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Article

When sharing platforms fix sellers' prices

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ABSTRACT

While price-fixing on platforms can attract severe enforcement action, as shown by the Amazon poster case, a more nuanced picture emerges regarding the fixing of prices for sellers by sharing economy platforms. This article explores possible antitrust responses to such centralized platform-driven price-fixing. The article, first, provides an introduction to the sharing economy and pricing models on such platforms. Then, it investigates the extent to which established case law and frameworks applied in competition law fit with the incentive structure and the operation of such platforms. In the final section, the article highlights key questions from a competition law and from a policy perspective. It shows how such practices defy traditional antitrust thinking and give rise to new policy and legal challenges.

KEYWORDS: platforms, sharing economy, price-fixing, employee, agency, hub-and-spoke, enforcement
JEL CLASSIFICATIONS: K00, K20, K21, K31, K42, L11, L14, L22, L23, L24, L41, L42

I. INTRODUCTION

In 2016, a class action against Uber alleged that the company has orchestrated a price-fixing agreement between its drivers using its algorithm that sets the prices for rides.[1] This case builds, in part, on the USA and UK convictions of sellers of posters for fixing prices on Amazon by using algorithms.[2] The poster case may be regarded as a classic hard core cartel of sellers on Amazon's platform supported by algorithmic tools. The Uber case seems different, as it is Uber, and not the drivers, setting the

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1 *Spencer Meyer v Travis Kalanick*, 15 Civ 9796; 2016 US Dist Lexis 43944.

2 These cases ended with criminal fines and director disqualification orders, see for the US Amazon case, <https://www.fbi.gov/contact-us/field-offices/sanfrancisco/news/press-releases/former-e-commerce-executive-charged-with-price-fixing-in-the-antitrust-divisions-first-online-marketplace-prosecution> accessed 15 March 2018 and the UK Amazon case, Case 50223 <https://www.gov.uk/cma-cases/online-sales-of-discretionary-consumer-products> accessed 15 March 2018.

price for all rides sold over its platform. However, Uber is not alone in setting prices for its drivers. In particular, on sharing economy platforms, the setting of prices for services or goods sold on the platform can be encountered.[3] Against this background, this article aims to start a debate about how competition policy should treat sharing platforms that fix sellers' prices *on* their platforms.[4] While the article does not address the question of whether such price-fixing is good or bad,[5] it compares established competition law[6] frameworks applied in comparable situations and explores the extent to which these could be employed to this (new) phenomenon. Such an approach is necessary for two reasons. First, such an exercise is relevant as these frameworks determine the outer limits of factual and economic arguments that can be presented before courts and authorities and is therefore highly relevant for companies, authorities, and courts involved in such cases. Second, beyond the purely legal analysis, the comparison provides important insights on the economic incentives applicable in these cases and thereby provides a sound basis for any fact-specific analysis to quantify the effects on competition in an individual case.

The article begins with a brief discussion of platforms, the sharing economy, and pricing. It shows that the sharing economy, as such, is not a new phenomenon even if one takes the Internet, one of its main enabling factors, into account. The second part provides an exploration of the available legal frameworks that could be employed to such price-fixing and explains that the previous frameworks seem to have not always fit in with the mode of operation of such platforms. The next part sets out the core choices that need to be made from a legal perspective and highlights issues that such an analysis raises from enforcement policy and theoretical perspectives.

II. PLATFORMS AND PRICING IN THE SHARING ECONOMY

The recent Federal Trade Commission (FTC) paper on the sharing economy[7] provides an in-depth examination of platforms and its Internet-reliant and often app-based business models. The report focuses on the competitive benefits of these

3 And seems particularly coming in the ride-sharing context, although such price-fixing might equally happen on other platforms.

4 It is important to distinguish such price-fixing from the fixing of prices that occurs *across* platforms to the detriment of competition between platforms, on such most favoured nation (MFN) clauses, see eg Ariel Ezrachi, 'The Competitive Effects of Parity Clauses on Online Commerce' (2015) 11 European Competition Journal 488; Pinar Akman and Daniel Sokol 'Online RPM and MFN Under Antitrust Law and Economics' (2017) 50 Review of Industrial Organization 133.

5 As this seems rather an empirical question and highly fact dependent. Yet, there is some economic evidence that rational profit maximizing platforms do not maximize the total welfare calculated by the total of the surplus of consumers, sellers, and the platform and that they are leading to a transfer of surplus from the consumers to the platform and the sellers, see in this regard Ming Hu and Yun Zhou, 'Price, Wage and Fixed Commission in On-Demand Matching' (10 April 2017) 24 <https://ssrn.com/abstract=2949513> accessed 15 March 2018, see also Christopher S Tang and others, 'Coordinating Supply and Demand on an On-Demand Platform: Price, Wage, and Payout Ratio' (29 August 2016) 26–27 <https://ssrn.com/abstract=2831794> accessed 15 March 2018.

6 Throughout the article, the term competition law and antitrust (law) are used interchangeably and relate to the application of arts 101 and 102 of TFEU as well as ss 1 and 2 of the Sherman Act.

7 See FTC, *The "Sharing" Economy: Issues Facing Platforms, Participants & Regulators: A Federal Trade Commission Staff Report* (November 2016) <https://www.ftc.gov/system/files/documents/reports/sharing-economy-issues-facing-platforms-participants-regulators-federal-trade-commission-staff/p151200_ftc_staff_report_on_the_sharing_economy.pdf> accessed 15 March 2018.

platforms as well as challenges for consumer protection[8] with a focus on markets of for-hire-transportation and short-term lodging.[9] Typically, the sharing economy[10] and its platforms are associated with the digital economy and peer-to-peer systems. Yet, the business model behind these platforms can be traced back to the old village marketplaces, which connected buyers with sellers.[11] Thus, the sharing economy platforms can be compared to the classic marketplace or stock market where different sellers or buyers are brought together. Similarly, one might think of brokers or traditional real estate agents. These, like sharing economy platforms, connect buyers and sellers and obtain a commission for every successful transaction. A common example of 'low tech' and freesharing platforms are notice boards where people organize all kinds of services, such as household services, rides, or spare rooms.[12]

However, with the advent of the Internet, sharing platforms have been 'turbocharged',[13] reaching new levels of scale and effectiveness. Early online adaptation may be illustrated through the classified ads offered by the likes of Craigslist where people could post ads for numerous goods or services, which were initially distributed by email. While this particular company did not charge users for its services,[14] other companies associated with the earlier days of the Internet did. One of the most famous examples in this regard is eBay, where private sellers sell to other private parties and pay a fee for using the platform. Today, the most cited examples of sharing economy platforms are companies, such as Uber, Lyft, and Airbnb.[15]

On the platforms of the sharing economy, the goods or services contracted for are often underused assets, which are either rented out or sold.[16] This has led some to define the sharing economy as 'economic activities carried out in markets characterised by the use of internet platforms (often accessed via mobile media) to facilitate the sale or lease to an individual of an under-used asset owned by another individual'.[17] The FTC paper, therefore, highlights several features that characterize

8 However, it ignores any potential competition issues.

9 The report provides an excellent starting point for anyone who is interested in understanding these platforms, for an overview of how EU law might come into play, see Vassilis Hatzopoulos and Sofia Roma, 'Caring for Sharing? The Collaborative Economy under EU Law' (2017) 54 Common Market Law Review 81–127.

10 Some authors describe the term 'sharing economy' as misleading and suggest access economy because sharing as traditional concept builds on social values and trust and does not involve monetary transactions as it occurs typically between families and neighbours. In the 'sharing economy', in contrast people grant access to a specific resource or skills and demand remuneration in return. See Giana M Eckhardt and Fleura Bardhi, 'The Sharing Economy Isn't About Sharing at All' *Harvard Business Review* (2015) <https://hbr.org/2015/01/the-sharing-economy-isnt-about-sharing-at-all> accessed 15 March 2018.

11 See Bertin Martens, 'An Economic Policy Perspective on Online Platforms' (2016) Institute for Prospective Technological Studies Digital Economy Working Paper 2016/05, 10 <https://ssrn.com/abstract=2783656> accessed 15 March 2018.

12 ibid 11–12. See also Russell Belk, 'You Are What You Can Access: Sharing and Collaborative Consumption Online' (2014) 67 Journal of Business Research 1595.

13 David S Evans and Richard Schmalensee, *Matchmakers: The New Economics of Multi-Sided Platforms* (Harvard Business Review Press 2016) 40–45.

14 Generating revenue via paid job adverts.

15 See FTC (n 7) Executive Summary.

16 Guy Lougher and Sammy Kalmanowicz 'EU Competition Law in the Sharing Economy' (2016) 7 Journal of European Competition Law and Practice 87, 88.

17 ibid.

companies active in the sharing economy.[18] According to this definition, a sharing economy platform enables buyers and sellers to meet and form a contract, typically between two individuals or small-scale firms. The sellers either provide services using their personal assets or sell such assets. Consequently, the costs of entering the market enabled by the platform are minimal. Therefore, the markets are typically 'thick',[19] that is to say, there are numerous buyers and sellers providing liquidity to the market. The platform itself offers not only to connect the buyer and seller but also offers procedures that ensure reliability and safety, for example, by means of identity checks and rating systems. Finally, the platform charges a fee or commission for its services. What these platforms of the sharing economy have in common is that they reduce search and transaction costs.[20] However, the dividing line between sharing platforms where underused assets are sold or rented becomes increasingly difficult to draw. This is because eBay, for example, has transformed so that professional retailers use the platform more and more. Meanwhile, other online platforms that would usually not be associated with the sharing economy seem to be slowly moving into the area, such as Amazon that now accommodates the sale of used goods and even allows for the rental of books. Thus, while the boundaries of the definition of the sharing economy and its platforms might not always be clear, these platforms have three features in common: these platforms establish a marketplace, which connects buyer and seller, typically individuals or small-scale e firms; a fee is charged for these connecting services; and the platforms are based online.

Occasionally, 'regulatory disruption',[21] as well as homogeneity of goods and services,[22] have been identified as additional characteristics. 'Regulatory disruption'[23] takes place where the platform offers ways that seem to avoid regulatory limits and costs that incumbents face. In essence, because the new sellers are participating via the platform, they do not conform to the traditional regulatory model and therefore operate in a regulatory grey area. However, while 'regulatory disruption' seems common it is not a necessary condition in the context of the sharing economy.[24]

18 ibid 18–20.

19 On the efficiency of such markets, see, eg Li Gan 'Efficiency of Thin and Thick Markets' (2016) 192 Journal of Econometrics 40.

20 Mark Anderson and Max Huffman, 'The Sharing Economy meets the Sherman Act: Is UBER a Firm, a Cartel or Something in Between?' (2017) Columbia Business Law Review 7 <https://ssrn.com/abstract=2954632> accessed 20 May 2017.

21 ibid 9–12.

22 See FTC (n 7) 19.

23 On regulatory disruption, see Nicolas Terry, 'Big Data and Regulatory Arbitrage in Health Care' (11 August 2016). G Cohen and Eta L, *Big Data, Health Law, and Bioethics* (CUP 2017), Indiana University Robert H McKinney School of Law Research Paper No 2016-31 <https://ssrn.com/abstract=2821964> accessed 15 March 2018. See also Daniel E Rauch and David Schleicher, 'Like Uber, but for Local Government Policy: The Future of Local Regulation of the "Sharing Economy"' (2015) GMU Law & Economics Research Paper Series No 15-01 <https://www.law.gmu.edu/assets/files/publications/working_papers/1501.pdf> accessed 15 March 2018; Sofia Ranchordas, 'Does Sharing Mean Caring? Regulating Innovation in the Sharing Economy' (2014) Tilburg Law School Research Paper Series No 06/2015 <https://scholarship.law.umn.edu/cgi/viewcontent.cgi?article=1356&context=mjlst> accessed 15 March 2018.

24 Particularly, in developing countries one might not encounter the same regulations covering health and safety that have been adjusted for sharing platforms. For example, if Uber or Lyft start operating in a country where there no specific rules for taxies, the companies do not disrupt the legal framework for taxi

The homogeneity of goods and services is certainly a matter of interpretation.[25] Often, the goods and services only seem homogenous on a very abstract level, ie the sellers all provide short-term lodging or transportation services with their own car. However, the actual size or luxuriousness of the accommodation (or ride) may differ substantially. Similarly, on some platforms, the prices might also be considerably different.

The pricing on sharing economy platforms differs substantially[26] from that observed in other two-sided markets.[27] Such platforms typically take a fee per transaction, similar to the more traditional case of estate agents. The fee is usually part of the price paid by the consumer, and therefore affects the prices charged to the consumers. Yet, the actual pricing on sharing economy platforms takes different forms. Possibly the most competitive pricing mechanism is the auctioning mechanism employed, for example, in the traditional eBay setting, where bids are submitted and the good or service is sold to the highest bidder. The seller has to pay eBay its commission, plus fixed fees for using the platform and for promotional activities by eBay. On other platforms, such as Airbnb, the sellers independently set a fixed price for their offerings and the buyers decide which offer best fits their needs. Airbnb then takes a percentage of the transaction which, depending on the country, is either part of the final price shown to the buyer or is added on top of the price charged by the seller at the end of the checkout process. Other platforms in this sector charge a fee for the listing of a property. Finally, the price charged to consumers for the good or service offered through the platform can be fixed uniformly.

Where the fixing of a uniform price is arranged by sellers on the platform, vigorous enforcement action can be observed. In the USA and the UK, several individuals have been charged for price-fixing on the online platform Amazon. In the famous 2015 US case,[28] a vendor was charged for fixing the prices of certain posters sold on Amazon. The price-fixing agreement was implemented by means of an algorithm that monitored prices on Amazon coordinated all price changes on that platform via an algorithm-based software.[29] Similarly, the Competition and Markets Authority (CMA) in 2016 in the *Online Sales of Posters and Frames* case, prosecuted such an algorithm-based cartel.[30] The CMA has continued its efforts to ensure price competition on online platforms by publishing a guidance paper for online sellers.[31]

tariffs. Yet, such 'regulatory disruption' might often be an important inroad for competition advocacy to ensure that the consumers can benefit from the 'new' products and services offered via the platform.

25 See FTC (n 7) 9.

26 On price setting strategies and dynamic versus static models for price setting, see Siddhartha Banerjee, Carlos Riquelme, and Ramesh Johari, 'Pricing in Ride-Share Platforms: A Queueing-Theoretic Approach' (10 February 2015) <https://ssrn.com/abstract=2568258> accessed 15 March 2018, and on how to optimize from the point of the platform, see Yiwei Chen and Ming Hu, 'Pricing and Matching with Forward-Looking Buyers and Sellers' (2017) Rotman School of Management Working Paper No 2859864<https://ssrn.com/abstract=2859864> accessed 15 March 2018.

27 Where often one user group is charged for access to the other group.

28 See the US Amazon case (n 2).

29 See Ariel Ezrachi and Maurice E Stucke, *Virtual Competition* (Harvard UP 2016) and Salil K Mehra, 'US v Topkins: Can Price-Fixing Be Based on Algorithms?' (2016) 7 Journal of European Competition Law & Practice 470.

30 See UK Amazon Case (n 2).

31 CMA Guidance, 'Price-fixing: Guidance for Online Sellers' (7 November 2016) <https://www.gov.uk/government/publications/price-fixing-guidance-for-online-sellers/price-fixing-guidance-for-online-sellers> accessed 15 March 2018.

Importantly, the online price can also be fixed uniformly by the platform. Platforms may use different models to achieve such uniform pricing. This can be exemplified by the price setting mechanism adopted by different ride-sharing and carpooling platforms, which employ recommended and fixed prices. BlablaCar, for example, sets a recommended fare, which is based on the location, the distance, and the number of passengers, but allows for an adjustment up and downwards within a certain range.[32] This can be compared to Uber that uses an algorithm to set a unified price for all sellers on its platform and therefore a class-action in the USA for violating section 1 of the Sherman Act.[33]

From the perspective of the consumers, it does not matter whether the price is fixed by the sellers or fixed uniformly for all sellers on the platform. In both cases, the consumers face a uniform price on the platform. Such a perspective only focuses on the final price paid by the consumer and seems to neglect the fact that platforms do not receive the final price but rather a commission. Yet, in terms of economic incentives, the fixing of prices by the sellers and by the platform is comparable. In a traditional price-fixing case, the sellers aim to obtain a supra-competitive price by setting the price the highest optimal level. At this output is reduced but not to the extent that it reflects on the overall margins of the cartel members.[34] Platforms have similar incentives where they receive a percentage of the price.[35] The incentives in revenue sharing or commission contracts are similar as these contracts typically align the incentives[36] because the platform obtains a percentage of the overall surplus of the sellers.[37] In contrast, optimal from a total welfare perspective is the maximization of supplier and consumer surplus. In this situation, the quantity of matches as well as the demand and supply surplus is maximized. However, this situation is not in the interest of the platforms, as their margin would be squeezed to the lowest level possible.[38]

III. ESTABLISHED LEGAL FRAMEWORKS FOR ANALYSIS: APPLICABLE CASE LAW

Moving on to legal questions, this section considers established legal frameworks, which may be used to address price-fixing by sharing platforms. It considers both the

32 BlablaCar's terms and conditions are aimed at ensuring that the provider receives compensation for the trip but that this compensation does not exceed the costs. In other words, the aim is to allow the sharing of 'costs, but also to prevent people from profiting from carpooling'. See Blablacar webpage on pricing <https://www.blablacar.co.uk/faq/question/how-do-i-set-my-price> accessed 15 March 2018.

33 However, recently the 2nd US Circuit Court of Appeals in Manhattan decided in an appeal that the case would likely have to be arbitrated instead, as the online customers had been duly notified. Although the trial court would have to investigate whether Uber waived its right to arbitration by actively engaging with the claim in court, see *Meyer v Uber Technologies Inc*, 2nd US Circuit Court of Appeals, No 16-2750.

34 On the theory of perfect monopoly, see eg Robert Triffin, *Monopolistic Competition and General Equilibrium Theory* (Harvard UP 1940).

35 A profit-maximizing platform will set the highest price for the output and the lowest price/wage for the input. Hu and Zhou (n 5) 24.

36 ibid 22.

37 The shared incentives vis-a-vis the customers sometimes also become visible in the language used, for example, Uber tellingly calls the drivers its 'partners'.

38 Hu and Zhou (n 5) 24, see also Christopher S Tang and others (n 5) 26–27.

possible means to evade antitrust scrutiny *a priori* and how such price-fixing, once it comes within the scope, can be characterized fits with established.

An easy way out: the non-application of competition law?

For such an *a priori* approach where competition law does not come into play, two key routes are worthy of note. Both stem from the relationship between the sharing economy company and the seller on these platforms. Competition law would not apply to price-fixing on platforms if the sellers: a) form part of one single entity with the platform; or b) are considered employees of the sharing economy company.

Forming part of one single entity

The first approach that may be used to bring price-fixing outside the realm of competition law is anchored in the concept of single economic entity. This approach offers a way out of competition law scrutiny since two or more separate firms or entities/undertakings must exist for competition to apply.

In the USA, natural and legal persons are liable for breaches of antitrust rules under the Sherman Act. Central to the context of the conspiracy against section 1 of the Sherman Act is the question of whether two separate and independent entities exist. This principle is highlighted in *Copperweld v Independence Tube* where it was held that although a corporation and its subsidiary are two separate legal entities, section 1 of the Sherman Act does not apply to their dealings because they make up a single enterprise that pursues a common objective guided by one common corporate consciousness.[39] Yet, the issue of separateness can cause difficulty in the context of establishing whether one single enterprise exists, in particular, where that legal entity is controlled by a group of competitors. This can be seen in *American Needle Inc v National Football League*.[40] In this case, the Court ruled that two separately incorporated teams of the National Football League (NFL) that assigned their IP rights to the National Football League Properties (NFLP) for resale, constituted concerted action. The judgment was based on the teams being separate legal entities, which were also separate from the NFLP. The separate nature of these entities was evidenced by their independent decision-making centres.

In the European Union (EU) context, the results are similar, which is a consequence of the concept of the single economic unit. It follows from this concept that agreements within the same economic unit are not subject to Article 101 (1) of Treaty on the Functioning of the European Union (TFEU).[41] A single economic entity exists where one can establish a 'unitary organisation of personal, tangible, and intangible elements, which pursue a specific economic aim on a long-term basis'.[42] Thus, it is essential to determine whether the different entities enjoy 'real autonomy

39 *Copperweld Corp v Independence Tube Corp*, 467 US 752, 104 S Ct 2731, 81 L Ed 2d 628 (1984).

40 560 US 183 (2010).

41 See eg Case T-111/08 *MasterCard and Others v Commission* EU:T:2012:260, para 76.

42 Case T-112/05 *Akzo Nobel NV v Commission* [2007] ECR II-5049, para 57-58; Case T9/99 *HFB and Others* v *Commission* [2002] ECR II1487, para 54; Case T-11/89 *Shell* v *Commission* [1992] ECR II-757, para 311, and Case T-352/94 *Mo och Domsjö* v *Commission* [1998] ECR II-1989, para 87.

in determining their course of action in the market [or] carry out the instructions issued to them'.[43] In this examination of autonomy, legal, organizational, and economic links between the entities are examined with a particular focus on whether control can legally and factually be exercised.[44]

For sharing economy platforms and the relevant sellers on those platforms, this seems to suggest that they cannot typically be considered to form one single company. In particular, the platforms and the seller—as well as the sellers among each other—share neither the costs, profits, nor the economic risk involved.[45] Moreover, the economic activities carried out by the sellers as compared to the platform are rather different.[46] While the sellers may offer an underused asset, the platform's role is to connect the seller to the buyer. Thus, in the USA as well as in the EU it is unlikely that a sharing economy platform and the seller on such a platform would be considered to be one company for the purposes of competition law.

The competition and the labour law question

Another approach that may be utilized to shield the price-fixing from antitrust intervention is to view the platform and sellers as connected by an employment contract and the relationship between them subjected to labour courts. If the sellers on sharing economy platforms are employees, competition law would not apply because the setting of the price would essentially equate to the setting of wages by the employer. The relationship between sharing economy platforms and their sellers has been examined in several high-profile cases with regard to Uber. Uber has maintained that its drivers are independent contractors and not employees because Uber insists that it is 'nothing more than a neutral technological platform, designed simply to enable drivers and passengers to transact the business of transportation'.[47] While Uber lost a high-profile case in California and a similar case in Florida, both of which were appealed, it was successful in Georgia, Pennsylvania, and Texas.[48] In the UK, Uber also lost a first instance case[49] and a similar debate is ongoing with regard to the couriers of Deliveroo.[50] Deliveroo maintains that its drivers/cyclists who pick up food from restaurants and deliver it to the orderers are independent contractors and not employees.

The question of whether these couriers or drivers are employees is relevant because the application of competition law depends on whether such people are

43 Case *T-102/92 Viho v Commission* [1995] ECR II-17, para 47, see also Case 48/69 *ICI v Commission* [1972] ECR 619, para 134; Case 66/86 *Ahmed Saeed Flugreisen and Others* [1989] ECR 803, para 35, Joined Cases T-68/89, T-77/89, and T-78/89 *SIV and Others* [1992] ECR II-1403, para 357.

44 See Case C-521/09 *P ElfAquitaine v Commission* [2011] ECR I-8947, paras 54-72. Case C-217/05 *Conferacion Espanola de Empresaarios de Estaciones de services* EU:C:2006:784, para 44.

45 Anderson and Huffman (n 20) 33.

46 Lougher and Kalmanowicz (n 16) 91.

47 *Uber vs Berwick* CGC-15-546378, 9 <https://www.scribd.com/doc/268911290/Uber-vs-Berwick> accessed 29 June 2017.

48 Mike Isaac and Natasha Singerjune, 'California Says Uber Driver Is Employee, Not a Contractor' *New York Times* (17 June 2015) <http://www.nytimes.com/2015/06/18/business/uber-contests-california-labor-ruling-that-says-drivers-should-be-employees.html?_r=1> accessed 29 June 2017.

49 See *Aslam & Ors v Uber BV & Ors* [2016] EW Misc B68 (ET) (28 October 2016).

50 See <http://www.telegraph.co.uk/technology/2017/03/06/tribunal-rule-deliveroo-riders-employment-status/> accessed 15 March 2018.

qualified as employees or independent contractors/service providers. Competition law does not apply if they are employees. In the EU, this is due to the Court of Justice's (CJ) decision in *Poucet et Pistre*[51] where the Court ruled that employees cannot be considered undertakings because they are part of the company.[52] US case law has gone in a similar direction, mainly due to section 6 of the Clayton Act.[53]

In the EU, the CJ in *FNV Kunsten*[54] reaffirmed the strict approach to distinguish between employees and independent service providers. Thus, while the agreements between unions and employer organizations are outside the scope of competition law,[55] an agreement between an association of independent service providers and the same employer organization for the same 'work' would be prevented by competition law.[56] It is, therefore, crucial to determine whether independent service providers are in fact 'false self-employed' and should actually be classified as employees.[57] Thus, as AG Wahl pointed out, self-employed service providers fall under the competition provisions, under which pricing agreements are prohibited as '[p]ricing is one of the most important, if not of the single most important, aspect on which undertakings compete.'[58] The distinction between 'false self-employed', ie employees, where prices can be agreed, and real independent service providers, where such agreements would be within the scope of competition law, requires a detailed analysis of the facts *in concreto* rather than *in abstracto*.[59] For the case of Uber and its driver AG Szpunar, in *Asociación Profesional Elite Taxi,* as part of an obiter dictum explained why the drivers are likely to be 'false self-employed' and therefore classed as employees[60] on whom competition law would not apply.

For competition authorities, such an approach may seem like an easy way out of answering how to treat such cases of price-fixing by platforms. However, there are several considerations that make such an approach by competition authorities unlikely. First, competition authorities would have to undertake the daunting task of determining whether the sellers on these platforms are 'false self-employed'. This is, politically, a sensitive task. Secondly, questions like this might rather be in the domain of labour law, so competition authorities would defer on the matter in favour of a more specialized branch of law. This question raises interesting issues related to

51 Joined Cases C-159/91 and C-160/91 *Poucet et Pistre* [1993] ECR I 637; EU:C:1993:63.

52 On the issue of employees and unions as undertakings, see Shaun Bradshaw, 'Is a Trade Union an Undertaking under EU Competition Law?' (2016) 12 European Competition Journal 320.

53 On the issue of the contractor versus employee in the USA, see eg Keith Cunningham-Parmeter 'From Amazon to UBER: Defining Employment in the Modern Economy' (2016) 96 Boston University Law Review 1673.

54 Case C-413/13 *FNV Kunsten Informatie en Media* EU:C:2014:2411.

55 By reason of the *Albany* exemption, see Case C-67/96 *Albany* EU:C:1999:430.

56 Case *FNV Kunsten* (n 54), paras 28-30.

57 The CJ in *FNV Kunsten* reiterated the conditions under EU labour law to determine whether a person is an employee/'false self-employed' or a real independent service provider. It highlighted in particular that the classification under national labour, tax, or other law, is not relevant. The EU concept is independent and requires and examination of the ability to determine the conduct on the market independently, of forms of subordination, the commercial and financial risk, and whether the operator forms economic unit with or integral part of the employer, see *FNV Kunsten* (n 54), paras 33-37.

58 Case C-413/13 *FNV Kunsten* EU:C:2014:2215, Opinion AG Wahl, para 36.

59 ibid, para 88.

60 See Case C-434/15 *Asociación Profesional Elite Taxi* EU:C:2017:364, Opinion AG Szpunar, paras 43-52.

the definition of employees. Should the same definition apply to competition and labour law, or can these vary because they operate in different spheres? This issue is also related to a separation of powers question, which branch, the judiciary or the executive and which section within those branches, should decide the matter? The third issue is similar but is of a federal nature. Is it the law of the federal level (US federal or EU law) or that of the state level (US State or EU Member State law) which is used to determine whether the relationship between the platform and its providers is one of labour law? Both, the Clayton Act in the USA and case law on employees in the EU provide for an exception to the competition provisions for employees. Yet, in both cases, the federal nature of the antitrust rules seems to suggest that a federal, maybe even an antitrust-specific, definition of the employee would apply.[61] However, it is not clear whether the relevant state labour courts would apply the same interpretation of the term 'employee'. Hence, a situation might occur where the federal (US or EU) antitrust jurisprudence takes a different approach from the state (US states or EU Member States) to whether the sellers on the platform are employees employed by the sharing economy platform.

The Antitrust Way: But what if competition law applies?

Having explored instances where competition law would not apply to platform price-fixing, the article now turns to consider frameworks, which may be used for analysis once competition law is applicable.[62] The analysis begins[63] with associations, membership organizations, and joint ventures, moving on to vertical cooperation, and finally agency arrangements and hub-and-spoke cartels.

Cooperation by means of associations, membership organizations, and joint ventures

At times, it may be possible to view the platform and as associations, membership organizations, or joint ventures. This approach shares similarities with the issue of whether sharing economy platforms and their sellers are one economic entity. For example, Hemnet in Sweden is a platform set up by estate agents to connect home buyers and sellers. As with individual estate agents fixing commission[64] Article 101 (1) TFEU comes into play where an association of sellers sets the price. This would be considered as a decision by an association of undertakings within the meaning of Article 101 (1) TFEU. The situation of sharing platforms setting the price for the sellers on their platform could possibly be compared to selling co-operatives or collection societies. In these cases, a number of small-scale sellers,[65] often in the agricultural business, use a co-operative to sell their goods on markets where other players

61 See, for example, the definition of employee given in *FNV Kunsten* (n 54), paras 33-37 and the application of the concept by Opinion AG Szpunar, ibid.

62 It is important to highlight that this examination focuses on the can and does not make a normative claim as to the ought.

63 For a framework based on the level of co-operation versus the level or risk sharing, see Anderson and Huffman (n 20).

64 See eg CMA, Case reference 50235 (2 March 2018) <https://www.gov.uk/cma-cases/residential-estate-agency-services-suspected-anti-competitive-arrangement-s> accessed 15 April 2018.

65 German Competition law for a long time also had an exemption from the general cartel prohibition, see for an overview, in particular, OECD Policy Round Tables 'General Cartel Bans: Criteria for Exemption for Small and Medium-sized Enterprises' (1996) OCDE/GD(97) 53.6

are active. In a similar model, collection societies pool the copyrights of artists and then offer these jointly. The difference here is that collection societies offer pools of licences to the market. Such a pool of licences operates like a flat rate. For a one-off payment, the buyer can access a whole range of services. Yet, in both cases, one would have to examine whether the selling co-operative or collection society is an association or membership organization that is covered by the competition law provisions.

AG Léger in *Wouters* explained that an association of undertakings is a group of 'undertakings of the same general type and makes itself responsible for representing and defending their common interests vis-à-vis other economic operators, government bodies and the public in general'.[66] In this sense, the concept ensures that companies cannot circumvent competition law by forming a new unit that coordinates their conduct.[67] In the assessment of whether such an association within the meaning of EU competition exists, the level of control of the undertakings over the association as well as the degree of shared interests between the association and the undertakings are important factors.[68] As EU competition law operates with the concept of undertaking and association of undertakings, these principles are applied to cases of selling co-operatives or collection society.[69]

Similarly, in the USA, measures of membership organizations that restrict competition are seen as an overall horizontal agreement rather than individual agreements between the member and the organization since all members agree to abide by the rules of the association.[70] Thus, the USA has treated the setting up of a joint selling agency setting the common price for coal as a horizontal agreement between the participating coal businesses.[71] In the area of collection societies, *Broadcast Music, Inc v CBS*[72] establishes that such societies are within the scope of section 1. Yet, such societies can benefit from a rule of reason approach because they did not agree on the individual price of each licence. Instead, the society offers something new to the market: a blanket or flat rate licence all works within its remit. Such a licence could not be offered by the individual businesses taking part in the society on their own.

Equally, a rule of reason could be applied to sharing platforms for setting the price because these, similar to membership organizations or associations, seem to offer a new product and co-ordinated prices for the product. Yet, important differences remain between sharing platforms and such associations. Sharing economy platforms do not operate on a membership basis[73] and are typically not established by the

66 Case C-309/99 *Wouters* [2002] ECR I-1577, Opinion AG Léger, para 61.

67 ibid paras 61-62; *MasterCard and Others* (n 41), para 243.

68 *MasterCard and Others,* ibid, paras 244–259; Case C-382/12 P *MasterCard and Others v Commission* EU:C:2014:2201, paras 66-72.

69 See eg Case C-360/92 P *The Publishers Association v Commission* EU:C:1995:6; or most recently Case C177/16 *AKKA/LAA* EU:C:2017:689, where art 102 was applied to a collection society.

70 See eg *Board of Trade of City of Chicago v United States* 246 US 231 (1918); *National Collegiate Athletic Association v Board of Regents of University of Oklahoma* 468 US 85, 99 (1984); *Arizona v Maricopa City Medical Society* 457 US 332, 356–57 (1982). *FTC v Indiana Federation of Dentists* 476 US 447, 455 (1986).

71 *Appalachian Coals v United States,* 288 US 344 (1984).

72 441 US 1, 5 (1979).

73 See eg Anderson and Huffman (n 20) 37.

sellers.[74] The sellers have no decision-making power over the price, as it is the platform that sets the price independently. More importantly, the incentive structure and interest differ. The platforms do not simply represent the interest of the sellers vis-à-vis the other side of the market. At first sight, the interests of the platform and the sellers seem to be aligned. The platform aims to increase the number of participants on both sides of the market (sellers and buyers). This increase is also in the interest of the sellers, as this will increase the number of potential buyers and selling price.[75] Similarly, the platform has an interest in the price of the individual transaction as it receives a percentage of that price. Yet, at the same time, the interests of the platforms and the sellers on these platforms can collide. The platform might accept a reduction in the prices for individual transactions as long as the overall number of transactions increases. In contrast, sellers have no interest in the overall number of transactions but only in the number and price of transactions conducted by them. There are numerous cases where such conflicts surface. For example, Uber was in conflict with its drivers because of lowering fares and quality standards, or because of a disagreement[76] over how the percentage of the fare that Uber receives should be calculated.[77]

Closely linked to membership organizations and associations are joint ventures. In the USA, the Supreme Court in *Texaco Inc v Dagher* highlighted that joint ventures selling a product at a fixed price cannot be considered price-fixing by the parent companies.[78] The Court highlighted that the joint venture had been approved by the antitrust authorities and that the competing companies, Shell and Texaco, had pooled their resources within the new entity, and shared the risks as well as the profits by producing the relevant product. This pooling of resources and the sharing of those risks related to the selling of a certain product is also typical for joint ventures in the EU.[79] Within a joint venture, the parent companies would typically retain rights to influence the joint venture due to their equity in the joint venture.

While profits made are shared between sellers and the platform to a certain extent,[80] the other characteristics of a joint venture are not present: Sharing economy economy platforms and the respective sellers neither pool assets, nor do they share risks. Similarly, the sellers on the platform do not pool their resources or share the risks or profits of the activity. Moreover, the sellers seem to have no direct influence over the platform, which would be typically due to the equity in the joint venture.

Comparing the incentives of platforms and joint ventures, a similar picture emerges. For the platform, the individual seller is not relevant, and the platform has little interest in sharing the risks incurred by the individual seller. In fact, the whole

74 ibid 38. However, there are exceptions like the above-mentioned hemnet.se.

75 See Hu and Zhou (n 5) 22.

76 See Kimiko De Freytas-Tamuramay, 'Kenya's Struggling Uber Drivers Fear a New Competitor: Uber' *New York Times* (22 May 2017) <https://www.nytimes.com/2017/05/22/world/africa/uber-kenya-driver-protest.html> accessed 15 March 2018.

77 See Julia Carrie Wong, 'Uber Admits Underpaying New York City Drivers by Millions of Dollars' *The Guardian* (23 May 2017) <https://www.theguardian.com/technology/2017/may/23/uber-underpaid-drivers-new-york-city> accessed 15 March 2018.

78 See *Texaco Inc v Dagher*, 547 US 1 (2006).

79 See for the details eg Luís Morais, *Joint Ventures and EU Competition Law* (Hart 2013) ch 1.

80 As the sharing platform receives a certain percentage of the price, but not of the profit made by the seller.

idea of the platform is not to offer to the market the same thing that the seller does, thereby bearing the risk involved. Instead, the focus of the platform is on connecting the seller to the buyer and receiving a fee for this service. The platform gains nothing from sharing the burden of risk with the seller, as long as a sufficient number of sellers are available to offer their services on the platform that ensures that a sufficient amount of transactions take place on the platform. In turn, the individual seller has no interest in sharing the risks of the platform. The seller can just as easily sell via another platform or channel. For example, if Uber suffered losses, the drivers would have no interest in covering these. Instead, they could switch to Lyft or another competitor, or even offer their services via another distribution channel. Therefore, joint ventures do not seem to be a fitting framework when looking at sharing economy arrangements.

Thus, it is unlikely that sharing platforms can be considered associations, membership organizations, or joint ventures, as long as platforms are not operating on a membership or equity basis, giving sellers influence, and because of the different incentive structure.

Vertical cooperation

The framework for vertical cooperation could be employed where the cooperation between platforms and sellers cannot be conceptualized as associations, membership organizations, or joint ventures. The application of this standard would typically involve more favourable treatment than cooperation on a horizontal level: In the USA, vertical arrangements are typically not subject to the *per se* prohibition under section 1 of the Sherman Act.[81] The EU also exercises restraint where a vertical agreement is at stake. In this regard, the EU's Vertical Guidelines explain that '[v]ertical restraints are generally less harmful than horizontal restraints and may provide substantial scope for efficiencies.'[82]

With such a vertical relationship, the setting of prices by the sharing economy platforms could be treated in a similar way as resale price maintenance (RPM). Since the *Leegin* decision in the USA, RPM has been the subject of intensive debate. The decision reclassified minimum RPM clauses from the *per se* rule approach to the rule of reason.[83] Subsequently, the EU also reformulated its Vertical Guidelines with regard to price maintenance schemes.[84] While the debate around *Leegin* and RPM in the EU concerned minimum resale prices, the issue of sharing platforms concerns fixed resale prices. Thus, *Leegin* as such could not be applied but it seems possible that a similarly lenient approach could be applied in the USA. In the EU, such price-fixing agreements would most likely be classified as a restriction by object[85] under Article 101 (1) TFEU. The companies concerned would then have to prove the benefits under Article 101 (3) TFEU.[86]

81 See *Leegin Creative Leather Products Inc v PSKS Inc*, 551 US 877 (2007); 127 S Ct 2705 (2007).

82 Guidelines on Vertical Restraints [2010] OJ C130/01, para 6, in the following Vertical Guidelines.

83 *Leegin Creative Leather Products Inc v PSKS Inc* (n 81).

84 See Vertical Guidelines (n 82) para 223-229.

85 See art 4(a) of Regulation No 330/2010 and the Vertical Guidelines, ibid, paras 223-229.

86 The EU's approach can be contrasted with a *per se* approach and might better be compared to a form of rule of reason within the US antitrust context.

Applying the framework for vertical arrangements seems to be supported by the contractual arrangements of sharing economy platforms, where the seller is connected via a contract to the platform that is connected to the buyer via another contract. A similar pattern can be observed in traditional vertical arrangements. In these, a manufacturer agrees with its retailers about the details of the sale of the products such as where, to whom, and for how much the manufacturer's products are resold by the retailers. The retailer then forms a contract with the subsequent buyer of the product. A special form of vertical arrangements that also might come to mind when examining sharing economy platforms is franchising.[87] In such arrangements, the franchisor typically grants the franchisee a licence to operate under its brand and provides input in the form of know-how and raw materials.[88] The sellers on sharing platforms are sometimes allowed to use the trademarks of the sharing platform and, in general, rely on the platform's reputation. Moreover, there are cases where the platform might help with the equipment required. For example, Uber might help drivers by providing loans for their cars.[89]

While the recent judgment in *Asociación Profesional Elite Taxi*[90] suggests that Uber is a transport service provider, this does not mean the platform–seller relationship is a form of vertical agreement. In the EU, a vertical agreement is defined in Article 1(1)(a) of the Vertical Block Exemption[91] and the Guidelines[92] as:

> an agreement or concerted practice entered into between two or more undertakings each of which operates, for the purposes of the agreement or the concerted practice, at a different level of the production or distribution chain, and relating to the conditions under which the parties may purchase, sell or resell certain goods or services

With regard to 'different levels of production or distribution chains', the Guidelines then explain that this means that one undertaking produces a product which is subsequently an input for another company, or that a manufacturer agrees with a wholesaler or a retailer.[93] Platforms do not produce or resell any goods, rather they seem to operate like marketplaces or real estate agents or brokers who bring the seller and the buyer together for a fee. Similarly, Anderson and Huffman, in the US context and with regard to Uber, point out that nothing is sold 'to the drivers that the drivers then resell to the rider. [...] Uber is merely providing a matching service helping drivers and riders find each other. The driver then provides the service to the rider at a price established by the Uber algorithm'.[94] Thus, it seems difficult to classify the link between the platform and its sellers as a vertical relationship. Moreover, the

87 Which in the USA, however, seem to be considered a non-vertical relationship but rather a case of a single company.

88 See Vertical Guidelines (n 82), paras 189ff.

89 See De Freytas-Tamuramay (n 76).

90 *Asociación Profesional Elite Taxi* (n 60)and confirmed in Case C-320/16 *Uber France* EU:C:2018:221.

91 Regulation No 330/2010 on the application of art 101(3) of the Treaty on the Functioning of the European Union to Categories of Vertical Agreements and Concerted Practices.

92 Vertical Guidelines (n 82), para 24.

93 ibid, para 24(c).

94 Anderson and Huffman (n 20) 36.

incentives and economic justifications for allowing RPM in vertical situations cannot be compared to those applicable to sharing platforms. This becomes clear when one examines the debate about the risks and benefits of RPM.

One of the major risks of RPM schemes is them being used to form and monitor cartels.[95] This risk does not only exist upstream, as there is also the risk that powerful retailers 'negotiate' the prices with the supplier.[96] In such a situation, the incentives of the retailers and the producers are aligned as they are able to share the supra-competitive rents. Price-fixing by a sharing platform seems to be in line with such a situation. One can argue that the incentives of the platform and the sellers would be similar as they could equally share any supra-competitive rents.[97]

Similarly, the typical benefits presented to justify RPM seem to be absent. A classical justification for RPM schemes is free-riding.[98] RPM schemes prevent free-riding by consumers who make use of the additional services provided by one retailer but then buy the goods or services at another cheaper retailer who does not provide such services.[99] Such a justification does not seem to apply in the context of sharing economy platforms. The different sellers do not offer different (additional) services. The same is true for RPM schemes employed to ensure that retailers stock sufficient quantities without the risk of declining prices.[100] The sellers on platforms do not stock products and need to be protected against declining prices. Something else that justifies a lenient approach to RPM is the benefits for inter-brand competition. RPM schemes can provide benefits in terms of incentivizing additional services for the consumers[101] or they might facilitate market entry by lowering the prices for a certain promotional period.[102] It may be difficult to imagine that sharing platforms could advance these arguments, in particular, where the price-fixing does not only occur for a limited amount of time but instead applies permanently.

95 See, eg Richard A Posner, *Antitrust Law* (The University of Chicago Press 2001) 172; Thomas R Overstreet, *Resale Price Maintenance: Economic Theories and Empirical Evidence* (FTC Bureau of Economics Staff Report 1983) 133; Howard P Marvel and Stephen McCafferty, 'Resale Price Maintenance and Quality Certification' (1984) 15 RAND Journal of Economics 346ff. Howard P Marvel and Laurel A Price, 'RPM and the Rule of Reason: Ready Or Not, Here We Come?' (2010) 55 *Antitrust Bulletin* 231. See eg *Argos Ltd v Office of Fair Trading* [2006] EWCA (Civ) 1318, para 141.

96 See also Vertical Guidelines (n 82), para 224; Jeremy Lever and Silke Neubauer, 'Vertical Restraints and Their Motivation and Justification' (2000) European Competition Law Review 7ff; Ulf Bernitz 'Resale Price Maintenance in Comparative Perspective' in Ariel Ezrachi (ed), *Research Handbook On International Competition Law* (Edward Elgar 2012) 430. Bruno Jullien and Patrick Rey, 'Resale Price Maintenance and Collusion' (2007) 22 RAND Journal of Economics 983, 996.

97 See Hu and Zhou (n 5) 22.

98 Challenging free-rider justifications in support of RPM, see Marina Lao, 'The Internet Phenomenon and "Free Rider" Issues' (2010) 55 *Antitrust Bulletin* 473.

99 Howard P Marvel, 'The Resale Price Maintenance Controversy: Beyond the Conventional Wisdom' (1994) 63 Antitrust Law Journal 59; Marvel and McCafferty (n 94).

100 See Raymond Deneckere, Howard P Marvel, and James Peck, 'Demand Uncertainty and Price Maintenance: Markdowns as Destructive Competition' (1997) 87 American Economic Review 619.

101 Mart Kneepkens, 'Resale Price Maintenance: Economics Call for a More Balanced Approach' (2007) 28 European Competition Law Review 656, 658, see also Greg Shaffer, 'Slotting Allowances and Resale Price Maintenance: A Comparison of Facilitating Practices' (1991) 22 RAND Journal of Economics 120, 130.

102 See *Leegin Creative Leather Products Inc v PSKS Inc* (n 81) 11–12. See also Posner (n 95) 172ff.; Marvel and McCafferty (n 95); See Frank Mathewson and Ralph Winter, 'The Law and Economics of Resale Price Maintenance' (1998) 13 Review of Industrial Organization 74.

Hub-and-spoke organized through an agency/brokerage relationship

Closely related to vertical conceptualization is that of hub-and-spoke organized through an agency/brokerage relationship. Platforms frequently argue[103] that they are comparable to an agency or brokerage situation.[104] Genuine agency or brokerage agreements would usually fall outside the scope of competition law in the EU[105] or in the USA would be subject to the standards applied to vertical situations as a distinction between an agency and vertical situation does not seem to exist.[106]

However, it is important in this context to distinguish between a genuine agency or brokerage agreement and a hub-and-spoke situation that would be caught under competition law.[107] Although the relationship between the sellers and the platforms might well be classified as an agency/brokerage relationship, the actual working might seem closer to that of a hub-and-spoke arrangement. In the EU context, an agency agreement is defined as a relationship where the agent is 'vested with the power to negotiate and/or conclude contracts on behalf of another person (the principal), either in the agent's own name or in the name of the principal, for the: purchase of goods or services by the principal, or sale of goods or services supplied by the principal'.[108]

In determining whether such a relationship exists, the risk borne by the agent with regard to the activities performed for the principal is the relevant criterion.[109] When examining agency agreements, it is important to remember that the agent is active in two markets: the market for services to principals and the secondary market where the agent offers the principal's products.[110] In the context of Article 101 (1) TFEU, an agreement will be considered to be an agency agreement where the agent

103 See Matthew Bennett 'Online Platforms: Retailers, Genuine Agents or None of the Above?' (2013) Competition Policy International <https://www.competitionpolicyinternational.com/online-platforms-retailers-genuine-agents-or-none-of-the-above> accessed 15 March 2018.

104 One might equally think of a sub-contracting arrangement, see also AG Szpunar (n 60), para 54. However, the platforms do not bear the risk of performance towards the customer. That is to say, *a priori* a platform is not liable where the seller does not perform as promised, although there might be special situations where this is the case. See with regard to this bearing of risk, Commission Notice Concerning its Assessment of Certain Subcontracting Agreements in Relation to art 85 (1) of the EEC Treaty [1979] OJ C 1/2, para 1, which is still relevant, see Vertical Guidelines (n 82), para 22 or Guidelines on the Applicability of art 101 of the Treaty on the Functioning of the European Union to Horizontal Co-Operation Agreements [2011] OJ C 11/1, para 154.

105 Vertical Guidelines, ibid, para 18(c).

106 Roger van den Bergh and Peter Camesasca, *European Competition Law and Economics: A Comparative Perspective* (Intersentia Publishers 2001) 245–47.

107 See in this regard in particular *United States of America v Apple Inc., et al.,* 12 Civ 2862 (DLC), where the relevant agreement was also termed 'agency agreement'; for the EU, see Case C-194/14 P *AC-Treuhand AG v European Commission* EU:C:2015:717 and also *Yen libor derivates* case, Commission Press Release IP/15/4104 (4 February 2015).

108 Vertical Guidelines (n 82), para 12.

109 See, in particular, Case T-325/01 *Daimler Chrysler v Commission* [2005] ECR II-3319; C-217/05 *Confederación Espanola de Empresarios de Estaciones de Servicio v CEPSA* [2006] ECR I-11987; Case C-279/06 *CEPSA Estaciones de Servicio SA v LV Tobar e Hijos SL* [2008] ECR I-6681.

110 Laura Elizabeth John and Jon Turner 'Agency Agreements' in *Bellamy & Child: European Union Law of Competition* (7th edn, OUP 2015) para 7.182.

does not bear the risk of the transaction between the principal and the final customer.[111]

It could be argued that the mode of operation of the sharing economy platforms is one of a principal–agent relationship acting as a contract broker because the platform does not bear the seller's risks and merely connects the seller with the buyer. In this case, the sharing economy platforms would be seen as agents of the sellers (principal) using the platform for brokering the contract between the buyer and the seller. Agreements between the seller and the agent that concern the price and conditions under which the agent sells the goods or services of the principal would normally not be within the scope of Article 101 (1) TFEU.[112] However, particularly in cases where the agent acts for multiple principals, a danger exists that the agent is used to facilitate a cartel between the principals, which would then be subject to the Article 101 (1) TFEU prohibition.[113] Such an arrangement would be considered a hub-and-spoke cartel.[114]

However, in terms of incentives, the principal–agent situation seems different from the seller-sharing platform relationship because the incentive structure is different. In traditional agency situations, the contracts align the interests of the principal and the agent so that the agent is incentivized to broker as many sales of the principal's product as possible. This incentive structure is often ensured by non-compete clauses that prevent the agent from selling products of competitors. In the case of sharing platforms, the situation is different. The incentives are not arranged in a way to maximize the number of sales of the individual principal. Instead, the individual transactions are not important to the platform; what counts are the overall sales. If the total number of transactions increases then so too does the revenue from fees, rendering the sales of the individual principal irrelevant. Thus, the incentives of the platform are closer to those of the aggregated principals, or a collective of principals, rather than the individual principal. In this sense, the incentives seem rather close to the incentives of an organizer of a hub-and-spoke cartel that collects fees based on the overall success of the cartel rather than the individual success of participants on the market. Such situations are examined in the following section.

Thus, there are two primary reasons that might suggest that the setting of prices by the sharing platform could be seen as a hub-and-spoke cartel. First, the sellers on the platforms do not pool their resources and share their risks, and nor do the sellers with the platforms. Thus, it is difficult to consider the platforms and the sellers as one economic unit for the purposes of competition law. This is the case, in particular, if the sellers on sharing economy platforms are independent economic actors and not employed. These could, therefore, themselves form a cartel if they fixed the

111 Vertical Guidelines (n 82) para 12. See also *Conferacion Espanola de Empresaarios de Estaciones de services* (n 44), paras 45-60.

112 ibid, para 18(c). Occasionally, the Commission's statement in its guidelines is used to find that MFN clauses—clauses that ensure price parity on different platforms—as part of agency agreements are outside the scope of art 101 (1) TFEU, see Pinar Akman, 'A Competition Law Assessment Of Platform Most-Favored-Customer Clauses' (2016) 12 Journal of Competition Law & Economics 805ff. However, the issue of MFN clauses as part of agency agreement is different. MFN, competition between platforms rather than competition on a platform.

113 John and Turner (n 110), para 7.188. See also Vertical Guidelines (n 82) para 20.

114 Examined in the next section.

prices to be charged on the platform. Secondly, where the platform–seller relationship is seen as an agency–principal relationship, the setting of a single price for all the principals enables a horizontal cartel by the principals.

This line of argument was essentially advanced in the class action case against Uber in the USA[115] because Uber sets or co-ordinates the prices paid by the consumers by means of an algorithm. Hub-and-spoke cartels are different from normal cartels, as the participants do not communicate directly to align their business behaviour. Yet, the communication and the details of the management of the cartel are outsourced to an intermediary. This third party is not active in the cartelized market but is mainly in charge of the organization of the cartel. The cartel members, as well as the intermediary, are both liable for the violation of the antitrust rules.[116]

In the USA, the *Apple e-book* price-fixing case is perhaps the best-known example of a major hub-and-spoke cartel.[117] In the EU, *AC-Treuhand*[118] provides a recent example of a hub-and-spoke cartel. In this case, a consultancy company was found to have organized a cartel by collecting and sharing market data, and by providing locations where the cartel members could meet. In the *Yen libor derivates* case, the Commission fined ICAP, a broker, for having acted as a communication channel between different traders in banks, thereby enabling a cartel.[119] Occasionally, *Eturas* is also mentioned in the context of hub-and-spoke cartels. This case concerned an electronic system, which was used to fix prices or, more precisely, the maximum discounts available, amongst competing travel agents.[120] However, in this case, the main question revolved around the extent to which the participants had known that the system fixed those discounts and what burden of proof should be applied. In the USA, Apple was found to be involved in a hub-and-spoke cartel regarding the fixing of e-books that violated section 1 of the Sherman Act *per se*. Apple had agreed on the prices of e-books with the publishers. Apple, who sold these e-books on its platform, received a percentage of that price. It is, thus, not surprising that Uber's business model seems comparable. Uber obtains a percentage of the fixed prices that it sets for drivers selling their services on its platform. However, there are three important differences to note between Uber and Apple.

First, Uber, unlike Apple, does not directly fix the prices or a price range for its drivers. Uber uses an algorithm for its pricing. Yet, this arrangement, using an algorithm, may not prevent antitrust liability for the following two reasons: (i) the arrangement is not too different from normal hub-and-spoke arrangements;[121] and

115 On this case, see eg Julian Nowag 'The UBER-Cartel? UBER between Labour and Competition Law' (2016) 3 Lund Student EU Law Review <https://ssrn.com/abstract=2826652> accessed 15 March 2018.

116 On hub-and-spoke agreements under EU and US law, see eg, Okeoghene Odudu, 'Indirect Information Exchange: The Constituent Elements of hub-and-spoke Collusion' (2011) 7 (1) European Competition Journal 205–42; Barak Orbach, 'Hub-and-Spoke Conspiracies' (2016) The Antitrust Source 1.

117 *United States of America v Apple Inc, et al*, 12 Civ 2862 (DLC).

118 *AC-Treuhand AG v European Commission* (n 107).

119 See Commission Press Release IP/15/4104 (n 107).

120 See eg Case C-74/14 *Eturas and Others* EU:C:2016:42.

121 See Ariel Ezrachi and Maurice E Stucke, 'Artificial Intelligence & Collusion: When Computers Inhibit Competition' (2015) Oxford Legal Studies Research Paper No 18/2015, University of Tennessee Legal Studies Research Paper No 267 <http://ssrn.com/abstract=2591874> accessed 29 June 2017; Ariel

(ii) the case of price-fixing by a seller of posters on Amazon shows that even if algorithms set the price, competition law can be applied. Furthermore, there is some evidence that Uber's algorithm has led to higher prices for consumers.[122] While such evidence would be important in the context of a rule of reason (USA) or an effects assessment (EU), such evidence is not necessary if the arrangement is classified as *per se* violation in the USA or as an object restriction in EU competition law.[123]

Second it has been argued that Uber and other sharing economy platforms cannot be compared to a situation where a vertical relationship with a retailer is used to establish a horizontal conspiracy. This is because '[t]he sharing economy arrangements do not literally fit the vertical restricted distribution mould. Uber does not sell a good to the drivers that the drivers then resell to the rider.'[124] While it is true that sharing economy platforms do not neatly fit the vertical relationship,[125] it seems plausible to compare such platforms to the *Apple* case. One needs to question whether it would make sense from a competition law perspective to determine antitrust liability based on the *formal* criterion of whether Apple first bought the books and then resold them, or whether the books were sold by the publishers on Apple's platform.

Third the Apple case also involved an MFN clause, whereby the publishers agreed not to sell their books more cheaply on other platforms. While this has certainly increased the potential for harm, it does not detract from the horizontal price-fixing charge.

Notwithstanding these differences, it is worth bearing in mind that hub-and-spoke cartels are different from vertical, as well as traditional horizontal, cartels.[126] Hub-and-spoke situations are typically characterized by the bargaining power of the retailer vis-à-vis its suppliers which is used by the retailer to achieve horizontal collusion via vertical restraints, and in return, the suppliers hope to receive some of the supra-competitive gains.[127] Moreover, the incentive structure of hub-and-spoke cartels might be compared to that of sharing platforms that set the price for its sellers.[128]

The consequences of characterizing the setting of prices by sharing platforms in this way might be dire for Uber and others in the US context. The *per se* classification

Ezrachi and Maurice E Stucke,'Algorithmic Collusion: Problems and Counter-Measures' (2017) OECD Roundtable on Algorithms and Collusion OECD DAF/COMP/WD(2017); see also Ezrachi and Stucke (n 29), who discuss different challenges and options to deal with such situations.

122 See, in particular, Gideon Lichfield, 'How Surge Pricing Works' (*The Atlantic*, 31 October 2015) <http://www.theatlantic.com/business/archive/2015/10/how-uber-surge-pricing-works/413335/?utm_source=SFFB> accessed 29 June 2017; Lauren Kirchner and Surya Mattu, 'Uber's Surge Pricing May Not Lead to a Surge in Drivers'(*ProPublica*, 29 October 2015) <https://www.propublica.org/article/uber-surge-pricing-may-not-lead-to-a-surge-in-drivers> accessed 29 June 2017.

123 On the challenges of blurring the line between object and effect restrictions, see Maria Ioannidou and Julian Nowag 'Can Two Wrongs Make a Right? Reconsidering Minimum Resale Price Maintenance in the Light of *Allianz Hungária*' (2015) 11 (2-3) European Competition Journal 340–66.

124 Anderson and Huffman (n 20) 35.

125 For more details see previous section.

126 On this, see Roberto Amore, 'Three (Or More) Is a Magic Number: Hub & Spoke Collusion as a Way to Reduce Downstream Competition' (2016) 12 European Competition Journal 28.

127 ibid 42–46.

128 See above text n 112ff.

means that pro-competitive effects could not be considered.[129] This US position contrasts sharply with the EU where benefits for consumers could be advanced in Article 101(3) of TFEU. Under this provision, it, however, needs to be shown that the arrangement was necessary and would not eliminate competition. In this context, it needs to be borne in mind that where the price is fixed, price competition is eliminated entirely,[130] meaning that at least one major part of competition is eliminated.

IV. KEY LEGAL AND ENFORCEMENT CHALLENGES

Having applied the established legal frameworks to situations of price-fixing on platforms, a number of key questions emerge from both legal and policy perspectives.

A vertical, horizontal, or third kind of relationship?

The question of whether the relationship between a sharing economy platform and its different sellers is a vertical one or a more horizontal one is important, especially in the US context. The distinction[131] seems rather difficult to draw because the platform–seller relationship exhibits both vertical and horizontal characteristics.[132] On the one hand, the customer gains access to the seller via the sharing platform, on the other hand, a cartel between the sellers organized in the relevant market through a common outlet would also show such a pattern. In the US context, the distinction between horizontal and vertical has dire consequences because being categorized as vertical might come with the benefit of a rule of reason approach, while a horizontal relationship between the sellers mediated by the platform seems to imply a *per se* prohibition. With such a classification, the entire business model of the likes of Uber would be at risk.[133] Yet, the above analysis of the incentive structure seems to suggest that such platforms exhibit both vertical and horizontal characteristics and are most likely best considered as agents or brokers. In the EU, the classification as vertical, horizontal, or agents seems less important. In all cases, pro-competitive effects can be argued under Article 101 (3) of TFEU.

An object or effect restriction?

In the EU, it is not so much the horizontal–vertical distinction that matters but rather that between restrictions by object and those by effect. This distinction is vital in terms of the burden of proof. In the EU, price-fixing, whether horizontal[134] or

129 For an overview, see Anderson and Huffman (n 20) 38ff.

130 Compare UBER in this regard with Airbnb where the sellers are offering different prices. Whether it would be possible to argue that there are benefits for the 'taxi-market' as a whole, ie the increased competition with the state organized monopolies is questionable. Such an argument was advanced unsuccessfully in the Apple e-book case with regard to the dominant position of Amazon in the book market.

131 On this distinction and its consequences in current antitrust, see eg Robert L Steiner, 'Vertical Competition, Horizontal Competition and Market Power' 53 (2) Antitrust Bulletin 251; Ioannis Lianos, 'The Vertical/Horizontal Dichotomy in Competition Law: Some Reflections with Regard to Dual Distribution and Private Labels' in Ariel Ezrachi and Ulf Bernitz (eds), *Private Labels, Brands And Competition Policy* (OUP 2009) 161–86; Ariel Ezrachi, 'Unchallenged Market Power? The Tale of Supermarkets, Private Labels and Competition Law' (2010) 33 (2) World Competition 257.

132 See the examination above.

133 For an overview, see Anderson and Huffman (n 20) 3.

134 See eg Guidelines on the Application of art [101](3) of the Treaty [2004] OJ C 101/97, para 23.

vertical,[135] is usually considered a restriction by object, although the agreement needs to be considered in context.[136] Thus, the Commission considers selling via joint selling agencies to be object restrictions,[137] which, however, can occasionally be justified by means of Article 101 (3) of TFEU.[138] The classification of object restriction does not change where the participants are allowed to sell outside the joint selling agency.[139] Thus, it is irrelevant for the categorization as object restrictions whether or not sellers are also able to sell outside the platform.

However, the categorization of object restriction has to take account of the legal and economic context so that even non-compete clauses have to be looked at in their specific context, as *Maxima Latvija*[140] highlights. Because of the specific context, it is, therefore, possible that arrangements which fix the price, and which would usually be subjected to the object treatment, are examined under the effects analysis. For example, the Commission, in *MasterCard,* examined the fixing of the multilateral interchange fee as a restriction of competition by effect.[141] The Commission left it open, as to whether this form of price-fixing could also be considered as a restriction by object.[142] This decision could possibly provide an opening for sharing platforms as the Commission examined the *MasterCard* system as a two-sided market and these platforms are equally two-sided markets. *MasterCard* could increase the burden of proof for the claimant or enforcer to show anti-competitive harm. In contrast, a number of national competition authorities have treated cross-platform price-fixing by booking platforms via MFN clauses as restrictions by object[143] notwithstanding the two-sided nature of that market.

How to consider the benefits and the two-sided nature?

While the two-sided nature might be relevant in the context of the object and effect distinction, it is vital not to overlook the matchmaker function[144] in considering the effects in general. Thus, a practical definition of a two- or multi-sided market is a market where an 'economic catalyst' is needed. This catalyst has more than one group of customers and these customers are, in some form, dependent on each other. The different customers have to rely on a catalyst to enable the transactions,

135 See art 4(a) of Regulation No 330/2010 and the Vertical Guidelines (n 82), para 223-229.

136 With regard to the context analysis and the case law developing this, see Ioannidou and Nowag (n 123).

137 See eg *Astra* [1993] OJ L 20/23; *HOV SVZ/MCN* [1994] OJ L 104/34, upheld on appeal Case T-229/94 *Deutsche Bahn AG v Commission* [1997] ECR II-1689, and Case C-436/97 P [1999] ECR I-2387; see also Horizontal Cooperation Guidelines, paras 234–235 and 246.

138 For example, *Floral* [1980] OJ L 39/51; *UIP* [1989] OJ L 226/25; *Cekanan* [1990] OJ L 299/64; *Ansac* [1991] OJ L 152/54. See also Horizontal Cooperation Guidelines, paras 246-248.

139 ibid para 235.

140 Case C-345/14 *Maxima Latvija* EU:C:2015:784, see in particular para 23.

141 Commission Decision *MasterCard* (Comp/34.579) paras 408ff. The Courts did not rule on whether the restriction could also have been classified as restriction by object. Case T-111/08 *MasterCard* (n 41), paras 138, 141; Case *MasterCard* (n 68) para 186.

142 Commission Decision *MasterCard* (Comp/34.579) para 407.

143 However, the competition issues are slightly different, as this does not necessarily concern the competition on the platform itself. For an overview, see Akman (n 112); Ezrachi (n 4).

144 See Evans and Schmalensee (n 13).

as they are unable to capture the value of their transactions on their own.[145] Thus, when examining sharing economy platforms, one needs to scrutinize the effects on the sellers', as well as on the buyers', side, particularly in terms of their interaction.

The commonality of the different definitions of platforms is that network effects and economies of scale are crucial.[146] In the platform business, sunk costs can be rather small as they mainly relate to the initial development of the programme and marketing.[147] Hence, platforms can grow quickly on both sides of the market making use of the network effects.[148] Given these features, it is not surprising that price is one of the major factors for success.[149] The centrality of price also becomes clear when examining the effects that the entry of sharing economy platforms has on other traditional market participants. These platforms have the potential to challenge or disrupt[150] traditional businesses and these challenges have led to significant decreases in price where they have become active.[151]

Notwithstanding the two-sided nature of sharing economy platforms and the importance that price might have, one would still need to examine whether forms of price competition other than price-fixing would not be less restrictive on competition. In the Uber context, one could imagine full price competition such as where each driver sets his or her own price per kilometre and time. The consumer would then see different cars with different prices and at different distances from the consumer. The consumer could then decide whether it is worth waiting longer for a cheaper car. Moreover, one could equally investigate whether a maximum price or even a minimum price, would not be less restrictive on competition. This analysis of less restrictive means could either take the form of the ancillary restraints test[152] or

145 See David Evans and Richard Schmalensee 'The Industrial Organisation of Market with Two-Sided Platforms' in Roger D. Blair and D. Daniel Sokol (eds), *The Oxford Handbook of International Antitrust Economics, Volume 1*(OUP 2015) for an overview on other definitions, see Gönenç Gürkaynak and others, 'Multisided Markets and the Challenge of Incorporating Multisided Considerations into Competition Law Analysis' (2017) Journal Antitrust Enforcement 100–07 .

146 See Gürkaynak and others, ibid 100-105, also see 100–29 on the challenges of multi-sided markets for competition law.

147 ibid.

148 Vera Demary, 'Competition in the Sharing Economy' (2015) IW Policy Paper 19/2015, 11–12 <https://www.econstor.eu/handle/10419/112778> accessed 15 March 2018.

149 See David Evans and Michael Noel 'Defining Antitrust Markets when Firms Operate Two-Sided Platforms' (2005) Columbia Business Law Review 680; and the foundational paper by Jean-Charles Rochet and Jean Tirole 'Platform Competition in Two-Sided Markets' (2003) 1 Journal of the European Economic Association 990.

150 Currently 'disrupt' is the a terms on fashion which seems to come from the work of Christensen on disruptive innovation, 'The Innovator's Dilemma' *Harvard Business Review* (1997); however, not all platforms can be described as disruptive innovators, see, for example, Clayton M Christensen, Michael E Raynor, and Rory McDonald 'What Is Disruptive Innovation?' *Harvard Business Review* (2015) <https://hbr.org/2015/12/what-is-disruptive-innovation> accessed 15 March 2018. Claire Groden, 'Why Uber isn't Disruptive but Netflix Is' (2015) <http://fortune.com/2015/11/17/uber-disruption-christensen/> accessed 15 March 2018.

151 See Georgios Zervas, Davide Proserpio, and John Byers, 'The Rise of the Sharing Economy: Estimating the Impact of Airbnb on the Hotel Industry' (2016) Boston U School of Management Research Paper No 2013-16 <https://ssrn.com/abstract=2366898> accessed 20 July 2017.

152 However in the EU, after the *MasterCard* cases it seem difficult to argue such a price restriction under the ancillary doctrine as a strict necessity test is applied, see *MasterCard and Others* (n 41), para 88–99 and *MasterCard,* Case C-382/12 P (n 68), para 91–93.

could take place within the rule of reason in the USA or under Article 101 (3) of TFEU.

What standard of proof?

Particularly with regard to the objective of fixing the common price on the platform, the relevant standard of proof needs to be considered. This question arises from the differences between traditional hub-and-spoke cartels and the platforms. In traditional hub-and-spoke cases, the primary objective is horizontal collusion. In contrast, in the platform or algorithm-based hub-and-spoke cases, it can be questioned whether the sellers participate with anti-competitive intent or whether the fixed price is the result of an unintentional alignment which results from using the same outlet.[153] In the USA, the intent is relevant for conspiracies against section 1 of the Sherman Act. The conspirators must have either clearly intended the illegal result or acted in the knowledge that this result was at least probable.[154] In contrast, the intent is not necessary in the EU. Knowledge of the objective content of the action, in other words, that the platform's system sets the price, may be sufficient. As the Court in *Eturas*[155] reiterated in the context of common algorithm-based pricing, knowledge of the fact that the price is fixed for everyone without public distancing or reporting the activity to public authorities is sufficient for Article 101 (1) of TFEU to apply.[156]

In the end, the competition law questions are about the allocation of the burden of proof. Should it be on the claimant/authority to show that this price-fixing has negative effects and to what standard? Or are there presumptions at work that make the job of the claimant/authority easier? Such presumptions would shift the burden to the defendant to show that price-fixing is necessary for its business model.

How to engage?

Beyond these mainly legal questions, price-fixing by such platforms also raises a number of enforcement challenges, most importantly, in what way should competition agencies engage with such platform issues. It might be politically opportune to focus solely on the benefits of the sharing economy. Instead of engaging with the difficult questions of price-fixing on platforms, agencies could focus their efforts on advocacy to ensure that sharing economy platforms are given sufficient room to operate. Moreover, passivity with regard to price-fixing by platforms allows the labour courts to address the difficult questions of whether sellers are employed by the platform or whether they are independent economic actors. This allows the agencies to stay clear of these socially and politically contentious questions.

However, to focus only on competition advocacy to ensure that the potential of sharing economy platforms can be realized equally bears risks. In particular, passivity by antitrust enforcement agencies might put courts, rather than agencies, into the lead role in terms of steering policy direction. The Uber class action is a case in point

153 Ezrachi and Stucke (n 29) 48, 53.

154 ibid 53, pointing to *United States v U.S. Gypsum Co*. 438 US 422 444-446 (1978).

155 *Eturas and Others* (n 120).

156 However, it might still be possible to take the intent into account when setting the fine for the conduct, see eg Guidelines on the method of setting fines imposed pursuant to art 23(2)(a) of Regulation No 1/2003 (2006) OJ C 210/2.

in the USA.[157] In the EU, the increased opportunities for private enforcement with the damages directive raises similar prospects. A local, not necessarily specialized, court might have to address the issue and given that taxi markets are usually local,[158] the court might not send relevant questions to the Court of Justice for a preliminary reference. Such a situation entails dangers, both in terms of the application of competition law across the EU and, possibly more importantly, with regard to the assessment and importance of economic evidence.

Additionally, passivity might risk giving the impression that different standards apply to different standards may apply depending on the size of the company involved. On one hand, price-fixing on platforms when induced by sellers has been prosecuted and even attracted criminal sanctions.[159] On the other hand, price-fixing by large and powerful platforms is not addressed.

Do we trust the invisible digital hand?

Where the price is set by means of an algorithm, competition agencies have to confront the following question: Do we trust the algorithm as a form of invisible digital hand or should the 'original' invisible hand set the price?[160] While a decentralized market is more efficient and creates greater social welfare compared to self-interested platforms centrally setting the price,[161] a properly programmed algorithm can come close to resembling a decentralized market.[162]

An interconnected question is related to the extent to which competition authorities want to protect the basic principle that economic operators should freely determine their policy on a market especially if self-employed small businesses are involved.[163] As AG Wahl pointed out:

> self-employed persons may also have profoundly diverging approaches to the prospect of being subject to provisions binding for them all as a group. For example, [. . .], whereas some self-employed [. . .] may welcome provisions fixing minimum tariffs, others may not. In fact, such provisions can deprive [newly established service providers] [. . .] from being able to compete effectively with more experienced or renowned colleagues, by offering their services at more advantageous rates. Without the possibility of competing on price, some self-employed would have far fewer opportunities to win a contract and would risk being marginalised [. . .] entirely.[164]

157 Although, a judgment seems currently to have been avoided as case seems to move to arbitration.

158 The examination might also take account of specific local law. For example, in Sweden, the taxi market is liberalized so that every taxi driver can set its own price (but has to display it) but Sweden has a law that allows for price cartels by taxis where they offer on demand service through a common telephone service. Such a rule could be applied in analogy to the Uber case.

159 See the US Amazon and the UK Amazon case (n 2).

160 On this issue and its implication, see Ezrachi and Stucke (n 29).

161 Hu and Zhou (n 5) 27.

162 The current estimates are that such an algorithm can reach around 90% of the competition scenario, see ibid.

163 See eg *Eturas and Others* (n 120), para 27 and the case law cited there.

164 Opinion AG Wahl (n 58) para 56.

Given the difficulties regarding labour law, soft law, in the form of guidelines rather than individual cases, might be the best way forward. One option would be to issue guidelines on the employee–employer relationships that are outside the scope of competition law. If a competition authority does not wish to engage in the topical question of whether sellers are employees, guidelines could highlight that they apply only to cases where the sellers on platforms are not employees. Guidelines provide an opportunity to explain what kind of approach should be taken to different forms of price-fixing and might allow the authority to achieve some of its advocacy goals by explaining the benefits of sharing economy platforms. These guidelines could take the form of a stand-alone white paper or, in the EU context, an update of the guidelines on commercial agencies. Finally, such guidelines provide an impetus for further debate.

Further questions raised

The debate about price-fixing by platforms and its treatment provides an opportunity for the competition community to rethink its approach to at least four more traditional issues.

First, in the context of price-fixing by platforms, inter-brand competition needs to be considered. To what extent can competing platforms offer sufficient competitive pressure to make up for the loss of competition on the platform. However, if this is a consideration in the context of price-fixing by platforms, one might equally need to ask whether enforcement action is needed in other cases. For example, if a number of sellers on Amazon form a traditional cartel, should such behaviour be classed as *per se* or object restriction if there are either competing platforms or other competitive channels from where the goods or services can be obtained? A related issue is whether it matters that the prices fixed for the sellers on the platform are lower than those of competitors.[165] While the harm to the consumer in such a situation might not be directly visible, making intervention hard to justify,[166] this argument raises two thorny issues. If the harm suffered by the consumer is long term rather than short term, then the situation can be compared to predatory pricing. If that is the case, it may be very difficult for authorities to identify the tipping point between short-term benefit and long-term harm.[167] Moreover, if lower prices would be a sufficient defence, how would this be determined? In particular, would it also apply to cases like the Amazon posters case? Specifically, could the seller of the poster have avoided prosecution if their fixed price was lower than the price of the same posters offline? And, possibly more importantly, how would one implement such a 'lower price by comparison' defence in terms of standards of proof?

Second if sharing platforms are treated with an effects or rule of reason approach, should such an approach not also apply to selling cooperatives and the setting of prices by membership organizations in general, as long as there is sufficient residual competition?

165 Other platforms or other forms of competition.
166 Ezrachi and Stucke (n 29) 54.
167 ibid.

Third we could ask whether we should distinguish sharing economy platforms like Uber from other platforms like eBay or Amazon. We also might need to think about whether the platforms should be treated differently from other matchmakers[168] like traditional agents such as real estate agents or stock markets. Would the setting of prices by these matchmakers be acceptable? Furthermore, the issues raised by price-fixing by platforms invites us to think again about how to distinguish vertical from horizontal situations, particularly in the case of hub-and-spoke cartels.

Finally, we might need to consider the relevance of innovation, as innovation alone should not provide a shield against antitrust liability. Otherwise, significant parts of the criminal law would be *de facto* obsolete, as criminals can be very innovative[169] in coming up with new ways to achieve their (often financial) ends.

V. CONCLUSION

How should price-fixing on platforms in the sharing economy be treated from a policy perspective? While we treat the fixing of prices by sellers on platforms such as Amazon as hardcore cartels, the same does not seem immediately true for cases where the platform itself would fix the prices for sellers on its platform. This, possibly, is attributable to the complex and two-sided nature of sharing platforms, which makes a universal answer problematic. Yet, this article aims to start this debate about the relevant parameters for such assessment. It has first shown that the sharing economy might not be as new as one might think. The article then explored different established frameworks or categories of competition cases on which a competition law analysis of this price-fixing phenomenon could be built. It also demonstrated that there are numerous problems with applying these established frameworks, but generally speaking an agency/brokerage framework might be the most appropriate approach. In the next section, the article highlighted the key legal and policy questions that need to be addressed when applying the competition provisions to such price-fixing on platforms by platforms. It highlighted the rather difficult position that competition enforcement agencies are in. On the one hand, sharing economy platforms seem to be providing substantial benefits so getting involved in this area might be politically sensitive. This is particularly the case for the question of whether sellers on the platform are employed or not. On the other hand, passivity might lead to a situation where private enforcement occurs, as the Uber class action shows. Such private enforcement in front of non-specialized courts raises the risk that agencies lose control of competition policy and that the multi-sided nature of such platforms is not sufficiently taken into account. The treatment of platforms, however, also provides an opportunity for the competition community to rethink its approach to a number of more traditional issues. These issues include questions about: how to

168 On the match-making function, see Evans and Schmalensee (n 13).

169 See Alexa Clay and Kyra Maya, *The Misfit Economy: Lessons in Creativity from Pirates, Hackers, Gangsters and Other Informal Entrepreneurs* (Simon & Schuster 2015); Phillips Lorraine Gamman and Raein Maziar, 'Reviewing The Art of Crime: What, if Anything, Do Criminals and Artists/Designers Have in Common' in David H Cropley and others (eds), *The Dark Side of Creativity* (CUP 2010) 155–76; Tonja Jacob and Jonah Kind, Criminal Innovation and the Warrant Requirement: Reconsidering the Rights-Police Efficiency Trade-Off (2014) William & Mary Law Review, Northwestern Public Law Research Paper No. 14-19<https://ssrn.com/abstract=2413221> accessed 15 March 2018.

distinguish vertical from horizontal situations, where intermediaries are connecting the consumers with the sellers but also the sellers with the sellers; whether price-fixing by other intermediaries such as agents or exchanges would be treated differently; or how to treat price-fixing as such in cases where sufficient residual competition exists or the price fixed is below that of residual competition. In this sense, price-fixing by platforms on platforms also provides us with an opportunity to re-explore the basic principle that economic operators need to determine their policy for a given market independently.[170] In other words, sharing economy platforms disrupt and challenge not only traditional economies but also traditional antitrust thinking.

170 See eg *Eturas and Others* (n 120), para 27 and the case law cited there.