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COMPETITION COMMITTEE****Hub-and-spoke arrangements – Note by the European Union**

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More documents related to this discussion can be found at
<http://www.oecd.org/daf/competition/hub-and-spoke-arrangements.htm>

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1. The EU competition law approach to hub-and-spoke arrangements

1. Hub-and-Spoke arrangements are triangular schemes that involve economic players operating at different levels of the supply chain, thus containing both horizontal and vertical elements.

2. In EU competition law, hub-and-spoke arrangements are mentioned in the section of the Horizontal Guidelines related to information exchange.¹ Paragraph 55 of the Horizontal Guidelines states that “[i]nformation exchange can take various forms. Firstly, data can be directly shared between competitors. Secondly, data can be shared indirectly through a common agency (for example, a trade association) or a third party such as a market research organisation or through the companies’ suppliers or retailers.” The Horizontal Guidelines thus recognise two main scenarios for indirect data exchanges: one in which the hub is a third party or common agency and another in which the hub is an upstream supplier or a downstream customer.

3. Hub-and-Spoke arrangements are also briefly referred to in the Vertical Guidelines.² Paragraph 224 of the Vertical Guidelines, which concerns retail price maintenance (“RPM”), states that “by eliminating intra-brand price competition, RPM may also facilitate collusion between the buyers, that is, at the distribution level. Strong or well organised distributors may be able to force or convince one or more suppliers to fix their resale price above the competitive level and thereby help them to reach or stabilise a collusive equilibrium”.³ The Vertical Guidelines thus focus on the scenario in which the hub is an upstream supplier.

4. In the context of the Horizontal and Vertical Guidelines, the main competition concern raised by hub-and-spoke arrangements is collusive price-fixing between competitors (or other forms of horizontal coordination).

2. The European Commission’s enforcement practice

5. So far, the European Commission (“Commission”) has not taken any specific enforcement action with regard to hub-and-spoke arrangements. However, recent cases

1 Guidelines on the applicability of Article 101 of the Treaty on the Functioning of the European Union to horizontal co-operation agreements Text with EEA relevance. OJ C 11, 14.1.2011, p. 1–72, para 55.

2 Guidelines on Vertical Restraints, OJ C 130, 19.5.2010, p. 1–46.

3 In the context of the ongoing evaluation of the Vertical Block Exemption Regulation (and related Guidelines), some stakeholders have raised the issue of hub-and-spoke arrangements in response to the open public consultation. Stakeholders point out, for example, that these arrangements often include relevant vertical elements such as RPM. Stakeholders therefore argue that such agreements should be addressed more explicitly in the vertical rules. Stakeholder contributions to the public consultation on the evaluation of the Vertical Block Exemption Regulation are published here: https://ec.europa.eu/info/law/better-regulation/initiatives/ares-2018-5068981/public-consultation_en#consultation-outcome

investigated by the Commission included some elements of indirect coordination between competitors through a third party, whereas others pointed to links between RPM and horizontal collusion.

6. The Commission's first e-books investigation, which led to the adoption of two commitment decisions in 2012 and 2013,⁴ included some elements of indirect coordination between competitors through a third party. In this case, the Commission had doubts about the joint switch by five publishers and Apple from a wholesale model to agency contracts, including a retail price Most Favoured Nation ("MFN") clause. The Commission was concerned that the switch had been coordinated between the publishers and Apple as part of a common strategy aimed at raising retail prices for e-books. The Commission took the preliminary view that Apple, who was acting as the common e-book distributor for five publishers, had enabled indirect contacts among publishers and shared the same common strategy. The Commission came to the preliminary conclusion that the joint switch to an agency model with the same key pricing terms amounted to a concerted practice between the five publishers and Apple within the meaning of Article 101 (1) TFEU, which had the object of either raising retail prices of e-books in the EEA or preventing the emergence of lower prices of e-books in the EEA. In spite of the presence of indirect contacts among publishers through Apple as the common distributor, the infringement was not characterised as a hub-and-spoke arrangement since the focus of the case was on the direct contacts between the publishers.

7. Also the Commission's recent experience from RPM cases indicates how horizontal collusion may be achieved through vertical distribution agreements. On 24 July 2018, the Commission fined four consumer electronics manufacturers for imposing fixed or minimum resale prices on their online retailers in breach of EU competition rules.⁵ These restrictions were found to be in breach of Article 101 TFEU. While the agreements at hand concerned vertical restrictions, there were indications (but no clear-cut evidence) that, in some instances, RPM may have been driven by retailers who informed their supplier about low prices applied by other retailers and requested it to intervene to ensure a certain price level. In such cases, the successful intervention by the supplier may trigger further requests by affected retailers to intervene against price-aggressive competitors. The more such practices are driven by retailers, the more they are likely to result in horizontal collusion through hub-and-spoke arrangements.

3. Main elements of hub-and-spoke arrangements

8. Hub-and-spoke arrangements often relate to prices, supply intentions or business strategies. As with other types of horizontal collusion, the main competition concern is that the exchange of strategic information may reduce the uncertainty about the action of competitors and thus lead to a collusive outcome on the market. In hub-and-spoke arrangements, however, collusion is achieved through the hub, who acts as a facilitator and sometimes also as the enforcer of anticompetitive horizontal conduct. A common supplier

4 Case COMP/AT.39847 E-books, 12/12/2012 (addressed to Hachette, Harper Collins, Georg von Holtzbrinck, Simon & Schuster and Apple - OJ C 73, 13.3.2013, p. 17–20) and 25/07/2013 (addressed to Penguin Random House - OJ C 378, 24.12.2013, p. 25–28).

5 Cases COMP/AT.40182 Pioneer (OJ C 338, 21.9.2018, p. 19–21); COMP/AT.40181 Philips (OJ C 340, 24.9.2018, p. 10–11); COMP/AT.40465 Asus (OJ C 338, 21.9.2018, p. 13–15) and COMP/AT.40469 Denon & Marantz (OJ C 335, 20.9.2018, p. 5–6), all dated 24/07/2018.

or manufacturer could take the role of a “hub” between retailers, but it is equally possible that a retailer facilitates coordination between multiple suppliers. In the online platform context, a platform operator might take the role of both a facilitator and enforcer of anticompetitive practices, coordinating the behaviour of suppliers and retailers operating via its platform.

9. Whether a hub-and-spoke arrangement is a restriction by object or by effect does, in principle, not depend on whether or not the collusion is achieved through a third party, but rather on the nature of the information exchange and the legal and economic context in which the information exchange takes place. The assessment would therefore be similar to that of collusion achieved through direct contacts⁶.

10. However, the fact that a hub-and-spoke arrangement involves indirect contacts through a hub raises a number of issues for its assessment, notably what distinguishes it from vertical restrictions (RPM) and what is required to show collusion on the part of the spokes.

11. When the hub is a common supplier and the conduct at issue is price fixing, it may be difficult to distinguish RPM, where the restriction stems from vertical agreements and is normally imposed by the supplier, from horizontal price fixing, which is the result of a coordination among retailers. In practice, price related interventions by suppliers may be driven by retailers that request their supplier(s) to intervene in order to coordinate market prices and to ensure certain margins. The more the price fixing is imposed by a supplier to achieve a harmonised price level or restrict intra-brand price competition, the more likely it is to find RPM. Conversely, the more the pricing related interventions are driven by the (same) retailers, the more likely it is to find a hub-and-spoke scenario. However, since the contacts between retailers in such a scenario typically only happen through the hub, it may be challenging in practice to prove the horizontal coordination element. Moreover, changing roles between suppliers and retailers and different levels of participation among retailers might make the characterisation of the conduct as a hub-and-spoke arrangement less straightforward.

12. In general, it seems less likely that a hub-and-spoke arrangement could be characterised as an agreement, since it typically concerns indirect information exchanges through the hub. A hub-and-spoke arrangement will therefore often be characterised as a concerted practice, i.e., a form of coordination between undertakings by which, without it having reached the stage where an actual agreement has been concluded, practical cooperation between them substitutes the risks of competition.⁷ The assessment of concerted practices is particularly dependent on the facts of each case, as the coordination is less explicit than in an agreement. As regards hub-and-spoke arrangements, particular factors to take into account include the role of the hub and the spokes (i.e., who is the driver of the conduct) and whether collusion is the only plausible explanation for the conduct.

13. Hub-and-spoke arrangements presuppose at least two information exchanges: one between spoke A and hub B, and another one between hub B and spoke C. Such vertical

6 The Horizontal Guidelines already contain useful principles on this assessment, in paragraphs 72-94.

7 Nevertheless, it bears recalling that a precise characterisation of the nature of the cooperation as either an agreement or a concerted practice is not necessary. See Case C-49/92 P, *Commission v Anic Partecipazioni*, ECLI:EU:C:1999:356, paragraph 132 and Case C-238/05, *Asnef-Equifax, Administración del Estado v AUSBANC*, ECLI:EU:C:2006:734, paragraph 32.

information exchanges, even when relating to strategic information, may often be legitimate and thus legal business practices. The difficulty, therefore, is in identifying the situations in which such legitimate practices amount in reality to an illegal horizontal agreement or concerted action. It is therefore of particular importance to assess the context behind the information exchanges between spoke A and hub B and between hub B and spoke C. This assessment is case-specific and will notably have to take into account the level of awareness of the spokes regarding the information exchanges between other spokes and the hub and whether they have distanced themselves from the behaviour of the hub. This raises the question as to the requisite standard of proof for horizontal collusion in such cases and notably whether it is necessary to show that the spokes know that the information exchanged with the hub is being passed on further to other spokes.

14. The European Court of Justice's ("ECJ") recent jurisprudence suggests that full knowledge of the anticompetitive conduct may not be necessary. In the preliminary ruling on *VM Remonts*,⁸ the ECJ held that an undertaking may, in principle, be held liable for a concerted practice on account of the acts of an independent service provider if, *inter alia*, the undertaking was aware of the anticompetitive objectives pursued by its competitors and the service provider and intended to contribute to them by its own conduct, or if that undertaking could reasonably have foreseen the anticompetitive acts of its competitors and the service provider and was prepared to accept the risk which they entailed. The Court also clarified that an undertaking is not liable if the service provider has, without informing the undertaking using its services, made use of the undertaking's commercially sensitive information in an anticompetitive manner.

15. Another relevant judgment in this regard is the *Eturas* judgment.⁹ In this case, the ECJ decided on a preliminary ruling concerning a decision of the Lithuanian Competition Council imposing fines on Eturas and 30 travel agencies for applying a common cap on discounts applicable to services provided through the Eturas online booking platform. The discount cap was communicated to the agencies through an internal messaging system in the form of a message informing about an amendment to the platform terms and conditions. The cap was then implemented by Eturas in the booking system through technical restrictions that prevented the agencies from offering discounts that were lower than the established cap. The ECJ considered that the travel agencies could be found to have participated in a concerted practice if they were aware of the content of the administrator message that gave rise to the infringement and did not publicly distance themselves from the unlawful practice or adduce other evidence to rebut that presumption. The judgment notes as well that the court is not precluded from considering that the dispatch of the message may, in the light of other "*objective and consistent indicia*", justify the presumption that the travel agencies concerned were aware of the content of that message.¹⁰ The court, however, did not give a lot of guidance as to what other indicia could be considered. It thus remains to be seen how this can be applied in practice.

8 Case C-542/14, SIA 'VM Remonts' (formerly SIA 'DIV un KO') and Others v Konkurences padome, ECLI:EU:C:2016:578. The judgment concerned a case of bid rigging through an independent consultant, who used the tender received from one company as a point of reference in preparing the tenders of the other two tenderers.

9 Case C-74/14, Eturas UAB and Others v Lietuvos Respublikos konkirencijos taryva (Eturas), ECLI:EU:C:2016:42

10 Case C-74/14 Eturas, paragraphs 39-40.

16. Another important element in assessing hub-and-spoke arrangements is the link between the information exchanges and the actual market conduct. In this regard, it should be recalled that there is a presumption that the undertakings participating in concerting arrangements and remaining active on the market take account of the information exchanged with their competitors when determining their conduct on that market.¹¹ The ECJ recalled in the *Eturas* judgment that an undertaking may rebut the presumption that it participated in a concerted practice by proving that it publically distanced itself from that practice or reported it to the administrative authorities. The court also recalls that there may be other means of rebutting this presumption.¹² Thus, while the concept of a concerted practice implies, in addition to the participating undertakings concerting with each other, subsequent conduct on the market and a relationship of cause and effect between the two¹³, it is for the involved undertakings to show that such a conduct or causal connection is not present.

17. Other relevant case law on concerted practices, indirect information exchanges and the participation of intermediaries or facilitators in anticompetitive conduct, such as *AC-Treuhand*,¹⁴ also contain useful elements to assess hub-and-spoke arrangements, in particular as regards the liability of the hub.

4. Hub-and-spoke arrangement in the online context

18. The Commission's enforcement action following the publication of the Final Report of the e-commerce sector inquiry¹⁵ focused on vertical restraints occurring in online distribution. However, under certain circumstances, e-commerce might also give rise to horizontal collusion through distribution agreements, and in particular, hub-and-spoke arrangements.

19. Increased price transparency, mass-data availability and the rapid development of Artificial Intelligence (AI) have fostered new potentially anticompetitive practices in the digital sector. In particular, the increasing use of algorithms has raised concerns of horizontal coordination, since they allow market players to swiftly adapt to market changes (e.g. price adjustments on the basis of automatic pricing software). The outsourcing of IT services to specialized third-party providers offering these types of automated processes can also create hub-and-spoke situations when competitors adopt the same algorithm or exchange sensitive commercial information through a common provider.

20. In the online context, there are in particular two specific hub-and-spoke scenarios that might occur, namely (i) online platform operators acting as facilitators of horizontal collusion and (ii) horizontal coordination through third-party algorithms.

11 Case C-49/92 P, *Commission v Anic Partecipazioni*, ECLI:EU:C:1999:356, paragraph 121.

12 Case C-74/14 *Eturas*, paragraph 46 and case law cited therein.

13 Case C-74/14 *Eturas*, paragraph 42 and case law cited therein.

14 Case C-194/14 P, *AC-Treuhand v Commission*, ECLI:EU:C:2015:717

15 European Commission, "Final report on the E-commerce Sector Inquiry" COM (2017) 229 final.

4.1. Online platform operators as facilitators of horizontal collusion

21. Online platforms play a key role in the digital economy affecting a wide-ranging set of activities. Platforms may be beneficial for consumers by increasing consumer choice, creating new opportunities for businesses and shaping innovative forms of conducting business.¹⁶ However, they may also engage in anticompetitive behaviour. The Commission's enforcement practice has so far focused on unilateral conduct by platforms.¹⁷

22. From the perspective of Article 101 TFEU, the use of online platforms creates digital environments that might facilitate interactions between business users even without direct contact among them since platform operators can easily organize and enforce coordination between undertakings using their platform. For instance, they might enable information exchanges between platform users to secure certain margins or price levels. In addition, platforms might facilitate infringements by imposing operational restrictions on the system preventing undertakings from offering lower prices or other advantages to final consumers.

23. In practice, some platform operators also make pricing software available to merchants and retailers offering their products and services via their marketplaces. Uniformly applied, such pricing software could be used to keep prices above competitive market levels (i.e., allowing retailers to align retail prices to those of competitors). Such use of a common pricing formula through the platform could be anticompetitive.

24. So far, there has been no Commission enforcement activity against competitors using online platforms as tools for coordinating their behaviour. However, such practices could be pursued under Article 101 TFEU if there is evidence demonstrating sufficient knowledge among the spokes that their commercially sensitive information would be passed on to other spokes. The platform operator that acts as a hub coordinating the horizontal anticompetitive practice among the spokes could also be held responsible for the conduct as a facilitator.

4.2. Coordination through third-party algorithms

25. The large availability of data and the reduction of costs associated with data processing and AI have made algorithmic pricing more frequent in online markets. According to the Commission's Final report on the e-commerce sector inquiry, *"53% of the respondent retailers track the online prices of competitors, out of which 67% use automatic software programmes for that purpose. Larger companies have a tendency to track online prices of competitors more than smaller ones. The majority of those retailers*

16 Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: Online Platforms and the Digital Single Market, Opportunities and Challenges for Europe, COM(2016) 288 final

17 Case COMP/AT.39740 - Google Search (Shopping), 27/06/2017, OJ C 9, 12.1.2018, p. 11–14; Case COMP/AT.40099 - Google Android, 18/07/2018, not yet published; and Case COMP/AT.40411 – Google Search (AdSense), 20/03/2019, not yet published. More recently, the Commission has also started looking into competition concerns that the collection of retailers' data might raise when the platform owner has a dual role as retailer and marketplace operator (see Commission press release, 17.07.2019, "Antitrust: Commission opens investigation into possible anti-competitive conduct on Amazon", available at https://europa.eu/rapid/press-release_IP-19-4291_en.htm).

that use software to track prices subsequently adjust their own prices to those of their competitors”.¹⁸

26. As noted by the Commission in a previous note to the OECD,¹⁹ algorithms increase the risk of parallel behaviour (tacit collusion), since firms can use software to automatically monitor competitors’ prices almost in real time and adapt prices accordingly. Algorithms can be used as well to implement pre-existing price fixing agreements between competitors (explicit collusion) by agreeing in a particular pricing formula to set price levels and avoid giving unnecessary discounts.

27. A growing concern in relation to algorithmic pricing is the use of common third-party algorithm providers by competitors to adopt the same algorithmic formulas or data pools to determine price levels. In practice, as software pricing develops and becomes cheaper and accessible to a larger number of businesses, companies contract business intelligence services from IT companies to integrate advanced pricing systems in their supply chain. When various industry players (the spokes) use the same third party provider of algorithmic software (the hub) to exchange commercially sensitive information in order to determine market prices and/or react to market changes, they could be engaging in anticompetitive practices.

28. The collection of and access to data is a critical step in automatic price-setting processes, since data is the most crucial input of algorithmic software. In order to collect relevant data, IT companies normally use “web-scraping”, which consists in gathering publicly available information such as competitor’s prices and product categories available through automatic collection methods on the internet.²⁰ This data is subsequently aggregated and fed into the algorithmic software to obtain price recommendations.

29. However, when third-party providers enter into multiple contracts with competing companies they can gain access to a large pool of confidential, commercially sensitive information, such as future pricing or internal product data, obtained directly from contractors. While using publicly available data to feed algorithmic software is legal, the aggregation of sensitive information into a pricing tool offered by a single IT company to which various competitors have access could amount to horizontal collusion.

30. From a legal perspective, the use of a third-party provider to coordinate market behaviour by means of a common pricing algorithm would likely constitute an infringement of Article 101 TFEU. In addition, the exchange of information on future pricing intentions through a third-party provider would typically constitute a restriction of competition by object. As already indicated above, the main issue in the assessment of such conduct is the determination of the level of knowledge of each of the spokes about the anticompetitive coordination taking place through algorithmic setting.

31. As Commissioner Margrethe Vestager stressed in a speech at the German Bundeskartellamt in 2017, “*companies can’t escape responsibility by hiding behind a computer program*”. In this speech, Commissioner Vestager also referred to “*antitrust*”

18 Commission Staff Working Document accompanying the Final Report on the E-commerce Sector Inquiry, document SWD (2017) 154 final on 10.5.2017, paragraph 608.

19 Algorithms and Collusion- Note from the European Union, 14 June 2017. Page 7.

20 OECD (2017), Algorithms and Collusion: Competition Policy in the Digital Age

compliance by design” as regards automated systems, meaning that “*pricing algorithms need to be built in a way that doesn’t allow them to collude*”.²¹

32. In this regard, more transparency is required to understand and monitor the functioning of algorithmic pricing, and in particular, the nature of the information involved in each scheme. Companies giving out their data to third-party providers should be aware of the functioning of the pricing tools they are contracting and take precautions if they suspect that competing firms are adopting the same pricing solution. Moreover, algorithm development firms should engage in efforts to ensure antitrust compliance by integrating safeguards into their software to prevent it from engaging in illegal activity, since they can also be considered liable as cartel facilitators.

4.3. Enforcement tools and liability

33. When investigating hub-and-spoke arrangements, the Commission can make use of all its investigative tools, such as inspections and requests for information. This includes the possibility for parties to actively cooperate with the Commission during the investigation in the context of the settlement procedure (for cartel cases) or cooperation practice (for non-cartel cases) in return for a fines reduction. Leniency, which is available for companies willing to disclose their participation in an alleged cartel and provide related evidence in exchange for full or partial immunity from fines, has so far only been used by the Commission for cartel infringements, i.e., horizontal agreements and/or concerted practices between two or more competitors aimed at price-fixing or other similarly serious violations of Article 101 TFEU. Given that hub-and-spoke arrangements, although including a vertical element, are essentially horizontal agreements or concerted practices, it can be argued that leniency should, in principle, be available where such arrangements aim at establishing a price-fixing cartel.

34. As described above, the spokes of a hub-and-spoke arrangement are liable for the infringement if they are aware of the anticompetitive conduct or could reasonably have foreseen it, whereas the hub can be held accountable as cartel facilitator. According to the ECJ judgement in *AC-Treuhand*, facilitators can be sanctioned for horizontal coordination even if they do not operate on the affected market.²² In order to find liability of the hub, it would be necessary to prove that it was aware of the downstream coordination, or at least that it could have reasonably foreseen the possibility, and that it contributed to the realisation of the conduct through its actions.²³

5. Conclusion

35. Enforcement against hub-and-spoke arrangements presents a number of challenges. The indirect nature of the contacts between the spokes makes it more challenging to prove horizontal collusion. This includes the need to show that the spokes were aware or could

²¹ Bundeskartellamt 18th Conference on Competition, Berlin, 16 March 2017

²² Case C-194/14, *AC-Treuhand AG v European Commission*, ECLI:EU:C:2015:717, paragraph 36.

²³ In *AC-Treuhand*, those requirements were satisfied since the defendant (a consultancy firm), with full knowledge, provided administrative services such as organising cartel meetings and collecting data with the purpose of implementing a cartel.

reasonably have foreseen that their commercially sensitive information would be passed on to other spokes. Moreover, the presence of a vertical element and the changing roles of retailers and suppliers may lead to situations in which horizontal collusion is difficult to distinguish from RPM. Finally, the increasing use of algorithms and online platforms may lead to new types of anticompetitive practices in the digital world. At the same time, the European Union case law provides useful elements for the assessment of hub-and-spoke arrangements. This assessment will necessarily depend on the facts of each case, with particular attention being paid to the overall context in which the information exchanges take place, but ultimately rely on the well-established legal framework for horizontal collusion, which can properly capture the specificities of hub-and-spoke arrangements.