purchasing with a credit card and the act of purchasing with cash. The vertical restraint limits the price consumers pay when using a credit card to be no higher than the price they would pay if they used cash. Because the cash price is a choice variable for the retailer, an NSR will cause the cash price to differ

---

<sup>18</sup> *Eastman Kodak Co. v. Image Technical Services, Inc.*, 504 US 451 (1992).

<sup>19</sup> Carl Shapiro. “Aftermarkets and consumer welfare: Making sense of Kodak.” *Antitrust Law Journal* 63, no. 2 (1995): 483-511, 497. (“I am not convinced that this type of consumer injury is worthy of the attention of antitrust laws.”)

Setting aside whether such a distortion ought to be worthy of attention from an antitrust authority, much of the literature has concluded that market power may create distortions of ambiguous *sign* on how platforms allocate the price among different sides. In other words, while market power may introduce a distortion in how the total price is allocated among the sides, that distortion does not necessarily favor one side or another. Glen Weyl analogizes this distortion to the more familiar result, due to Michael Spence, that a monopolist may either over- or under-provide quality depending on the nature of heterogeneous consumer tastes for quality. E. Glen Weyl. “A price theory of multi-sided platforms.” *The American Economic Review* 100, no. 4 (2010): 1642-1672.

<sup>20</sup> Marius Schwartz and Daniel R. Vincent. “The no surcharge rule and card user rebates: Vertical control by a payment network.” *Review of Network Economics* 5, no. 1 (2006).

from that absent the restraint. In other words, an NSR will cause merchants to change both the cash and credit prices. In the Schwartz and Vincent model, an NSR causes the credit price to decrease and the cash price to increase.<sup>21</sup> (It is in this sense that Joseph Farrell has characterized an NSR as a means for a payment network to “tax” rival payments methods.<sup>22</sup>) In general, the effects on consumer welfare are ambiguous. The merchant’s market power distorts the credit price away from optimal levels and an NSR mitigates this effect; however, the NSR introduces additional distortions (namely an increase in the cash price as well as a distortion in the fees charged by the payment card network) that can outweigh its efficiency enhancing effects. In the Schwartz and Vincent model an NSR can either increase or decrease consumer surplus and total surplus.

### 2.3. How are the restraint’s effects transmitted to other sides of the platform?

21. In assessing a vertical restraint, some jurisdictions balance any anticompetitive effects against any procompetitive effects. When a platform is not at issue, a single set of consumers feels the effects of those opposite effects. In a platform, however, those opposite effects may be felt by distinct sets of users. This dynamic suggests that competition authorities should analyze whether and how effects of vertical restraints are transmitted across different sides.

22. As an example, consider the United States Department of Justice’s (USDOJ) case against BCBSM, which involved most favored pricing terms and was described in section 2.1. One approach might be to weigh the procompetitive and anticompetitive effects of the restraints considering *only* the relationships between hospitals and insurance companies. According to one such anticompetitive theory, those hospitals that had not incorporated the vertical restraint into their contracts would suffer from an elimination of competition among insurance companies; those hospitals that had incorporated the vertical restraint into their contracts could benefit. USDOJ, however, noted that higher prices paid to hospitals by BCBSM likely result in higher prices paid by a different set of users: payers of health insurance. Specifically, USDOJ noted that one set of payers, known as “self-funded” payers pay for their own healthcare claims.<sup>23</sup> Such payers would be harmed because they pay more when hospital prices increase. USDOJ also noted that state law allowed BCBSM to base the premiums of “fully insured” payers on historical healthcare costs “so increases in local hospital prices can lead directly to increased premiums.”<sup>24</sup>

---

<sup>21</sup> Suppose that a merchant sells two goods that are independent in the sense that the price of one good does not affect demand for the other good. Furthermore, suppose that, without any constraint, the merchant would choose to set a higher price for good 1 than for good 2. If the manufacturer of good 1 requires that the merchant’s selling price of good 1 not exceed the selling price of good 2 then, making some additional regularity assumptions, the merchant’s constrained (single) profit maximizing price for the two goods will fall between the unconstrained prices of the two goods. The merchant will raise the price of good 2 to some degree because it is required to do so in order to raise the price of good 1 closer to its preferred, unconstrained price.

<sup>22</sup> Joseph Farrell. “Efficiency and competition between payment instruments.” *Review of Network Economics* 5, no. 1 (2006).

<sup>23</sup> *Supra*, note 16, ¶ 15.

<sup>24</sup> *Supra*, note 16, ¶ 18.

23. More generally, a vertical restraint on one side of a platform, by definition, restrains an expression of competition on that side. However, it can also have effects on other sides of the platform. In principle, those effects can benefit or harm the other side. USDOJ’s complaint against BCBSM is an example where a vertical restraint on one side harms users on another side. Another theory might hold that a vertical restraint limits competition on one side but ultimately benefits users on another side due to a shift in the locus of competitive vigor. (In this context, it is useful to keep in mind that a vertical restraint must be bilaterally efficient before parties accept it, so it is necessary to explain why users on one side are better off by agreeing to a vertical restraint that limits one expression of competition on their side.)

24. The term “waterbed effect” has been used in the telecommunications literature to describe the effect of fixed-to-mobile termination rates on the prices paid by mobile telephone users.<sup>25</sup> Empirical analysis in that literature has exploited shifts in regulation over time to estimate how different sets of users are affected. In principle, such an approach could be used more generally to estimate how effects of vertical restraints are transmitted across platforms.<sup>26</sup>

### 3. Assessing the procompetitive effects of vertical restraints in platforms

25. While vertical restraints restrain, they can also enable expressions of competition. Thus, an analysis that focuses exclusively on what a restraint prevents without considering what it enables is incomplete. This section discusses two common procompetitive justifications for vertical restraints in platforms.

#### 3.1. Is free riding a procompetitive justification?

26. Jean-Charles Rochet and Jean Tirole distinguish between a merchant’s ex ante and ex post incentives to accept a payment card:

Retailers often complain that they are “forced” to accept card transactions that increase their net costs. To understand this “must-take card” argument, one must distinguish between ex post and ex ante considerations. Once the customer has decided to buy from the retailer, it is in the latter’s interest to “steer” the former to pay by cash or check instead of by card whenever  $p_s > b_s$ . But from an ex ante point of view, the retailer must also take into account the increase in store attractiveness brought about by the option of paying by card. Because retailers ex ante can always turn down cards, the “must-take card” argument refers to the ex post perspective.<sup>27</sup>

<sup>25</sup> Christos Genakos and Tommaso Valletti. “Testing the ‘waterbed’ effect in mobile telephony.” *Journal of the European Economic Association* 9, no. 6 (2011): 1114-1142.

<sup>26</sup> See Marc Rysman and Julian Wright. “The economics of payment cards.” *Review of Network Economics* 13, no. 3 (2014): 303-353. section 5.2 for a discussion of some potential difficulties of estimating waterbed-type effects in the case of payment cards.

<sup>27</sup> Jean-Charles Rochet and Jean Tirole. “Must-Take Cards: Merchant Discounts and Avoided Costs.” *Journal of the European Economic Association* 9, no. 3 (2011): 462-495, 467.

The notation  $p_s > b_s$  reflects the situation when the merchant’s private benefits of accepting the card are lower than the price it pays to do so. Setting  $p_s = b_s$  reflects the “Baxter fee.” Importantly, a

27. In this discussion, the merchant has an incentive to advertise acceptance of the card to generate increased custom only to steer customers away from using that card once they have started the process of a purchase. This conflict of incentives leads to a free rider problem that some claim may be resolved with a vertical restraint that restricts merchant behavior at the point-of-sale. The fact that a merchant and a consumer may transact *off* the platform that brought the two users together in the first place is the key element of an argument about free riding on platforms. That element may be important in platform applications beyond payment cards. For example, an online travel site may match a traveler and a hotel only to have the traveler and hotel transact off-platform at a price that is more attractive to each. Similarly, drivers and riders could find each other on a ride-sharing platform only to bypass the platform and share the savings.

28. In assessing whether a vertical restraint can help resolve a free-riding problem, competition authorities might usefully consider three questions.

- *Is the platform responsible for bringing the users together?* If the platform did not bring the users together then the platform's investments are not susceptible to free riding. However, a finding that the platform does not affect the matches users make is a finding that the platform has no market power, which is usually a predicate to a finding that a vertical restraint has an anticompetitive effect. For example, if travelers would have booked at a particular hotel regardless of the use of any booking platform, that hotel would lose no custom by ending its participation in the platform.
- *What investments are susceptible to free riding if a transaction happens off the platform?* When users transact off the platform, the platform avoids any expense associated with the transaction; such costs are not susceptible to free riding. Nevertheless, it is possible that the platform made investments that were responsible for bringing the users together. For example, in the context of the Rochet and Tirole payment card example, customers are attracted to a merchant that claims to accept a particular payment card in the *anticipation* of rewards and services they have come to expect from using their card in the past.
- *Can free riding be resolved in other ways?* Theory allows for multiple ways to solve free riding. For example, the platform could discontinue to serve offending users. Alternatively, a platform might be able to use a fee structure that involves a lump-sum payment that eliminates any incentive to free ride. Asking whether a vertical restraint is the "least restrictive alternative" is, thus, not possible to answer generally, but an important question to answer within a specific context.

### 3.2. Does the restraint preserve the platform's viability? Is that a procompetitive effect?

29. Platforms typically exhibit network effects. And when platforms compete, such network effects may cause markets to "tip" to a single platform.<sup>28</sup>

30. In theory, platforms can use vertical restraints either to encourage or to prevent tipping. For example, a "big" platform could use an exclusivity clause with one set of

---

merchant may have an incentive to accept cards even when the price exceeds the benefits due to a "business stealing" effect.

<sup>28</sup> Michael L. Katz and Carl Shapiro. "Systems competition and network effects." *The Journal of Economic Perspectives* 8, no. 2 (1994): 93-115.

users to increase industry concentration. Perhaps more surprisingly, a “small” platform could also use the same kind of exclusivity clause to decrease industry concentration. That latter possibility is not purely theoretical as Robin Lee’s empirical analysis of exclusivity by video game platforms demonstrates.<sup>29</sup> An important result of that study is that entrant platforms leveraged exclusives in software as a means of differentiating themselves from the larger incumbent.<sup>30</sup>

31. In assessing whether a vertical restraint can help spur competition by ensuring the viability of smaller platforms, competition authorities might usefully consider a two-part test. The first part of that test asks whether the vertical restraint, in fact, ensures the viability of the smaller platform. Answering that question in the affirmative, however, is not sufficient to conclude that the vertical restraint is necessary for competition because it may protect a competitor without protecting competition. The second part of that test requires consideration of an additional question: Is the presence of the smaller platform critical to competition in the market? It bears emphasizing that a vertical restraint may fail this test without being anticompetitive. In that case, obviously, a lack of a procompetitive justification should not trouble a competition authority.

---

<sup>29</sup> Robin S. Lee. “Vertical integration and exclusivity in platform and two-sided markets.” *The American Economic Review* 103, no. 7 (2013): 2960-3000.

<sup>30</sup> One of the most profound implications of network effects for antitrust is the implied tradeoff between quality and competition. Specifically, competition may grow with the number of competitors, but the benefits of network effects may be lost as the industry becomes fragmented. Lee argues that consumer welfare would have likely *increased* substantially with concentration in video game platforms. Marc Rysman’s study of yellow pages found the opposite: despite the presence of network effects, more competition increased welfare. Marc Rysman. “Competition between networks: A study of the market for yellow pages.” *The Review of Economic Studies* 71, no. 2 (2004): 483-512.