

Article

When Does Algorithmic Pricing Result In an Intra-Platform Anticompetitive Agreement or Concerted Practice? The Case of Uber In the Framework of EU Competition Law

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I. Introduction

This article raises a research question of when intra-platform algorithmic pricing results in an anticompetitive agreement or concerted practice in the meaning of Article 101 of the Treaty on the functioning of the European Union (TFEU). The taken approach is a combination of an overview of existing types of algorithmic pricing and the case study on the business model of Uber. Selection of Uber is motivated by its great significance on the online platforms' market. In 2015, Uber has been valued \$51 billion and was the only platform next to Facebook to exceed \$50 billion threshold.¹ Many platforms therefore follow Uber's business model and the remarks explicitly made on the example of Uber remain relevant to many other Uber-like apps.

Several research sub-questions will accompany the main research question. First, it requires answering what scenarios of algorithmic pricing collusion exist, and which are relevant intra-platform. Further, the relationship between Uber and its drivers has to be examined. Are they independent contractors and therefore 'undertakings' in the meaning of Article 101 (1) TFEU or do they constitute a single economic entity with Uber as its workers or agents? Namely, if they are a part of a single economic unit, the question about intra-platform anticompetitive practices is not relevant anymore. Assuming that Uber drivers remain independent contractors, is using the same pricing algorithm legal on the grounds of EU competition law? In case it is not, may this practice be justified on efficiency grounds? Finally, if Uber unjustifiably breaches EU competition law, what

Key points

- Uber argues that its drivers remain independent contractors rather than workers.
- Following this assumption, intra-platform agreements between Uber and each of Uber drivers concerning Uber's algorithmic pricing should be subjected to Article 101 TFEU. One may assess them as a hub-and-spoke arrangement where Uber orchestrates a horizontal price-fixing cartel of Uber drivers, or a series of vertical agreements between Uber and each Uber driver.
- To ensure compliance with Article 101 TFEU, Uber should either recognise its drivers as workers, or adjust its pricing algorithm by allowing drivers to set the fares for their rides freely.

changes should be implemented to its business model to ensure legal compliance?

The primary research method will be a critical analysis of the relevant case law of the Court of Justice of the European Union (CJEU), opinions of Advocates General (AG) and decision-making practice of the Commission, as well as the relevant Treaties provisions and guidance documents concerning EU competition law. Also, a comparative method will be employed by looking at relevant national courts' judgments and decisions of national competition authorities (NCAs). The work will refer to the reports of the national competition authorities and international organisations concerning algorithms and collusion, since in recent years crucial contributions of this kind were published.² Finally, the

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¹ It has, however, done so 2 years faster than Facebook. See, Ariel Ezrachi and Maurice E. Stucke, *Virtual Competition* (Harvard University Press 2016) 50.

² Most importantly: UK Competition and Markets Authority, 'Pricing algorithms' CMA94 (London, 8 October 2018) https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/746353/Algorithms_econ_report.pdf; Autorité de la Concurrence and Bundeskartellamt, 'Algorithms and Competition' (Paris and Bonn, November 2019) <https://www.autoritedelaconcurrence.fr/sites/default/file>

article alludes to the valuable contributions of legal scholars to the fields of competition law and legal aspects of digital platforms. Additionally, the work is supported by the views of economists on the harmful effects of price-fixing practices, and computer scientists on better understanding of algorithms and their impact on the concept of collusion of undertakings.

Section II deals with pricing algorithms and collusion. It addresses the key definitions ('algorithm', 'pricing algorithms', 'algorithmic collusion') and distinguishes the types of algorithmic pricing collusion. It substantially emphasises the hub-and-spoke collusion scenario, since it appears to be the most relevant to Uber's price-setting model. Section III introduces the business model of Uber and discusses the classification of Uber drivers. It first presents how Uber operates, positions Uber among other online platforms and shows how the EU has dealt so far with Uber's regulatory issues. Subsequently, it discusses why classification of Uber drivers and determining if they are independent contractors or workers (or agents) is crucial for EU competition law. It is followed by a detailed discussion about Uber drivers' classification, with an attempt to consider key arguments to support the possible views. Section IV analyses Uber's compliance with Article 101 (1) TFEU, under the assumption that Uber drivers remain independent contractors and thus a subject to this provision. It considers the most relevant scenarios under which this assessment may take place and subsequently discusses whether efficiency grounds arising from Article 101 (3) may justify Uber's conduct. The article ends with an attempt to draw conclusions, including policy recommendations.

II. The shift from a smoke-filled room to a complex algorithmic software: algorithmic collusion as a contemporary challenge for EU competition law

Before moving to a specific analysis of Uber's business model as an example of an online platform, this section aims to provide an introductory overview of new challenges that algorithms generate in terms of anticompetitive collusions.³ First, I will clarify the central terms,

[s/algorithms-and-competition.pdf](#); OECD, 'Algorithms and Collusion: Competition Policy in the Digital Age' (Paris, 14 September 2017) <https://www.oecd.org/daf/competition/Algorithms-and-collusion-competition-policy-in-the-digital-age.pdf>.

³ Shifting attention of competition law enforcers from a 'smoke-filled room' to algorithms have been first observed in the US. 'We will not tolerate anticompetitive conduct, whether it occurs in a smoke-filled room or over the Internet using complex pricing algorithms. American consumers have

such as an 'algorithm', 'algorithmic pricing' and 'collusion', and determine the relationship between them. Secondly, I will distinguish between the possible categories of algorithmic price-fixing collusions and explore the practical difficulties that each of them generates to competition law enforcers.

A. Algorithms as a price-fixing tool

One can use algorithms as facilitators of collusions between undertakings in diverse scenarios. They can be more or less sophisticated, more or less unique and consequently more or less challenging for the competition authorities, courts and academics while trying to classify them using already existing legal terms.

I. What is an algorithm?

Intuitively, an algorithm is associated with a sequence of steps that have to be made to complete a task. Referring to a classic example of a definition proposed by computer scientists, an algorithm is 'a set of rules which tell us, from moment to moment, how to behave'.⁴ The definition that has been adopted by the British Competition and Market Authority states that 'an algorithm is any well-defined computational procedure that takes some value, or set of values, as input and produces some value, or set of values as output'.⁵

In the light of abovementioned definitions, an algorithm always refers to a process of steps. It aims to ensure automated application of the programmed steps to achieve a specific result. This broad approach to algorithms brings a connotation to cooking recipes, where 'the inputs being the ingredients, the elementary operations any simple cooking operations and the output the desired meal'.⁶ Nevertheless, the view of this work, similarly as the other contributions concerning the impact of algorithms on competition law, is focused on computer algorithms. Simplifying, they can be understood as a 'computer programme' or 'using a hardware'.⁷

the right to a free and fair marketplace online, as well as in brick and mortar businesses'. See, US Department of Justice Press Release, 'Former E-Commerce Executive Charged with Price Fixing in the Antitrust Division's First Online Marketplace Prosecution' (6 April 2015) <https://www.justice.gov/opa/pr/former-e-commerce-executive-charged-price-fixing-antitrust-divisions-first-online-marketplace>.

⁴ Marvin Lee Minsky, *Computation: Finite and Infinite Machines* (Prentice Hall 1967) 23; cited by: Robin K. Hill, 'What an Algorithm Is' (2016) 29 *Philosophy & Technology* 35, 38.

⁵ Thomas H. Cormen et al., *Introduction to Algorithms*, (2nd edn, The MIT Press 2001) 5.

⁶ Autorité de la Concurrence and Bundeskartellamt (n 2), 3.

⁷ UK Competition and Markets Authority (n 2), para 2.2.

2. Pricing algorithms

Massive development of new technologies in recent years has resulted in introducing great innovation in providing businesses. The omnipresence of the internet has strongly affected the area of goods and services. The percentage of EU citizens in 16–74 age group who have ever ordered goods or services using the internet has increased from 30 per cent in 2007 to 55 per cent in 2016.⁸ The competition between goods sellers and services providers in the e-commerce sector leads to a technological race. According to the Commission's statistics, '53% of the respondent retailers track the online prices of competitors, out of which 67% use automatic software programmes for that purpose.' Additionally, 78 per cent of those using software adjust their prices to the ones used by their competitors.⁹

Pricing algorithms can be defined as a type of an algorithm, which 'uses price as an input, and/or uses a computational procedure to determine price as an output.'¹⁰ The CMA distinguishes between: price monitoring algorithms, price recommendation algorithms and price-setting algorithms.¹¹ Most often, pricing algorithms are interrelated to big data. The most common data that are used as an algorithms' input is on:

- (i) competing firms' prices,
- (ii) firms' past profit and revenue data,
- (iii) individual customer information,
- (iv) external information (e.g. about weather conditions).¹²

Consequently, pricing algorithms are used most commonly by the online platforms, to gain effectiveness of their businesses. Such algorithms aim to adapt the prices to the current market circumstances in the best possible way. However, the question is, are these pricing models efficient for the consumers or do they only boost companies' profits.

3. Algorithms and collusion of undertakings

Economists define the term 'collusion' as any form of coordination or agreement between competitors aiming to raise their profits to a higher level than the non-cooperative equilibrium, resulting in a deadweight loss.¹³ They distinguish between 'explicit collusion' and 'tacit collusion'. The former indicates a direct conduct resulting in an explicit agreement. In contrast, the latter means unilateral competitors' behaviour, who maximise their

profits due to mutual recognition and adapting to each other's conduct. Whilst economists consider the *outcomes* of competitors' conduct on the market, lawyers while assessing the legality of a conduct look at the *means* used by competitors.¹⁴

To find a breach of Article 101 (1) TFEU, it has to be proved that an undertaking did not act independently, and consequently concluded an agreement or participated in a concerted practice. These terms were defined in the CJEU's case law.¹⁵ Proving an agreement necessitates the 'existence of concurrence of wills',¹⁶ whereas finding a concerted practice requires establishing 'direct or indirect contacts' between undertakings.¹⁷

By contrast, tacit collusion (parallel behaviour) is, in principle, legal, as the law does not prevent competitors from deciding unilaterally on their business policy, which includes adapting to competitors.¹⁸ As mentioned above, a usual trait of collusion is a loss on the market. Unluckily, algorithms more than ever facilitate tacit collusion. This observation leads to many questions, especially which algorithmic collusion scenarios shall constitute an infringement and how to provide evidence in each of the scenarios.

B. Types of algorithmic collusion and practical difficulties they generate for competition law enforcers

In this section, I will discuss the algorithmic collusion scenarios already identified in the literature. One may divide them into two groups: (i) collusions based on algorithms that merely facilitate already existing agreements or concerted practices concluded by humans, and (ii) algorithmic collusions *sensu stricto*, namely the ones in which algorithms themselves lead to collusive outcomes.¹⁹ I will also address the practical risks that these scenarios produce for the EU competition law framework.

I. Algorithms as mere facilitators of already concluded agreements or concerted practices

The first category encompasses (i) algorithms that serve as a tool to execute already existing agreements concluded by humans and (ii) hub-and-spoke arrangements.

8 Commission, 'Final report on the E-commerce Sector Inquiry' COM (2017) 229 final (Brussels, 10 May 2017), para 3.

9 Ibid., para 149.

10 UK Competition and Markets Authority (n 2), para 2.4.

11 Ibid.

12 Ibid., para 2.23.

13 OECD (n 2), 19.

14 Ibid.

15 Examples used after: Autorité de la Concurrence and Bundeskartellamt (n 2), 29.

16 Case T-41/96 *Bayer*, EU:T:2000:242, para 69.

17 Joined Cases from 40/73 to 48/73, 50/73, from 54/73 to 56/73, 111/73, 113/73 and 114/73 *Suiker Unie*, EU:C:1975:174, paras 173–174.

18 Case C-89/85 *Woodpulp*, EU:C:1993:120, para 126.

19 Ezrachi and Stucke first discussed these categories. See Ariel Ezrachi and Maurice Stucke, 'Artificial Intelligence & Collusion: When Computers Inhibit Competition' (2017) 2017 University of Illinois Law Review 1775, 1784–1795.

1.1. *Algorithms as a tool to execute earlier agreements.* The first type of algorithmic collusion is not excessively challenging from the competition law's point of view.²⁰ The central activity from the perspective of antitrust law takes place between humans, in a traditional way. Algorithms are used merely to facilitate the arrangements of humans. For instance, undertakings arrange a price coordination and algorithms are programmed solely to execute these arrangements.²¹ Therefore, algorithms in this scenario are used as a tool to implement, monitor or enforce an already existing agreement or concerted practice.²²

Infringement of Article 101 (1) TFEU or its national competition law substitutes is evident in this scenario since an agreement between undertakings is undoubted. It can be proved, for example, by email correspondence or meetings in person.²³ Algorithms do not complicate the legal interpretation of this practice. Thus, the legal assessment is limited to an agreement or a concerted practice itself, which is only subsequently enforced by the algorithms. In any event, algorithms may make the parties' arrangements more stable, resulting in worse effects for the competition.

1.2. *Hub-and-spoke arrangements.* The term hub-and-spoke refers to a practice, where the *hub* acts as a coordinator or an intermediary between the *spokes* that are the undertakings who compete against each other on an upstream or a downstream market.²⁴ The hub gathers information from each of the spokes and subsequently transfers it to all of the spokes. As a consequence, the spokes are not communicating directly, but the hub coordinates their actions. For this reason, a hub-and-spoke arrangement has been aptly called by one of the authors a 'horizontal collusion in disguise'.²⁵ From competition law's point of view, hub-and-spoke is a series of the same separate vertical agreements between each competitor and the same third party that may result in a concerted horizontal practice.²⁶

According to the Commission's Horizontal Guidelines, besides the direct sharing of information between

competitors, what can designate an anticompetitive practice, information 'can also be shared indirectly (1) through a common agency (2) or a third party such as market research organisation or the companies' suppliers or retailers'.²⁷ Even though the Commission is not using this term, that third party should be considered as a hub in our scenario. As the Horizontal Guidelines clarify, the exchange of information may constitute an agreement or concerted practice to determine a price, which often should be penalised as a participation in a cartel.²⁸ A 'double nature' of hub-and-spoke conspiracy can be reflected by the possibility of finding it also in the Vertical Guidelines, at least its type where the hub is an upstream supplier.²⁹ While addressing the retail price maintenance (RPM), the guidelines state that strong or well-organised distributors might force their suppliers to fix their price above the competitive level to stabilise a collusive equilibrium.³⁰

Even though both EU guidelines documents indirectly refer to hub-and-spoke arrangements, there are still no clear examples of law enforcement on this matter in the EU. Therefore, it remains disputable whether mere vertical information exchange might lead to a concerted practice between competitors at the same level.³¹ An example of this reasoning can be found in the Commission's two proceedings in the *E-books* cases.³² However, the Commission has not qualified these cases as hub-and-spoke arrangements since the emphasis was put on direct contacts between the five publishers facilitated by Apple as their mutual distributor. Hence, the violation of Article 101 (1) TFEU was based on contacts between the publishers, rather than its coordination by a third party.

Hub-and-spoke arrangements assume the existence of a concerted practice between upstream and downstream competitors, rather than concluding an agreement.³³ Although in order to state a violation of Article 101 (1) TFEU there is practically no difference between agreements and concerted practices,³⁴ investigation of

20 Ibid., 1784.

21 Plea Agreement, *United States v David Topkins* [30 April 2015] <https://www.justice.gov/atr/case-document/file/628891/download>; Information, *United States v. David Topkins* [6 April 2015] <https://www.justice.gov/atr/case-document/file/513586/download>.

22 Autorité de la Concurrence, and Bundeskartellamt (n 2), 27.

23 See for example, Competition and Markets Authority, Decision of 12 August 2016 in *Trod* (Case 50223).

24 Patrick Van Cayseele, 'Hub-and-Spoke Collusion: Some Nagging Questions Raised by Economists' (2014) 5 *Journal of European Competition Law & Practice* 164, 165.

25 Iga Małobęcka, 'Hub-and-spoke cartel—how to assess horizontal collusion in disguise?' (2016) 8 *Krytyka Prawa* 64.

26 Okeoghene Odudu, 'Indirect Information Exchange: The Constituent Elements of Hub and Spoke Collusion' (2011) 7 *European Competition Journal* 205, 205–207.

27 Guidelines on the applicability of Article 101 of the Treaty on the Functioning of the European Union to horizontal co-operation agreements [2011] OJ C11/1, para 55.

28 Ibid., para 59.

29 Guidelines on vertical restraints [2010] OJ C130/1, para 212.

30 Ibid., para 224; OECD, 'Roundtable on Hub-and-Spoke Arrangements—Background Note by the Secretariat' (Paris, 25 November 2019), para 58 [https://one.oecd.org/document/DAF/COMP\(2019\)14/en/pdf](https://one.oecd.org/document/DAF/COMP(2019)14/en/pdf).

31 Alison Jones and Brenda Sufrin, *EU Competition Law*, (4th edn, Oxford University Press 2016), 161.

32 Commission Decision of 12 December 2012 in *E-books* (COMP/AT.39847).

33 OECD, 'Hub-and-spoke arrangements—Note by the European Union' (Paris, 13 November 2019), para 12 [https://one.oecd.org/document/DAF/COMP/WD\(2019\)89/en/pdf](https://one.oecd.org/document/DAF/COMP/WD(2019)89/en/pdf).

34 Case C-238/05 *Asnef-Equifax*, EU:C:2006:734, para 32.

a concerted practice requires a more detailed analysis of the facts of each case.³⁵ This approach necessitates a scrupulous assessment of the spokes' behaviour in order to state their infringement. The CJEU's case law provides some useful hints on that.

The Court made the most noteworthy findings which may relate to hub-and-spoke arrangements in the digital context in the *Eturas* ruling.³⁶ It concerned a price coordination arranged by the Lithuanian booking.com substitute—Eturas online platform. The administrator of Eturas informed the online travel agencies advertising their services on Eturas that the discounts they are offering cannot exceed 3 per cent.³⁷ Offering a higher discount was still possible but required additional technical steps from the online travel agencies.³⁸ The Lithuanian national competition authority found in these circumstances a concerted practice between the travel agencies based on price-fixing coordinated by Eturas.

The Lithuanian national court made a preliminary reference, having doubts if just receiving an email about the discount cap and not opposing it was enough to establish a participation in concerted practice.³⁹ As a response, the CJEU stated that in these circumstances it is possible to presume that online travel agencies knew the content of the message sent by a booking platform from the moment of receiving it, and therefore can be held liable.⁴⁰

There are two crucial outcomes of *Eturas* for recognising conceivable hub-and-spoke conspiracies in the digital context. First, the presumption of innocence as a general principle does not exclude a presumption that an undertaking was aware of the content of a message sent, in the light of other objective and consistent indicia.⁴¹ Secondly, the defendant may rebut this presumption in three ways: (i) by proving that it publicly distanced itself from a concerted practice, (ii) by proving that it notified competent authorities about a concerted practice or (iii) by other evidence.⁴² As the CJEU clarified, an example of other evidence in the circumstances of *Eturas* case could be to prove that a travel agency has been continuously offering a discount exceeding the 3 per cent cap.⁴³

In the *VM Remonts* case, the CJEU confirmed that an undertaking could be found liable for a concerted

practice if it 'was aware of the anticompetitive objectives pursued by its competitors and the service provider and intended to contribute to them by its own conduct.'⁴⁴ It is also enough that an undertaking 'could reasonably have foreseen' them.⁴⁵

Lastly, also the *AC Treuhand* ruling contributes significantly to the hub-and-spoke concept.⁴⁶ AC Treuhand tried to argue that it cannot be held liable for a participation in an anticompetitive agreement or a concerted practice between undertakings on a downstream market as an upstream supplier. However, the CJEU indicated that it played a crucial role in organising the meetings of the cartel members and was present in them.⁴⁷ It would prevent EU competition law from having full effect if an undertaking was excluded from the restraint of competition only because of not operating on the market on which an anticompetitive agreement is materialising.⁴⁸ Consequently, this reasoning enables an attribution of liability to a hub in a hub-and-spoke model.

2. Algorithmic collusions *sensu stricto*

The previous category referred to algorithmic collusions which are decisively influenced by humans. Although the second category, where human impact is absent, remains rather theoretical at the moment, it has already captured lots of attention of scholars. Nevertheless, because it is outside of the scope of this article's further analysis, types of algorithmic collusion covered by it will be discussed only briefly. These are: (i) conscious parallelism of independent algorithms and (ii) machine learning algorithms.

2.1. Conscious parallelism of independent algorithms. The third type of algorithmic collusion produces particular difficulty in terms of its qualification. It is because of the uncertainty of qualifying the undertaking's behaviour as a participation in a concerted practice, or rather as a mere parallel behaviour (tacit collusion). In this scenario, algorithms are programmed to adapt to the market changes in real-time.⁴⁹ While reacting automatically, algorithms would follow their competitors' prices, especially by decreasing or increasing the price, and offering discounts.⁵⁰

As already mentioned, adapting to competitors' behaviour falls outside the scope of Article 101 (1) TFEU. The distinction between concerted practices and parallel

35 Case C-8/08 *T-Mobile*, EU:C:2009:343, para 60.

36 Case C-74/14 *Eturas*, EU:C:2016:42.

37 *Ibid.*, para 10.

38 *Ibid.*, para 12.

39 *Ibid.*, para 24.

40 *Ibid.*, para 39–40.

41 *Ibid.*, para 40.

42 *Ibid.*, para 46. About rebutting this kind of presumption on the grounds of the 'other evidence' see also Case C-634/13 P *Marketing Services*, EU:C:2015:614, paras 23–24.

43 *Ibid.*, para 49.

44 Case C-542/14 *VM Remonts*, EU:C:2016:578, para 30.

45 *Ibid.*, para 31.

46 Case C-194/14 P *AC-Treuhand*, EU:C:2015:717.

47 *Ibid.*, para 37.

48 *Ibid.*, para 36.

49 Ezrachi and Stucke (n 19), 1789.

50 Salil Mehra, 'Antitrust and the Robo-Seller: Competition in the Time of Algorithms' (2016) 100 *Minnesota Law Review* 1323, 1325.

actions has been observed many times by the CJEU.⁵¹ Parallel behaviour of competitors, in the last decades, was especially common in the oligopolistic markets. As the CJEU indicated in the *Wood Pulp* ruling, the parallelism of prices and the price trends may be explained by the oligopolistic tendencies.⁵² A classic example is the market of the two petrol stations placed next to each other. Seeing that one decreases the prices, an opponent most likely will do the same, which cannot result in EU antitrust law infringement.⁵³

Pricing systems based on algorithms that monitor competitors' decisions in real-time may shift the phenomenon known from oligopolistic markets to the digital sphere.⁵⁴ Since many markets are ongoingly digitalised, these tendencies resulting in higher prices, might become much more common. It appears that current EU competition law framework might not be sufficiently equipped to tackle practices of even conscious deployment of similar algorithmic models by the competitors. The latter will be justifying themselves on the grounds of parallel behaviours.

In further years, a tacit collusion concept should be rethought, since algorithms will significantly facilitate colluding tacitly. In the US context, it has been noted that the development of pricing algorithms by an undertaking is at least observable.⁵⁵ Thus, there is some extent to which one can assess an undertaking's action in terms of human behaviour by looking 'inside the head' of the price-setting algorithm.⁵⁶ Objective of coding an algorithm in a particular way could play a role while assessing the legality of algorithm's actions.⁵⁷ It has also been noticed that in the United States, the Federal Trade Commission may issue a claim against anticompetitive behaviour on the grounds of an 'unfair practice'.⁵⁸ This kind of approach could potentially broaden the scope of Article 101 (1) TFEU to tackle these new tendencies, without the necessity to prove the existence of an agreement or concerted practice (or the dominant position to apply Article 102 TFEU).

2.2. *Machine learning algorithms.* Machine learning is one of the features of artificial intelligence (AI). The category of self-learning algorithms goes entirely beyond the human-centric approach to competition law. The difference

between the algorithms facilitating a tacit collusion and self-learning is that the latter could be programmed more generally to achieve a target, such as profit maximisation.⁵⁹ AI would independently decide how to do it exactly. Consequently, potential anticompetitive behaviours might not result from human intent, but rather machine learning processes.⁶⁰ Furthermore, this type of an algorithm could both adapt in real-time to market changes and predict them.⁶¹

It seems that the current EU competition law frameworks do not provide any measures to hold undertakings liable for unintentional AI development that led to anticompetitive outcomes.⁶² Moreover, this scenario might be entirely excluded from the scope of an agreement or concerted practice because of its unilateral character. Therefore, an alternative examination could occur under Article 102 TFEU, as a potential abuse of dominant position (obviously in case of a dominant position occurrence). Similarly to other issues related to AI, machine learning algorithms raise not only legal, but also ethical questions on human's impact on decisions made by self-learning machines.⁶³ This impact is a starting point for discussions about any kind of liability for AI.

III. 'When your boss is an algorithm'. Classification of Uber drivers: independent contractors, workers or something in between?

Scenarios of algorithmic pricing collusions discussed in the previous section are especially relevant to online platforms. Algorithms may facilitate collusion between separate platforms, distorting inter-platform competition. However, anticompetitive actions may also occur 'inside' the platform, leading to intra-platform competition distortion.⁶⁴ In the case of Uber, the latter scenario might be present. Uber drivers use the same pricing algorithm and cannot compete on price. In any event, a preliminary step before discussing whether EU competition law is violated is to classify Uber drivers. One may find that competition between Uber drivers is

51 *T-Mobile* (n 35), para 33.

52 *Woodpulp* (n 18), para 126.

53 *Suiker Unie* (n 17), para 174.

54 *Ezrachi and Stucke* (n 19), 1793.

55 Joseph E. Harrington Jr, 'Developing Competition Law for Collusion by Autonomous Artificial Agents' (2018) 14 *Journal of Competition Law & Economics* 331, 349–350.

56 *Ibid.*, 350.

57 *Ibid.*, 351.

58 *Ezrachi and Stucke* (n 19), 1794.

59 *Ezrachi and Stucke* (n 19), 1795.

60 *Ibid.*

61 Marcin Mleczo, 'Technologiczne wyzwania dla antropocentrycznego prawa konkurencji na przykładzie algorytmicznego ustalania cen w sektorze e-commerce' (2018) 8 *Internetowy Kwartalnik Antymonopolowy i Regulacyjny* 63, 70.

62 *Ezrachi and Stucke* (n 19), 1796.

63 Commission, 'Ethics Guidelines for Trustworthy AI' (Brussels, 8 April 2019) <https://ec.europa.eu/digital-single-market/en/news/ethics-guidelines-trustworthy-ai>.

64 Vassilis Hatzopoulos, *The Collaborative Economy and EU Law* (Bloomsbury Publishing 2018) 128–129.

not even the case, since they constitute a single economic entity with Uber, most likely as Uber's workers.⁶⁵

In this section, I will first introduce Uber's business model to clarify how it works, what kind of a platform it is and how the EU has dealt so far with regulatory issues it generates. Then, I will clarify why classification of Uber drivers is necessary from the EU competition law point of view, bringing the concepts of an 'undertaking' in the meaning of Article 101 (1) TFEU and a 'single economic entity' established in the CJEU's case law. Finally, substantial remarks on Uber drivers' classification will be made to answer the question: are they independent contractors or do they constitute a single economic unit with Uber? This assessment is crucial, since as a part of a single economic entity together with Uber, the drivers are not separate subjects to Article 101 TFEU application.

A. Uber's business model

I. How Uber works and determines fares?

The great success of Uber results from a game-changing idea. According to the app's creators, it was born when they could not find a taxi during a freezing night in Paris. Their simple idea was: 'what if you could request a ride right from your mobile phone?'⁶⁶ This is how Uber might be described in its very essence.

Uber bases its services on an online platform, which serves as a matchmaker between the drivers and passengers. Drivers have to be registered with their cars on the Uber platform and be ready to give a ride.⁶⁷ Passengers need to have the Uber app downloaded on their smartphones and to run an account. Uber uses data about passenger's current location from her smartphone and matches her with a nearby driver. After requesting a ride, the passenger receives information about the available driver, car, distance, and waiting time.⁶⁸ The crucial infor-

mation that the passenger receives is, however, about the price. It is determined entirely by an algorithm, which takes into account: (i) time of the ride, (ii) distance, and (iii) current demand on the rides in a particular part of the city.⁶⁹ This algorithmically generated upfront fare is eventual and unchangeable during or after the ride. Although there was a time when Uber was informing that drivers have the possibility of lowering the price, it never elaborated on how to do that.⁷⁰ Consequently, Uber drivers do not have any actual possibility to negotiate their fares. Recently Uber introduced a little nuance—currently after a ride, passengers may voluntarily pay a tip via an app.⁷¹

A controversial issue is the 'surge pricing' mechanism. The idea is that fares are multiplied in the areas where the demand exceeds the supply. In other words, there are fewer Uber drivers ready to offer a ride than passengers willing to order a ride. Even though Uber argues it basically adjusts demand level to supply level thanks to this measure, the room for manipulations is clear.⁷² Most importantly, Uber has not demonstrated the specified way in which the surge pricing works.

Finally, immediately after the ride, the charge is collected by Uber through the cashless payment. Therefore, to run an Uber account, a passenger has to provide the data from her credit card.⁷³ Uber drivers receive payments within weekly billing cycles, which are reduced by the 'Uber fee'—the percentage reserved for Uber.⁷⁴ After a ride, the passengers are asked to rate a driver, but they are not obliged to do so. Importantly, it turns out that a general rating below a certain threshold may result in deactivating the driver's account by Uber, similarly if the driver rejects a certain percentage of the requests.⁷⁵

65 Some authors referred to 'algorithm as a boss' describing business models based on algorithmic management. See Sarah O'Connor, 'When your boss is an algorithm' (*Financial Times*, 8 September 2020) <https://www.com/content/88fdc58e-754f-11e6-b60a-de4532d5ea35>; Alex Rosenblatt, 'When Your Boss Is an Algorithm' (*The New York Times*, 12 October 2018) <https://www.nytimes.com/2018/10/12/opinion/sunday/uber-driver-life.html>.

66 Brian O'Connell, 'History of Uber: Timeline and Facts' (*The Street*, 2 January 2020) <https://www.thestreet.com/technology/history-of-uber-15028611>.

67 Uber sets specific requirements to register either for drivers (e.g. turning 21 years old and having a driving licence at least for 1 year) and for their cars (e.g. being registered in the country of providing services and having four doors). See: Uber, 'Driver requirements' <https://www.uber.com/us/en/drive/requirements/>.

68 Uber Help, 'How does Uber work?' <https://help.uber.com/riders/article/how-does-uber-work?nodeId=738d1ff7-5fe0-4383-b34c-4a2480efd71e>.

69 Uber Help, 'How fares are calculated?' <https://help.uber.com/riders/article/how-are-fares-calculated/?nodeId=d2d43bbc-f4bb-4882-b8bb-4bd8acf03a9d>.

70 Nicholas Passaro, 'How Meyer v. Kalanick Could Determine That Uber and the Sharing Economy Fit into Antitrust Law' (2018) 7 *Michigan Business & Entrepreneurial Law Review* 259, 263.

71 Polina Marinova, 'What You Need to Know About Uber's New In-App Tipping Feature' (*Fortune*, 20 June 2017) <https://fortune.com/2017/06/20/uber-drivers-tips/>.

72 See arguments defending Uber's surge pricing: Bill Gurley, 'A Deeper Look at Uber's Dynamic Pricing Model' (*Above the Crowd*, 11 March 2014) <http://abovethecrowd.com/2014/03/11/a-deeper-look-at-ubers-dynamic-pricing-model/>.

73 The method of paying by cash is for example unavailable in Poland. Maciej Toroń and Katarzyna Wiese, 'Aplikacja UBER lub jak ująć sharing economy w istniejące ramy prawne?' (2017) 5 *Internetowy Kwartalnik Antymonopolowy i Regulacyjny* 8, 11–12.

74 Uber Help, 'How will I get the payment for trips?' <https://help.uber.com/riders/article/how-will-i-get-the-payment-for-trips?nodeId=7a60ac58-e540-4db0-a9fa-a998435ca5a0>.

75 See the remarks about Uber's 'algorithmic management' in sub-section C.2.1.

2. Uber among other online platforms

Uber's creators' goal was to enable people to order rides from their smartphones conveniently and to allow the drivers to provide ride services easily. First and foremost, this twofold approach positions Uber as a platform. The term 'platform' is defined as an intermediary operating in the two-sided markets enabling interactions between the participants of two sides of such markets.⁷⁶

Uber is categorised as a collaborative economy platform. At the EU level, it is defined as a category referring to 'business models where activities are facilitated by collaborative platforms that create an open marketplace for the temporary usage of goods or services often provided by private individuals.'⁷⁷ Sectors which have become the most suitable for this approach are transportation (i.e. Uber, Lyft, and Bolt in urban transportation and Blabla Car in transportation between the cities), accommodation (i.e. Airbnb) and fulfilling tasks (i.e. TaskRabbit).⁷⁸ What remains mutual to collaborative economy platforms is the participation of three actors: (i) services providers, sharing their facilities, time and skills, (ii) users, and (iii) intermediary platforms.⁷⁹ Services providers may act as professionals, but also as 'peers'—individuals, who offer their services on an occasional basis.⁸⁰

Uber has become the most recognised collaborative economy platform, to the extent that some authors started using the term 'Uber economy' as a synonym of the collaborative economy. The term 'to uberise' may be already found in the dictionaries—it is defined as 'to change the market for a service by introducing a different way of buying or using it, especially using mobile technology'.⁸¹ Nevertheless, being the most prominent collaborative economy example, Uber profoundly differs from the other collaborative economy platforms.⁸² It is because of a deep impact that Uber as a platform has on Uber drivers. What sets Uber apart from the other

collaborative platforms is that Uber drivers are cannot decide upon the price offered, contrary for instance to Airbnb landlords⁸³ or TaskRabbit taskers.⁸⁴

3. Sneaking out from the traditional regulatory frameworks

As AG Szpunar noted, the Uber business model leads to questions concerning competition law, consumer protection and employment law, among others.⁸⁵ In response, the EU so far has taken a cautious, 'wait-and-see approach'.⁸⁶ Namely, the Commission suggests using the existing tools and adjust them to the new business reality, either at the national and EU level.

So far, the CJEU has dealt with two cases concerning Uber.⁸⁷ Both were brought on the grounds of similar facts within the preliminary reference procedure and concerned market access requirements. Essentially, the national courts had doubts whether Uber's services could be considered as electronic intermediary services to fall within the scope of Article 56 TFEU (concerning free movement of services) or as an information society service in the meaning of the Directive 2000/31. Falling into the scope of one of these categories, Uber could freely operate in the Member States on the grounds of EU free movement rights.

The CJEU ruled that Uber's intermediation as an online platform is 'an integral part of an overall service whose main component is a transport service'.⁸⁸ The main CJEU's argument was that 'Uber exercises decisive influence over the conditions under which that service is provided by those drivers', whereas the latter could not provide this kind of services without Uber's online app.⁸⁹ Since the Services Directive exempts transportation services from its scope, the Member States remained free to restrict Uber's services, for example by requiring meeting particular conditions by the drivers.⁹⁰

76 Jean Rochet and Jean Tirole, 'Platform Competition in Two-Sided Markets' (2003) 1 *Journal of the European Economic Association* 990, 992.

77 Commission, 'A European agenda for the collaborative economy', COM (2016) 356 final (Brussels, 2 June 2016), 3.

78 Vassilis Hatzopoulos and Sofia Roma, 'Caring for sharing? Collaborative economy under EU law' (2017) 54 *Common Market Law Review* 81, 86–88.

79 Commission (n 78), 3.

80 Ibid.

81 Cambridge Dictionary, 'Uberize' <https://dictionary.cambridge.org/dictionary/english/uberize>.

82 There are also voices that Uber is not an example of collaborative (sharing) economy at all. See, Dominic Rushe, 'What is Uber? Forget the sharing economy—it's just a libertarian scam' (*The Guardian*, 9 May 2019) <https://www.theguardian.com/commentisfree/2019/may/09/uber-sharing-economy-ride-share-ipo>.

83 Airbnb Help Centre, 'How do I set my nightly price?' https://www.airbnb.co.uk/help/article/474/how-do-i-set-my-nightly-price?_set_bev_on_new_domain=1588706943_Bso6P%2BHtgKicwXzD.

84 TaskRabbit Support, 'What's the TaskRabbit Service Fee?' <https://support.taskrabbit.com/hc/en-us/articles/204411610-What-s-the-TaskRabbit-Service-Fee>.

85 Opinion of AG Szpunar in Case C-434/15 *Uber Spain*, EU:C:2017:364, para 1.

86 Hatzopoulos and Roma (n 79), 93.

87 Case C-434/15 *Uber Spain*, EU:C:2017:981; Case C-320/16 *Uber France*, EU:C:2018:221.

88 *Uber Spain* (n 88), para 40.

89 Ibid., para 39.

90 Directive 2006/123/EC of the European Parliament and of the Council of 12 December 2006 on services in the internal market [2006] OJ L376/36, Article 2 (2d).

B. Why classification of Uber drivers is essential for EU competition law?

One of Uber's business model key features that brings legal uncertainty arises from Uber's relationship with its drivers. The most obvious issue is whether Uber drivers should be classified as workers and, therefore, guaranteed social rights.⁹¹ This labour law aspect also plays a crucial role from the perspective of EU competition law. Classification of Uber drivers as workers generally indicates that they are a part of a single economic organism together with Uber. Therefore, they do not compete against each other. By contrast, qualifying them as independent contractors means that, in principle, they are a subject to EU competition law provisions, which may prevent them from engaging in anticompetitive agreements and concerted practices, such as price-fixing.

I. The concept of an undertaking in EU competition law

Article 101 (1) TFEU prohibits 'all agreements between undertakings, decisions by associations of undertakings and concerted practices which may affect trade between Member States, and which have as their object or effect the prevention, restriction or distortion of competition within the internal market'. The terms used in this provision were defined in the CJEU's jurisdiction and obtained an autonomous meaning in EU law.⁹²

The CJEU clarified the term 'undertaking' in the *Höfner* judgment, stating that it 'encompasses every entity engaged in an economic activity, regardless of the legal status of the entity and the way in which it is financed'.⁹³ The Court took the same approach in the *Wouters* ruling. It indicated that EU competition law does not apply to an 'activity which, by its nature, its aim and the rules to which it is subject does not belong to the sphere of economic activity'.⁹⁴ Consequently, the definition of an undertaking required clarifying the term 'economic activity'. According to well-established CJEU's case law, economic activity refers to any kind of activity concerning offering goods and services.⁹⁵ Hence, the term

undertaking is understood very broadly. As one author noted, what a substitute orchestra musician, a free-lance actor, and Microsoft have in common, is that they all have been qualified as undertakings and been a subject to EU competition law enforcement.⁹⁶

Importantly, besides entities and other groups of people, also natural persons acting as individual entrepreneurs may constitute undertakings in the meaning of Article 101 (1) TFEU.⁹⁷ Consequently, assessing that Uber drivers are independent in providing their services, a conclusion that each of them constitutes an undertaking is acceptable. Importantly for individuals acting as undertakings, while being a subject to EU competition law restrictions, they cannot in principle agree on common pricing models or conclude collective bargaining agreements.⁹⁸

2. Single economic entity exception

The most common way of escaping from being a subject to Article 101 (1) TFEU application is through the single economic entity lens. The idea behind this concept is that some persons or entities are economically connected and should be assessed as one organism by competition law enforcers. Thus, if a specific group of persons unilaterally pursues the same economic goal, their agreements should be considered as unilateral decisions of a single entity.⁹⁹

The CJEU addressed the single economic entity reasoning to the fullest extent in the *Viho* judgment.¹⁰⁰ Examining Parker Pen's distribution chain, in which participated Parker's subsidiaries, the Court noted that together they constitute a single economic entity. This finding was based on the observation that Parker's subsidiaries 'do not enjoy real autonomy in determining their course of action in the market but carry out the instructions issued to them by the parent company controlling them'.¹⁰¹ Therefore, Article 101 (1) was not applied to the agreements between Parker and its subsidiaries, since they were considered intra-undertaking arrangements.¹⁰²

91 See the examples of contributions specifically on this issue: Christian Patrick Woo and Richard A. Bales, 'The Uber Million Dollar Question: Are Uber Drivers Employees or Independent Contractors?' (2017) 68 *Mercer Law Review* 461; Adrián Todolí-Signes, 'The 'Gig Economy': Employee, Self-Employed or the Need for a Special Employment Regulation?' (2017) 23 *Transfer: European Review of Labour and Research* 193.

92 Alison Jones and Brenda Sufirin, *EU Competition Law*, (4th edn, Oxford University Press 2016) 116; Case T-99/04 *AC-Treuhand*, EU:T:2008:256, para 144.

93 Case C-41/90 *Höfner*, EU:C:1991:161, para 21.

94 Case C-309/99 *Wouters*, EU:C:2002:98, para 57.

95 See Case 118/85 *Commission v Italy*, EU:C:1987:283, para 7.

96 Victoria Daskalova, 'Regulating the New Self-Employed in the Uber Economy: What Role for EU Competition Law?' (2018) 19 *German Law Journal* 461, 461.

97 See Joined Cases T-217/03 and T-245/03 *FNCBV*, EU:T:2006:391, para 53, where the CJEU classified individual farmers as undertakings to assess concluding an anticompetitive agreement.

98 Daskalova (n 97), 471; Friso Bostoen, 'Competition Law in the Peer-to-Peer Economy' in Bram Devolder (ed.), *The Platform Economy: Unravelling the Legal Status of Online Intermediaries* (1st edn, Intersentia 2019) 148.

99 Okeoghene Odudu and David Bailey, 'The Single Economic Entity Doctrine in EU Competition Law' (2014) 51 *Common Market Law Review* 1721, 1722.

100 Case C-73/95 P *Viho*, EU:C:1996:405.

101 *Ibid.*, para 16.

102 *Ibid.*, para 63.

Further case law of the CJEU indicated the other particular groups of persons falling within the scope of the single economic entity exception. The ones that could be especially relevant for the purposes of classification of the peers in the collaborative economy are workers and agents.¹⁰³

C. Uber drivers and algorithmic management. How to classify Uber drivers?

Bearing in mind the discussion about the concept of an undertaking in EU competition law and the single economic entity exception, this section aims to assess how to classify Uber drivers on these grounds. This assessment is of a great practical significance, since falling into the scope of an undertaking category leads to a preliminary conclusion that Uber drivers who use the same algorithm to set their fares may constitute a price-fixing cartel.¹⁰⁴ Nevertheless, there are strong arguments to escape this reasoning through single economic entity exception lens, by qualifying Uber drivers as Uber's workers or agents.

I. Uber drivers as independent contractors

One of Uber's commercial narrative's most distinctive aspects is that its drivers are independent contractors. 'Set your own schedule. You're the boss' says Uber website encouraging to register as an Uber driver.¹⁰⁵ This vision of a business model led to controversies, especially concerning labour rights. Examples of examination, whether Uber drivers as workers are entitled to social rights, have already occurred at the national level.¹⁰⁶ In the United States, the state courts are highly fragmented. Uber defended its narrative about drivers as independent contractors in Georgia, Pennsylvania and Texas, but lost in Florida and California.¹⁰⁷

Uber's policy emphasising the drivers' independence to avoid ensuring their labour rights might not, however, be the most favourable scenario for Uber. As one author has aptly noted, 'the alternative to being an employer may be even more dramatic: facing competition law challenges, with potentially huge fines, imprisonment

and treble damages (at least in some countries)'.¹⁰⁸ The Commission's European agenda on the collaborative economy provides strong arguments for proving Uber drivers' independence. It hints that most of the services are provided on an *ad hoc* basis in the collaborative economy, not regularly or according to previously consulted schedule.¹⁰⁹ Similarly, Uber drivers are not obliged to work in strictly determined hours and, therefore, may offer their rides just as an additional activity.¹¹⁰

The question of Uber drivers' independence might also be addressed in another way: do Uber drivers provide ride-hailing services, or does Uber do it as a platform itself? The CJEU's approach stating that Uber's platform intermediation is a part of the transportation service supports the view that Uber drivers are not independent. Nevertheless, as AG Szpunar stated, the fact that Uber is a part of a transportation service does not mean that Uber drivers necessarily need to be considered as workers, since Uber may provide its services through independent traders.¹¹¹

Even assuming that the CJEU's reasoning from Uber cases is right,¹¹² it does not prejudge that Uber drivers are a part of a single organism. They still may be considered as independent contractors and be classified as undertakings in the meaning of Article 101 (1) TFEU, especially having in mind how broadly it is understood.¹¹³ According to the newest CJEU's case law, an undertaking status might be lost when a person 'does not determine independently his own conduct on the market, but is entirely dependent on his principal, because he does not bear any of the financial or commercial risks arising out of the latter's activity and operates as an auxiliary within the principal's undertaking'.¹¹⁴ Consequently, the margin of freedom that Uber drivers have, especially regarding the schedule of offering rides, tends to prove they keep their independent contractors status. Moreover, they bear lots of financial and commercial risks since they use their own vehicles. In turn, Uber requires the drivers to agree on its terms and conditions, which exclude Uber's liability

103 Bostoen (n 99), 150.

104 See the discussion under this assumption in section IV.

105 Uber, 'Become a driver' <https://www.uber.com/pl/en/drive/>.

106 UK Employment Tribunal *Aslam, Farrar and Others v Uber*, case no 2202551/2015 [2016].

107 Mike Isaac and Natasha Singer, 'California Says Uber Driver Is Employee, Not a Contractor' (*The New York Times*, 17 June 2015) <https://www.nytimes.com/2015/06/18/business/uber-contests-california-labor-ruling-that-says-drivers-should-be-employees.html>; cited by: Julian Nowag, 'The UBER-Cartel? UBER between Labour and Competition Law' (2016) 3 Lund Student EU Law Review 94, 97.

108 Julian Nowag, 'Between an UBER Rock and an UBER Hard Place' (*Derecho y Políticas de Libre Competencia en América Latina*, 22 November 2015) <https://lalibrecompetencia.com/2015/11/22/between-a-nd-uber-rock-and-an-uber-hard-place/>.

109 Commission (n 78), 11.

110 Opinion of AG Szpunar in *Uber Spain* (n 86), para 47.

111 *Ibid.*, para 54.

112 See the criticism towards the CJEU's approach: Vassilis Hatzopoulos, 'After Uber Spain: The EU's Approach on the Sharing Economy in Need of Review?' (2019) 1 European Law Review 88.

113 Daskalova (n 97), 481.

114 Case C-413/13 *FNV Kunsten*, EU:C:2014:2411, para 33. The Court referred to well-established case law on this matter, see for example case C-217/05 *Confederación Española de Empresarios*, EU:C:2006:784, paras 43–44.

regarding damages, such as property damages, personal injury, or any other lost profits.¹¹⁵

2. Uber drivers as a part of a single economic entity with Uber

To confirm the view that Uber drivers remain independent contractors and thus are a subject to Article 101 (1) TFEU, one should also determine if they cannot be classified as workers or agents. As mentioned above, these classifications indicate being a part of a single economic entity together with an employer (workers) or a principal (agents). Notably, the CJEU protects services providers unfairly classified as self-employed, stating that the ones who are in a comparable situation to workers are actually ‘false self-employed’.¹¹⁶

2.1. Uber drivers as workers. Workers do not compete against each other, since they fulfil the tasks under control of the same employer and are not independent. Therefore, it is apparent in the CJEU case law that workers fall within the scope of a single economic entity exception and are excluded from application of Article 101 (1) TFEU. Similarly, assuming that Uber drivers set fares for their rides using the same algorithm, but as Uber’s workers, Article 101 (1) TFEU cannot be applied to establish the potential anticompetitive price-fixing practices.

As mentioned above, considering Uber drivers as workers led to the courts’ divergent decisions in different states in the United States.¹¹⁷ Examples of this assessment had place also in the EU, at the national level. The employment tribunal in the UK stated that Uber drivers are workers rather than self-employed and should be guaranteed the minimum wage.¹¹⁸ The main arguments to support this view were that the drivers could not provide ride-hailing services of this kind without Uber’s intermediation and that any contract between an Uber driver and a client was only fictional. Therefore, Uber drivers were said to work for Uber, whereas the latter ‘runs a transportations business’ and ‘earns its profits’ through their work.¹¹⁹

These arguments may serve, however, only as an additional hint. The term ‘worker’ in the meaning of Article 45 TFEU has its autonomous meaning in EU law, and

therefore the Member States cannot modify it.¹²⁰ Due to the lack of a definition in the Treaties, the CJEU has clarified it in its case law. The Court indicated that the term worker ‘covers any person performing for remuneration work the nature of which is not determined by himself for and under the control of another, regardless of the legal nature of the employment relationship’.¹²¹ To be considered work, an activity has to be effective and genuine and cannot be ‘on such a small scale as to be regarded as purely marginal and ancillary’.¹²²

The crucial aspect from the peers’ perspective in the collaborative economy is a distinction between a ‘worker’ and a ‘self-employed’. Under the CJEU’s case law, the distinctive criteria are (i) the existence of a relationship of subordination concerning the choice of activity, working conditions and conditions of remuneration, (ii) the existence of personal responsibility, and (iii) the existence of remuneration paid directly and in full.¹²³ These criteria slightly differ from the criteria proposed by the Commission to determine whether the peers in the collaborative economy should be considered as workers, which are: (i) subordination link, (ii) nature of work (in the meaning that it has to be of an effective and genuine economic value, excluding marginal and accessory services), (iii) remuneration.¹²⁴ Although the Commission’s idea was to adapt the CJEU’s long-term jurisdiction to the collaborative economy specifics, it might be unclear whether the subordination link criterion covers bearing own responsibility by the peers.

The subordination link requirement refers to the control that an employer has over her workers and the lack of workers’ freedom, such as choosing a timetable, workplace, or tasks.¹²⁵ This criterion may be not fulfilled, since Uber drivers maintain a broad extent of freedom, especially regarding their flexibility while offering the rides. A primary counterargument to this view is the lack of Uber drivers’ actual possibility to determine prices for the rides they offer.¹²⁶ Since the price is a crucial component of the services provided, Uber drivers’ independence is questionable without a price-setting ability. A recently introduced tipping option may to some extent eliminate

115 Uber, ‘Terms and Conditions’ <https://www.uber.com/legal/en/document/?name=general-terms-of-use&country=great-britain&lang=en-gb>.

116 *FNV Kunsten* (n 115), para 31.

117 Mike Isaac and Natasha Singer, ‘California Says Uber Driver Is Employee, Not a Contractor’ (*The New York Times*, 17 June 2015) <https://www.nytimes.com/2015/06/18/business/uber-contests-california-labor-ruling-that-says-drivers-should-be-employees.html>.

118 UK Employment Tribunal (n 107).

119 See the list of circumstances on which the Employment Tribunal based its assessment: *Ibid.*, para 92.

120 Paul Craig and Gráinne de Burca, *EU Law. Text, Cases, and Materials* (6th edn, Oxford University Press 2015) 749; Case 75–63 *Hoekstra*, EU:C:1964:19.

121 Case 66/85 *Lawrie-Blum*, EU:C:1986:284, para 12.

122 Case 53/81 *Levin*, EU:C:1982:105, para 17.

123 Case C-268/99 *Jany*, EU:C:2001:616, para 70.

124 Commission (n 78), 12–13.

125 Case C-256/01 *Allonby*, EU:C:2004:18, para 72; *FNV Kunsten* (n 115), para 37.

126 Opinion of AG Szpunar in *Uber Spain* (n 86), para 39.

this lack, although it remains insignificant and does not allow Uber drivers to compete on prices.¹²⁷

Another strong argument for determining a subordination link is about Uber's 'algorithmic-management'. Uber uses various tools and incentives, which actually may be seen as giving Uber the control over its drivers. Most importantly, Uber provides a rating system, through which passengers are able to rate Uber drivers. If a driver's rating falls below a certain threshold, it may exclude him from the platform.¹²⁸ Moreover, Uber rewards the drivers who complete many rides. It also indicates urban areas, where the algorithm determines higher prices (and consequently better pay for them).¹²⁹ Finally, it is proved that Uber drivers who accept less than 80 per cent of the requests are considered deactivated by Uber.¹³⁰ Consequently, this algorithmic-management system that Uber has created produces fair arguments to prove that a subordination link criterion, to determine that Uber drivers are workers, is fulfilled.¹³¹ On the other hand, their self-employment status might be defended due to the financial and commercial risk that they bear.¹³²

The second criterion—stable nature of work—requires performing economic activity in an effective and genuine way, which cannot be just marginal and ancillary.¹³³ It is difficult for collaborative platforms to meet this requirement due to an often marginal and accessory character of services that peers provide.¹³⁴ This insight undoubtedly applies to Uber drivers as 'on-demand' workers, who provide services occasionally in the short periods.¹³⁵ Notwithstanding, the Court has stated that performing economic activity in a discontinuous and irregular way cannot prejudice classification as a worker.¹³⁶ In any event, limited hours of performing work may indicate that a person is not a worker.¹³⁷ Interestingly, as AG Szpunar noted on the grounds of material gathered in the *Uber*

Spain case, most of the trips are realised by Uber drivers for whom it is the only or the main professional activity.¹³⁸

The third employment criterion—remuneration—may appear to be quite obvious, since it is clear that Uber drivers are paid for offering rides. Also, the Commission suggests a straightforward application of this criterion to collaborative economy platforms, stating that it serves to distinguish a volunteer from a worker.¹³⁹ Despite this stance, a closer look at the CJEU's case law concerning the distinction between a worker and self-employed, remuneration criterion have always seemed to be more sophisticated. In *Jany*, the Court stated that to distinguish between a self-employed and a worker, it is necessary to assess whether in return she receives remuneration paid directly and in full.¹⁴⁰ In the case of Uber, drivers are charged the 'Uber fee' as a percentage of each trip fare, which is justified as helping to cover costs of technology, app development and marketing.¹⁴¹ Furthermore, drivers are paid for their rides within a 'charge transfer according to the weekly billing cycle'.¹⁴² Therefore, Uber drivers' remuneration for services they provide is not paid in full, but after excluding the sum charged by Uber and not directly, but within the weekly billing cycles. Consequently, applying the CJEU's traditional criteria of distinction between workers and self-employed, may lead to a conclusion that Uber drivers constitute workers, since they are not paid directly and in full for their services.

Considering uncertainty about fulfilling all of the three employment criteria, a hypothesis that Uber drivers do not constitute workers in the meaning of the Article 45 TFEU seems to be correct. One has to keep in mind that worker classification serving as an exception to Article 101 (1) TFEU application needs to be interpreted narrowly. Accordingly, Uber drivers most likely do not constitute workers in the meaning of Article 45 TFEU and cannot be excluded from Article 101 (1) TFEU through employment exception.

2.2. Uber drivers as commercial agents. The Commission has noticed agency agreements as one of the types of vertical agreements that generally fall outside the scope of Article 101 (1).¹⁴³ The Commission defines an 'agent' as 'a legal or physical person vested with the power to negotiate and/or conclude contracts on behalf of another person

127 Andrew Hawkings, 'Nearly two-thirds of Uber customers do not tip their drivers, study says' (*The Verge*, 21 October 2019) <https://www.theverge.com/2019/10/21/20925109/uber-tipping-riders-drivers-percentage-gender-nber-study>.

128 Opinion of AG Szpunar in *Uber Spain* (n 86), para 48.

129 *Ibid.*, para 47.

130 Ross Eisenbrey and Lawrence Mishel, 'Uber business model does not justify a new 'independent worker' category' (*Economic Policy Institute*, 17 March 2016) <https://www.epi.org/publication/uber-business-model-does-not-justify-a-new-independent-worker-category/>.

131 AG Szpunar even stated that Uber's informal management might be more effective than direct control of employer to his employees. See, Opinion of AG Szpunar in *Uber Spain* (n 86), para 52.

132 See remarks on Uber drivers as independent contractors in sub-section C 1.

133 Case 53/81 *Levin*, EU:C:1982:105, para 17; Case C-107/94 *Asscher*, EU:C:1996:251, para 25.

134 Commission (n 78), 13.

135 Daskalova (n 97), 490.

136 Case 139/85 *Kempf*, EU:C:1986:223, para 10.

137 Case C-357/89 *Raulin*, EU:C:1992:87, para 14.

138 Opinion of AG Szpunar in *Uber Spain* (n 86), para 47.

139 Commission (n 78), 13.

140 Case C-268/99 *Jany*, EU:C:2001:616, para 70.

141 Uber Help, 'What is Uber fee?' <https://help.uber.com/driving-and-delivering/article/what-is-the-uber-fee-?nodeId=5704e643-6df8-47cebcb2-a3968a445bcc>.

142 Uber Help, 'How will I get the payment for trips?' <https://help.uber.com/riders/article/how-will-i-get-the-payment-for-trips?nodeId=7a60ac58-e540-4db0-a9fa-a998435ca5a0>.

143 Guidelines on vertical restraints (n 29), paras 12–21.

(the principal), either in the agent's own name or in the name of the principal.¹⁴⁴ Thus, agency agreements has captured scholars' attention as another way to escape from the application of Article 101 (1) TFEU by the peers in the collaborative economy.¹⁴⁵

Also, in the case of Uber, one may consider a reasoning that Uber drivers act as agents who provide services for Uber as their principal. In any event, an obstacle is that under Vertical Guidelines, an agreement can be classified as an agency agreement once the agent does not bear risks in relation to concluded contracts, or such risks are only insignificant.¹⁴⁶ This approach is an outcome of the CJEU's case law. The latter has established that commercial agents should not be considered as undertakings in the meaning of Article 101 (1) TFEU if they do not bear commercial or financial risks arising from the contracts they negotiate.¹⁴⁷ Since Uber drivers do bear such risks, their classification as commercial agents seems to be unlikely.

Nevertheless, perhaps even more convincingly, an agency agreement might be considered in the case of Uber the other way around. Namely, what if Uber acts as a commercial agent who negotiates agreements with the customers, whereas each Uber driver is a principal?¹⁴⁸ One can argue that Uber is an agent since it 'negotiates' an essential component of the agreement between Uber drivers and customers—the price. Nevertheless, also in this scenario, an issue of bearing commercial and financial risks strikes back. It has been aptly noted in the literature that online platforms do bear such risks. As authors observed, 'market-specific investments will generally be significant for online platforms, such as investments to create, maintain and update their specialized website to be active on a particular market.'¹⁴⁹ The Vertical Guidelines seem to reflect this reasoning literally. They provide a non-exhaustive catalogue of the risks that cannot be borne to classify someone as an agent.¹⁵⁰ Under one of them, to be regarded as an agent,

one cannot be obliged to invest in sales promotion, such as contributions to the principal's advertising budgets.¹⁵¹

Consequently, it appears that either considering Uber drivers as Uber's agents, or Uber as an agent of Uber drivers is not convincing. Therefore, Uber drivers do not constitute a single economic organism with Uber within an agency agreement. Accordingly, Uber drivers cannot be excluded from being considered as undertakings in the meaning of Article 101 (1) TFEU on the grounds of an agency agreement.

D. Interim conclusions

Among the plethora of legal issues that Uber business model generates, the relationship between Uber drivers and Uber appears to be of the highest importance. Analysis provided in this section shows that Uber drivers are bound by a common pricing algorithm and cannot negotiate fares for the rides they provide. However, Uber considers them as independent contractors.

Remarks drawn in this section lead to a conclusion that Uber drivers remain undertakings in the meaning of the Article 101 (1) TFEU. The central argument supporting this view is their freedom in providing services within the Uber platform and the lack of a necessity of adapting to a dictated schedule regarding the time of offering rides and the areas where the rides are offered. Uber drivers may act as mere on-demand services providers on a minimum scale. This stance is further underpinned by the fact that Uber drivers bear significant risks since they use their own vehicles and Uber's liability is predominantly excluded according to the Uber's terms and conditions.

Notwithstanding, there are strong arguments to disagree with this view. One may reasonably argue that Uber drivers constitute a part of the single economic unit with Uber as its workers. Most importantly, Uber has in fact created a unique algorithmic-management model based on sticks and carrots, such as bonuses for completing a high number of rides or penalties for the low ratings. Further, the drivers' independence is limited bearing in mind their inability to set fares for the rides. Moreover, for most Uber drivers, this economic activity remains the only or the predominant one. Thus, regardless of Uber's narrative, there is a chance that Uber drivers might be classified as workers in the meaning of Article 45 TFEU. Considering number of Uber drivers operating in the EU and the scale of migration, a case concerning their employment status before the CJEU seems to be just a matter of time. In this manner, the application of Article

144 Ibid., para 12.

145 Odudu and Bailey (n 84), 1734; Guy Lougher and Sammy Kalmanowicz, 'EU Competition Law in the Sharing Economy' (2016) 7 *Journal of European Competition Law & Practice* 87, 91.

146 Guidelines on vertical restraints (n 29), para 15.

147 Case C-266/93 *Bundeskartellamt v Volkswagen*, EU:C:1995:345, para 19; Case T-325/01 *DaimlerChrysler*, EU:T:2005:322, para 87.

148 Johannes Safron, 'The Application of EU Competition Law to the Sharing Economy' (2018) Stanford-Vienna Transatlantic Technology Law Forum, EU Law Working Papers No. 27, 12 <https://ssrn.com/abstract=3139489>.

149 Josefine Hederström and Luc Peepkorn, 'Vertical Restraints in On-Line Sales: Comments on Some Recent Developments' (2016) 7 *Journal of European Competition Law & Practice* 10, 17.

150 Guidelines on vertical restraints (n 29), para 16.

151 Ibid., para 16 (e).

101 (1) TFEU would be excluded in relation to Uber's intra-platform competition.

In this ambiguous reality, the broad concept of an undertaking applied by the CJEU however prevails, and for the purposes of this work it will be assumed that Uber drivers remain independent contractors.

IV. Compliance of Uber's algorithmic pricing with article 101 TFEU: scenarios of assessment and potential justification on efficiency grounds

Following the assumption that Uber drivers remain independent contractors, this section assesses compliance of Uber's algorithmic pricing, which does not allow the drivers to set their own fares for the rides they offer, with EU competition law.

First, I will address the general concerns of EU competition law about Uber's algorithmic pricing. Afterwards, potential scenarios in which Uber's pricing model could be assessed will be discussed, with a distinction on the hub-and-spoke arrangements scenario and the series of vertical agreements between Uber and each of the drivers scenario. Eventually, I will discuss whether potential breach of Article 101 (1) TFEU can be justified on the grounds of efficiency gains (Article 101 (3) TFEU).

A. Competition law concerns about Uber's algorithmic pricing

As it has been established in the previous section, Uber's business model is based on an algorithm that each of the drivers uses to set fares for the offered rides. Even though there was a time Uber argued that drivers could offer a lower price than the ones set by an algorithm, it has never practically ensured such mechanism.¹⁵² Thus, Uber drivers are prevented from the possibility to compete on prices.

This observation has already led to the first proceedings regarding algorithmic price-fixing in some jurisdictions. Cases alleging unlawful price-fixing were brought against Uber (or another online platform using the same business model) in Canada,¹⁵³ the US,¹⁵⁴ India¹⁵⁵ and

Luxembourg.¹⁵⁶ Even though the reasonings differed, each of them concerned price-fixing and infringement of competition law through the lack of drivers' autonomy in setting fares. Concerns are focused mainly on Uber's surge pricing, when Uber's algorithm adjusts prices in high demand periods. There are examples of conducted research proving that surge pricing mechanism results in too excessive prices increases.¹⁵⁷

At the level of EU law, assessment of Uber's price-fixing practices potentially could be examined on the grounds of compliance with Article 101 (1) TFEU, which prohibits anticompetitive agreements and concerted practices. It is applied when such agreement or concerted practice affects trade between Member States—directly or indirectly, and actually or potentially.¹⁵⁸ EU competition law toolbox allows for two ways of enforcement—public, through the network of competition authorities consisting of the Commission and NCAs; and private, through civil litigation before the national courts.¹⁵⁹ The Commission or one of the NCAs could initiate an investigation concerning the potential incompatibility of Uber's algorithmic pricing with EU law, resulting in a decision that may impose a fine up to 10 per cent of the company's turnover.¹⁶⁰ Also, a private party injured by alleged anticompetitive conduct may bring a claim to a national court, asking for stating nullity of an agreement and/or compensation reflecting the loss suffered.¹⁶¹

B. Possible scenarios of assessing the compliance of Uber's algorithmic pricing with Article 101 TFEU

This section addresses the most likely scenarios of approaches to assessing Uber's algorithmic pricing compatibility with Article 101 TFEU. Uber agrees with each of the drivers on its terms and conditions, however,

152 Hatzopoulos (n 66), 129.

153 Kai Pfaffenbach, 'Uber accused of price-fixing in \$150 M lawsuit by Edmonton taxi companies' (CBC News, 15 September 2015) <https://www.cbc.ca/news/canada/edmonton/uber-accused-of-price-fixing-in-150m-lawsuit-by-edmonton-taxi-companies-1.3228115>.

154 US District Court for the Southern District of New York, Case 15 Civ. 9796, *Spencer Meyer v Travis Kalanick* (31 March 2016).

155 Competition Commission of India, Case No. 37 of 2018, *Samir Agrawal v ANI Technologies & Uber India* (6 November 2018).

156 Conseil de la Concurrence, Décision no. 2018-FO-01, *Webtaxi S.à.r.l.* (7 juin 2018).

157 Junfeng Jiao, 'Investigating Uber Price Surges during a Special Event in Austin, TX' (2018) 29 *Research in Transportation Business & Management* 101, 107.

158 Case 56/65 *Société Technique Minière*, EU:C:1966:38, para 7.

159 Alison Jones and Christopher Townley, 'Competition Law' in Catherine Barnard and Steve Peers (eds), *European Union Law* (2nd edn, Oxford University Press 2017) 512–514.

160 Council Regulation (EC) No 1/2003 of 16 December 2002 on the implementation of the rules on competition laid down in Articles 81 and 82 of the Treaty [2003] OJ L1/1, Article 23.

161 Alison Jones and Christopher Townley (n 160), 515. The EU has taken steps to harmonise the Member States' procedural rules within private enforcement of EU competition law. See Directive 2014/104/EU of the European Parliament and of the Council of 26 November 2014 on certain rules governing actions for damages under national law for infringements of the competition law provisions of the Member States and of the European Union [2014] OJ L349/1.

its role might be seen as a facilitator of a horizontal price-fixing cartel of the drivers, or a party to a series of vertical agreements with each of the drivers.¹⁶² Thus, Uber's algorithmic pricing might be investigated as a horizontal or vertical agreement, depending on the scenario of assessment.

I. Hub-and-spoke arrangement scenario

As sub-section B1.2. of Section II discussed, hub-and-spoke arrangement is a practice, where a person acting at a certain level of the supply chain (the hub) concludes multiple separate vertical agreements with competitors acting on an upstream or a downstream market (the spokes). As a result, the spokes do not exchange information with each other, but indirectly collude, thanks to the hub that coordinates their practice. The use of a common algorithm might further facilitate such practice.¹⁶³ Importantly, not only the spokes, but also the hub might be held liable for facilitating a concerted practice.¹⁶⁴ Consequently, assessing Uber's algorithmic pricing compliance with Article 101 (1) TFEU while considering it as a hub-and-spoke arrangement, Uber would be considered as a facilitator of a price-fixing cartel.¹⁶⁵

As AG Szpunar noted, using the same algorithm by competitors may potentially 'give rise to hub-and-spoke conspiracy concerns'.¹⁶⁶ In the case of Uber, Uber may constitute a hub that concluded an agreement with each of the drivers. This agreement would be vertical. The term vertical agreement covers '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'.¹⁶⁷ Even following the CJEU's view that Uber constitutes a part of a complex transportation service (and not merely an information society service), it clearly distinguishes Uber's services and Uber drivers' services.¹⁶⁸ As it stated, drivers provide transport for passengers, and Uber intermediates

between them and offers such transportation service.¹⁶⁹ Thus, agreements between Uber and each of the drivers are of vertical nature.

An outcome of Uber's algorithmic pricing is that Uber sets fares for hundreds of drivers, who in theory, as independent contractors, should compete against each other.¹⁷⁰ Thus, such conduct of Uber drivers, without their direct communication, might be considered as a concerted practice facilitated by Uber's pricing algorithm aiming to fix prices. Under Court's case law, to establish participation of undertakings in a concerted practice, three conditions need to be met: (i) concentration of undertakings, (ii) conduct on the market, and (iii) a causal link between first two.¹⁷¹ Uber drivers engage in a concentration while they agree with Uber to use a common pricing algorithm. The conduct on the market obviously takes place when the drivers provide their services and customers pay for them. Thus, also the causal link between the concentration and conduct on the market is undoubted.

It could be concluded that similarly as travel agencies in *Eturas*, who agreed on applying a common discount cap and were aware of an anticompetitive practice,¹⁷² Uber drivers agreed on applying a common pricing algorithm. Such presumption could be rebutted by publicly distancing from an algorithm, reporting such conduct to competition authorities or applying charging a different price.¹⁷³ Nevertheless, since Uber's algorithm automatically sets fares for customers and charges a cashless payment after the ride, rebuttal possibilities in Uber's case are limited.

Bearing in mind the existence of vertical agreements between Uber and drivers, where the latter agree on applying a common pricing algorithm, one may argue that Uber orchestrates a price-fixing cartel of Uber drivers engaged in a concerted practice. In this manner, hub-and-spoke could be the right model of assessing compliance with Article 101 (1) TFEU. Nevertheless, one may raise convincing arguments for the opposite view. Classic examples of hub-and-spoke arrangements assume that competitors agree on the hub's coordination proposals, under the condition that the other engaged competitors do the same.¹⁷⁴ For example, in the benchmark hub-and-spoke example, the key e-books publishers agreed on Apples' conditions knowing that their competitors are deciding to follow the same approach.¹⁷⁵ Differently,

162 José António Sá Reis, 'The "Uber Cartel": New Wine in Old Bottles?' in Maria Regina Redinha, Maria Raquel Guimarães and Francisco Liberal Fernandes (eds), *The Sharing Economy: Legal Problems of a Permutations and Combinations Society* (Cambridge Scholars Publishing 2019) 372.

163 Some authors suggested a term 'algorithm-fueled hub-and-spoke conspiracy'. See Ezrachi and Stucke (n 1), 50.

164 Case C-194/14 P *AC-Treuhand* (n 46), paras 36–37.

165 Passaro (n 71), 265; Nowag (n 108), 98.

166 Opinion of AG Szpunar in *Uber Spain* (n 86), para 62 (n 23).

167 Commission Regulation (EU) No 330/2010 of 20 April 2010 on the application of Article 101 (3) of the Treaty on the Functioning of the European Union to categories of vertical agreements and concerted practices [2010] OJ L102/1, Article 1 (1a).

168 Pieter Van Cleynenbreugel, 'Seeking to regulate Uber? Why not rely on Article 101 TFEU' (*Regulating for Globalization*, 22 February 2018) <http://regulatingforglobalization.com/2018/02/22/seeking-regulate-uber-not-rely-article-101-tfeu/>.

169 *Uber Spain* (n 88), para 38.

170 Ezrachi and Stucke (n 1), 51.

171 Case C-49/92 P *Anic*, EU:C:1999:356, para 118.

172 *Eturas* (n 36), para 39.

173 *Ibid.*, para 46–49.

174 Passaro (n 71), 269.

175 *E-books* (n 32), para 76–78.

many drivers do not accept Uber's conditions and do not become Uber drivers, which has nothing to do with those who decide to do the opposite. Thus, it could be argued that in hub-and-spoke arrangements, the size matters and therefore, such a scenario should not apply to Uber.¹⁷⁶

2. A series of vertical restraints scenario

What if, however, one disagrees with the statement that a concerted practice between Uber drivers and therefore a horizontal price-fixing cartel occurs? Such an assumption may lead to an approach of assessing Uber's pricing model under Article 101 (1) TFEU, limited to a series of vertical agreements between Uber and each of the drivers (without analysing the existence of the drivers' cartel).¹⁷⁷

In his opinion to *Eturas* case, AG Szpunar proposed the test of assessing whether an anticompetitive practice of competitors (in our case—Uber drivers) and a facilitator of their conduct (in our case—Uber) should be regarded as a horizontal or vertical agreement.¹⁷⁸ He clarified that, hypothetically, if an online booking company restricts the pricing conditions and acts merely in its own interest, it could be unfair to conclude that the travel agencies were involved in a horizontal collusion, just because they did not oppose against such practice. Thus, one should consider this scenario as a series of vertical agreements, or as a unilateral behaviour of the third party on the grounds of Article 102 TFEU.¹⁷⁹ Unilateral Uber's conduct on the grounds of Article 102 TFEU could also be potentially examined—if other criteria of its application are ever met (existence of a dominant position). In any event, it remains outside of the scope of this work.

This approach, since it puts the emphasis more on online platform's conduct, might be convincing. However, it requires to raise a question whether organising the system of algorithmic pricing by Uber is in Uber's autonomous interest. The use of Uber's algorithm may also be in the drivers' interest since it facilitates providing their services by matching them with customers in an innovative way.¹⁸⁰ Nevertheless, one may argue that Uber's pricing algorithm is exclusively in the interest of Uber. First, contrary to travel agencies in the *Eturas* case, Uber drivers do not have an actual possibility of resigning from prices set by an algorithm.¹⁸¹ Thus, algorithmic

pricing remains under absolute control of Uber. Secondly, a part of the fares covers Uber fee. Some evidence proves that the Uber fee is an object of manipulations, since it is often higher than the approximate 25 per cent that Uber reveals.¹⁸²

Since the parties to vertical agreements are not competitors (they operate on different markets), vertical agreements are considered less harmful for competition. Consequently, Vertical Block Exemption Regulation (VBER) excludes vertical agreements, where both supplier and buyer do not exceed 30 per cent of the market share from the application of Article 101 TFEU.¹⁸³ Nevertheless, this wide block exemption does not apply to hardcore restrictions of competition, among which there is resale price maintenance (RPM).¹⁸⁴ RPM refers to agreements between a supplier and buyer, which restrict the buyer's right to determine sale prices.¹⁸⁵ Nevertheless, Article 4 (a) VBER allows for restraints on maximum sale prices or recommended prices. Thus, it appears that Uber's agreements with the drivers on algorithmic prices may fall within RPM's scope. The finding would be different, for example, in the case of pricing algorithm used by Airbnb, which merely recommends the price, which the landlords may follow voluntarily.¹⁸⁶

Some authors raised concerns that terminology used in the VBER regarding RPM does not fit Uber's business model.¹⁸⁷ Indeed, one may potentially not consider Uber as a supplier of a service that Uber drivers buy and subsequently sell. Nevertheless, the CJEU in its case law states that provisions on fixing prices in agreements between non-competitors constitute a restriction of competition, without specifying relations between the parties to such agreements.¹⁸⁸ Therefore, the logic behind hardcore restrictions listed in VBER seems to be applicable to Uber's case.

Assuming that Uber's agreements with drivers restrict their ability to set prices, Uber may try to defend itself referring to the ancillary restraints doctrine.¹⁸⁹ This reasoning assumes that an agreement alleged to be anticompetitive is merely a part of a broader scheme.¹⁹⁰ As the

176 Passaro (n 71), 269.

177 Sá Reis (n 163), 372.

178 Opinion of AG Szpunar in Case C-74/14 *Eturas*, EU:C:2015:493, para 73.

179 *Ibid.* (n 23).

180 See the opinion that Uber's algorithm is not in autonomous interest of Uber: Safron (n 149), 38.

181 In the case of *Eturas* it was proved that travel agencies could freely offer higher discounts than the cap set by *Eturas* (it only required taking additional steps). See *Eturas* (n 36), para 11.

182 Brett Helling, 'Uber Fees: How Much Does Uber Pay, Actually? (With Case Studies)' (*Ridester*, 7 January 2021) <https://www.ridester.com/uber-fees/>.

183 Regulation 330/2010 (n 168), Article 3 (1).

184 *Ibid.*, Article 4 (a).

185 *Ibid.*

186 Mingming Cheng and Carmel Foley, 'Algorithmic Management: The Case of Airbnb' (2019) 83 *International Journal of Hospitality Management* 33, 34.

187 See, for example, Bostoan (n 99), 155.

188 Case 243/83 *Binon*, EU:C:1985:284, para 44.

189 Kayvan Hazemi Jebelli, 'EU Ancillary Restraints: A Reasoned Approach to Article 101 (1)' (2010) <https://ssrn.com/abstract=2166318>.

190 Passaro (n 71), 269.

CJEU stated in *Mastercard* ruling, ‘where it is a matter of determining whether an anti-competitive restriction can escape the prohibition laid down in Article 81 (1) EC because it is ancillary to a main operation that is not anti-competitive in nature, it is necessary to inquire whether that operation would be impossible to carry out in the absence of the restriction in question.’¹⁹¹ Thus, in the case of Uber, it could be argued that a series of vertical agreements with the drivers are just a part of the broader project that is not anticompetitive itself. Nevertheless, under abovementioned reasoning of the Court, Uber would need to prove that its services could not be provided without its algorithmic pricing model, which prevents the drivers from setting their own fares.

C. The way to escape? Individual exemption under Article 101 (3) TFEU

Assuming that Uber’s algorithmic pricing infringes Article 101 (1) TFEU under one of the abovementioned scenarios, innovation that Uber brings to the market leads to reflection, whether Uber can justify its potentially anti-competitive conduct on efficiency grounds. This section takes a closer look at the criteria of Article 101 (3) TFEU to assess whether they are fulfilled in the case of Uber.

According to Article 101 (3) TFEU, any agreement might be justified on efficiency grounds, in order to exclude application of Article 101 (1) TFEU. It requires fulfilling four criteria cumulatively: (i) efficiency gains, (ii) fair share for consumers, (iii) indispensability of restrictions, and (iv) no elimination of competition. As it is clear under the CJEU’s case law, this individual exemption might be invoked either in the case of restriction of competition by object or by effect.¹⁹² Interestingly, the Luxembourgish NCA has recently provided a relevant reasoning to the case of Uber.¹⁹³ In *Webtaxi* decision, it found a horizontal agreement between taxi operators, who were using the same pricing algorithm provided by an online platform, matching taxis with customers. Although the competition authority stated an infringement of the national substitute to Article 101 (1) TFEU, it justified it due to pro-competitive effects.¹⁹⁴

1. Efficiency gains and fair share for consumers

Uber may argue that its business model brought great innovation, both for consumers and drivers. Customers can order their rides more conveniently, and the time of waiting for the ride is reduced. Further, the price is calculated together with the offer, so customers are informed about all of the details before accepting the ride. Also, at least in principle, prices calculated by an algorithm are lower than approximate prices offered for equivalent rides by classic taxi services providers. Interestingly, in the *Webtaxi* case, the Luxembourgish NCA also considered a positive impact on the environment due to matching passengers with the closest drivers.¹⁹⁵ At the EU level justifying anticompetitive agreements on non-economic grounds remains disputable,¹⁹⁶ however, arguably, one could invoke such circumstance also in the case of Uber.

It therefore appears that two first conditions—efficiency gains and fair share for consumers might be met in the case of Uber. Invoked efficiency gains would need, however, to be accurately and reasonably calculated or estimated.¹⁹⁷

2. Indispensability of restrictions

The condition of indispensability requires an anticompetitive agreement to be necessary to achieve efficiency gains.¹⁹⁸ As the CJEU clarified, restrictive agreement cannot go beyond what is indispensable for the efficiencies.¹⁹⁹ Thus, in Uber’s case, the million-dollar question is: is the pricing model that Uber currently applies necessary to achieve Uber’s efficiencies? There are at least three alternatives to Uber’s pricing algorithm that could limit competition between the drivers less restrictively.

First, Uber could introduce a pricing algorithm that determines suggested fares for the ride, which do not have to be necessarily accepted by a driver. Example of this model is applied by Airbnb, where landlords are free to set own prices. Secondly, Uber may algorithmically generate the ceiling prices. In this scenario drivers would be able to set their own fares, however not exceeding the maximum price. Thirdly, Uber might leave setting fares entirely to the drivers. Interestingly, since the end of January 2020,

191 Case C-382/12 P *MasterCard*, EU:C:2014:2201, para 91.

192 Case T-17/93 *Matra*, EU:T:1994:89, para 85; Luc Peepkorn, ‘Coherence in the Application of Articles 101 and 102: A Realistic Prospect or an Elusive Goal?’ (2016) 39 *World Competition* 389, 399.

193 *Webtaxi S.à.r.l.* (n 157).

194 *Ibid.*, paras 79–95.

195 Louis Hollanders de Ouderaen, Philippe-Emmanuel Partsch and Thomas Evans, ‘The Luxembourg Competition Authority allows a price-fixing agreement between competitors as it provides efficiency gains in the taxi market (Webtaxi)’ (*Concurrences*, 7 June 2018) <https://www.concurrences.com/en/bulletin/news-issues/june-2018/the-luxembourg-competition-authority-allows-a-price-fixing-agreement-between/>.

196 Walter Frenz, *Handbook of EU Competition Law* (1st edn, Springer 2015) 140.

197 Guidelines on the application of Article 81 (3) of the Treaty [2004] OJ C101/97, para 56.

198 *Ibid.*, para. 76.

199 Case 258/78 *Nungesser*, EU:C:1982:211, para 77.

such a business model shift has already been tested by Uber in California.²⁰⁰

Uber may argue that only with its current algorithm it keeps a uniformity of its services based on an ideal adjustment of prices to supply and demand in real-time. Arguably, Uber might fail to fulfil this criterion, since especially an algorithm allowing drivers to set lower prices than the calculated ones seems to be similarly efficient but less restrictive for the competition.

3. No elimination of competition

Finally, Article 101 (3) TFEU requires an anticompetitive agreement not to eliminate competition in respect of a substantial part of the products in question. It has been argued that in Uber's case fulfilling this criterion would require not to eliminate competition between Uber drivers entirely.²⁰¹ Thus, Uber may try to prove that despite the lack of freedom in setting prices, Uber drivers still compete against each other on other grounds. A crucial element of their services is consumers' rating. One may argue that besides the price, consumers take into account also, for example, the waiting time for the ride or even general convenience, so whether the driver is polite, the type of her car and many other circumstances.

It appears that cumulative fulfilment of all four criteria required by Article 101 (3) TFEU might be difficult in the case of Uber. Whereas efficiencies both for consumers and drivers are undoubted, it is highly questionable whether the same efficiencies cannot be gained with a pricing algorithm that is less restrictive for competition and does not entirely eliminate competition between Uber drivers.

D. Interim conclusions

An assumption that Uber drivers do not constitute a single economic entity with Uber and act as independent contractors leads to concerns about compliance with EU competition law. Uber's pricing algorithm deprives the drivers of an ability to set prices for the rides they offer. What intensifies the concerns is that some works already prove potential manipulations through Uber's algorithm, especially while using the surge price mechanism during high demand periods.

EU competition law may tackle these potential anticompetitive practices, but interpretation of Article 101 TFEU needs to be appropriately adapted. Two scenarios seem to be the most relevant. First, Uber might be considered a facilitator of the horizontal price-fixing cartel

comprising of the drivers, who are involved in an anti-competitive concerted practice while applying the same pricing algorithm. Secondly, a series of vertical agreements between Uber and each of the drivers might be considered as resale price maintenance (RPM), which unlawfully obliges the drivers to set exclusively algorithmically calculated fares. Although hub-and-spoke scenario seems to be ambitious and was considered by some scholars as the most appropriate one, it might be not relevant to Uber's case, since it puts unnecessarily emphasis on Uber drivers' conduct as the participants of the price-fixing cartel. Bearing in mind that the pricing algorithm is most importantly in Uber's interest and remains fully under Uber's control, the case would be better examined as a series of vertical agreements, or, potentially, unilateral Uber's conduct on the grounds of Article 102 TFEU (if other criteria of its application are ever met).

Nevertheless, innovation that Uber brings to the market leads to a reflection on the potential justification of Uber's practice on the grounds of Article 101 (3) TFEU. While criteria of providing efficiency gains and benefits for consumers are likely to be met, fulfilling the other two criteria seems questionable. Meeting the indispensability criterion is highly unlikely since there is a probability that Uber could generate the same efficiency gains with an alternative model of pricing algorithm. The most relevant alternative could be an algorithm, which calculates the maximum price but allows drivers to set the lower one. This model could ensure the same efficiencies, as current Uber's algorithm, and would not deprive drivers of the right to compete on prices.

V. Conclusions

This work argued that the current EU competition law framework is partially prepared for the threats that emerge from the widespread use of algorithms in contemporary business models. The CJEU's ruling in *Eturas* proves that EU law might be flexible and be supported by practical presumptions. An example is a presumption that the parties to a hub-and-spoke arrangement are aware of an anticompetitive conduct once they received an information about it (for example by an email), and did not rebut this presumption, for instance through publicly distancing from an anticompetitive practice. Nevertheless, what remains a great challenge for EU competition law are algorithms able to adapt to a certain anticompetitive practice unilaterally and self-learning algorithms. To this extent, EU competition law appears to remain of an 'anthropocentric' nature and not sufficiently adapted to new digital challenges. The EU policymakers and lawmakers should find the solutions in determining

200 Matt McFarland, 'Uber tests a feature that lets some California drivers set their own rates' (*CNN Business*, 21 January 2020) <https://edition.cnn.com/2020/01/21/tech/uber-california-drivers-rates/index.html/>.

201 Hatzopoulos (n 66), 140.

how to look ‘into the head’ of an algorithm to establish the algorithm setter’s intent. This goal requires cooperation between competition lawyers, economists, and computer scientists to rethink the existing understanding of an ‘agreement’ and ‘concerted practice’.

The new area of providing services—the collaborative economy—flourishes thanks to the use of algorithms. Referring to the example of Uber, this work discussed algorithmic pricing’s impact on intra-platform competition. It appears that a central issue is the classification of the peers who provide services within collaborative platforms. Since Article 101 (1) TFEU does not apply to the persons falling into the scope of a single economic entity, classifying peers as workers of a platform excludes competition between them. The case of Uber proves how controversial such assessment might be. There is a plethora of arguments for both sides of a confrontation whether Uber drivers are independent contractors or workers. It calls for a reflection regarding implementing a new category of ‘on-demand’ workers, who could be provided a part of labour rights and be excluded from applying EU competition law as a part of a single economic entity.

Regarding intra-platform infringement of Article 101 TFEU due to algorithmic pricing, the case of Uber shows that a decisive circumstance is the scope of freedom in setting prices that the peers maintain. Since Uber drivers are actually deprived of any possibility of modifying or negotiating fares for the rides they offer, the practice followed by Uber and Uber drivers is most likely anti-competitive. One may examine this practice as a hub-and-spoke arrangement, in which Uber acts as a facilitator of a horizontal price-fixing cartel of Uber drivers using the same pricing algorithm. Another option which does not put unnecessary emphasis on Uber drivers as participants of price-fixing cartel, is to look at Uber’s price-setting model as a series of vertical agreements between Uber and each of the drivers. The latter could result in stating

infringement of Article 101 (1) TFEU due to a RPM, which remains the hardcore restriction of competition.

An open question remains the possibility of justifying Uber’s anticompetitive conduct on the grounds of Article 101 (3) TFEU. Fulfilling all of its criteria seems unlikely, especially because efficiency gains that Uber produces, such as reducing the time of waiting for the taxis and generally making ride-hailing services more convenient, might be achieved in a less restrictive way for the competition. One may invoke an algorithm used by Airbnb, which only suggests the price that the landlords may apply voluntarily. Another alternative, already tested by Uber in California, allows the drivers to set their own prices. Finally, Uber could use an algorithm calculating the recommended maximum price but allowing drivers to set the lower fare.

In the current EU competition law framework, there seem to be two ways of changing Uber’s (and other platforms’ which adopt the same business model) price-setting practice in order to comply with EU competition law. First, the drivers could be recognised as Uber’s workers. It would require guaranteeing them social rights. Competition law concerns, however, would be set aside, since it would be clear that Uber drivers constitute a part of the single economic entity with Uber and are not a subject to Article 101 TFEU enforcement. Secondly, Uber may modify its algorithmic pricing scheme. The EU competition law framework, especially provisions on RPM, allows setting maximum prices in agreements between non-competitors. Assuming that Uber concludes a series of vertical agreements with its drivers, using an algorithm which calculates a suggested maximum price but allows drivers to set a lower fare seems to be the ‘golden middle’—ensuring compliance with EU competition law and not hindering innovation.

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