Notion of Anticompetitive Agreement Challenged in Digital Environment*

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Summary: Prohibition of anti-competitive agreements pursuant to Article 101 TFEU and its counterparties in competition law of the EU member states is divided into three forms: agreements, concerted practices, decisions of association of undertakings. Each of them covers a different type of colluding and as such should cover a wide range, ideally all anticompetitive colluding. However, it has been recognised that certain potentially anti-competitive dealings are not covered by any of these forms. The very much discussed example is tacit collusion. This article explores these issues and it sets them into the digital environment. The question to be discussed here is whether the issues are deteriorating in digital environment. A supposed scenario is used to present problems of determination whether a dealing is an anticompetitive agreement.

Keywords: Article 101 TFEU, Anticompetitive agreements, Collusions, Concerted practices, Decisions of associations of undertakings, Pricing algorithms, Competition in digital environment

1. Introduction

Competition law has always been full of ambiguous terms. These terms are put into life by decisions of competition authorities and judgements of courts. Such approach is beneficial due to the fact that competition law is aiming on covering an economic reality[1]. Thus, very clear and strict legal restrictions would be easily circumvented by innovative business approaches.

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1 However, the assessment depends on which school of economics one follows. Much has been written on behavioural economics which question neoclassical's assumption of rationality. BELLOVÁ, J. Behavioural Economics and its Implications on Regulatory Law. *International and Comparative Law Review*, 2015, vol. 15, no. 2, pp. 89–102, p. 91.

Prohibition of anticompetitive agreements follows this logic. Article 101 TFEU, which is at the centre of this article's discussion, uses several terms which might be interpreted in multiple ways. The question is whether the terms are flexible enough to cover situations brought by modern, digital age.

In order to discuss this issue, the article is divided into two parts. The first one focuses on the notion of agreement with all its three forms stated in Article 101 TFEU: agreements in narrow sense; decisions of associations of undertakings; concerted practices. It analyses chosen cases of the Court of Justice of the EU in order to establish what is at the centre of each of these terms. The second part moves on to digital environment where competition law must operate nowadays. It is not the aim of this article to assess all the issues brought by digital era. The second part rather introduces the digital environment and it asks whether the notion of agreement in its broader sense (consisting of all three forms) covers dealings which might occur in digital word. A supposed scenario is discussed in this regard. The conclusion sums up the matters and it presents one of the possible ways forward.

2. Notion of agreement

Competition law in EU covers various questions.[2] One of the most significant is the prohibition of anti-competitive agreements. Article 101 TFEU states: "[t] *he following shall be prohibited as incompatible with the internal market: 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* [...]".

We may identify several important elements which shall hold a dealing anticompetitive:

- dealing shall have an effect on trade between member states;
- dealing shall have as its object or effect the prevention, restriction or distortion of competition within the internal market;
- dealing shall be done by undertakings or association of undertakings;
- dealing shall have a form of an agreement, a decision by association of undertakings or a concerted practice.

The main concern for this article is the last point. Before moving into that one in more details, let us spend a word on the third point, i.e. let us briefly discuss the notion of undertakings.

[2] POVAŽANOVÁ, K., KOVÁČIKOVÁ, H. Multinational Tax Avoidance vs. European Commission. *Bratislava Law Review*, 2017, vol. 1, no. 1, pp. 133–141; p. 133.

It is one of the crucial notions of EU competition law, though it is not defined in the Treaties[3]. Number of CJEU judgement has dealt with the matter.[4] As stated in *Klaus Höfner* case, "[…] *the concept of an undertaking encompasses every entity engaged in an economic activity, regardless of the legal status of the entity and the way in which it is financed* [...]."[5]

Three important issues may be derived from this quotation. First, undertaking shall be engaged in an economic activity. In the *Klaus Höfner* case, employment procurement was considered to be an economic activity[6]; therefore, a public employment agency engaged in the business of employment procurement may be classified as an undertaking. Even an official authority may be engaged in economic activity. Here, however, it must be distinguished between exercise of official authority on the one hand, and economic activities of an industrial or commercial nature on the other.[7]

Second, the legal nature of the undertaking is not decisive. Therefore, a public entity may be an undertaking, regardless of whether it is a separate entity conferred with special rights or whether it is part of state administration.[8] Similarly, it is not important whether the entity is a legal person at all. It may consist of formally more legal persons, such as parent company and its subsidiaries, provided that subsidiaries may not genuinely decide on their own. In order words, if they operate as a single economic unit.[9]

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3 By the Treaties we understand Treaty on European Union (TEU) and Treaty on Functioning of the European Union (TFEU).

4 Naturally, the notion of undertakings is also discussed by scholars. See, for instance, BLAŽO, O. Can be EU Competition-law Concept of Undertaking Lesson for Bankruptcy Law? *European Studies – The Review of European Law, Economics and Politics*, 2016, vol. 3, no. 2, pp. 204–215; KALESNÁ, K., PATAKYOVÁ, M. T. Subjects of Legal Regulation – Different Approaches of Comeptition, Public Procurement and Corporate Law. In MILKOVIC, M., KECEK, D., HAMMES, K. (eds.): *Economic and Social Development ,46th International Scientific Conference on Economic and Social Development – „Sustainable Tourist Destinations", Book of Proceedings*. Varazdin: Varazdin Development and Entrepreneurship Agency, 2019 , pp. 210–219.

5 Case C-41/90 *Klaus Höfner a Fritz Elser vs Macrotron GmbH* [1991] ECLI:EU:C:1991:161, para 21.

6 *Ibidem*, paras 21–23.

7 Case C-343/95, *Diego Calì & Figli Srl v Servizi ecologici porto di Genova SpA (SEPG)* [1997] ECLI:EU:C:1997:160, para. 16; Case 118/85 *Commission of the European Communities v Italian Republic* [1987] ECLI:EU:C:1987:283, para 7. Similarly, this concept applies in state aid sphere. See a recent decision in joined cases C-262/18 P and C-271/18 P *European Commission and Slovak Republic v Dôvera zdravotná poist'ovňa, a.s.* [2020] ECLI:EU:C:2020:450, paras. 28 et seq.

8 Case C-343/95, *Diego Calì & Figli Srl v Servizi ecologici porto di Genova SpA (SEPG)* [1997] ECLI:EU:C:1997:160, para. 17; Case 118/85 *Commission of the European Communities v Italian Republic* [1987] ECLI:EU:C:1987:283, para. 8.

9 Case C-22/71 *Béguelin Import Co. v S.A.G.L. Import Export* [1971] ECLI:EU:C:1971:113; CRAIG, P., DE BÚRCA, G. *EU Law – Text, Cases and Materials. Sixth Edition*. Oxford: Oxford University Press, 2015, p. 1004.

Third, the way in which an entity is financed is not of importance here either. This point is interconnected with the first one. Furthermore, the entity does not have to be a profit organisation.[10]

2.1. Agreements

At the very beginning, it shall be stressed that "agreement" may be understood in two ways. The agreement in a broader sense of the word covers all three forms of dealing mentioned in Article 101 TFEU, i.e. agreements, decisions of associations, concerted practices. The agreement in its narrower sense is addressing the first form only. This part of the article will be dedicated to agreements in the narrow sense.[11]

The notion of agreement has a specific meaning within EU competition law. It is not related to the notion of contract, as it may be defined in various EU member states. The definition of an agreement is a Union one and it flows from the case law.

The first element which must be fulfilled in order to conclude an agreement is that at least two parties must be part of the agreement. The two parties may not fall within one undertaking. Thus, agreements between two legally separated companies which are parts of the same undertaking may not infringe Article 101(1) TFEU.

The requirement of at least two parties also means that unilateral conduct of an undertaking is not an agreement. Such unilateral conduct escapes the prohibition in Article 101(1) TFEU.[12] It may, however, be prohibited based on Article 102 TFEU[13].

To distinguish between what is and what is not a unilateral conduct proved to be onerous.[14] The Court acknowledged in Bayer that "*the existence of an agree-*

[10] Case C-67/96 *Albany International BV v Stichting Bedrijfspensioenfonds Textielindustrie* [1999], ECLI:EU:C:1999:430, paras. 74 et seq.

[11] Naturally, it is not possible to capture all nuances of the term "agreement" within a few pages provided for this purpose in this article. Neither it is the aim of this article. Therefore, this part will only describe some fundamental pieces of information which are needed for further discussion, deliberately leaving apart other elements, such as single overall agreement.

[12] Case 107/82 *AEG* v *Commission* [1983] ECLI:EU:C:1983:293, para. 38; joined cases 25/84 and 26/84 *Ford and Ford Europe* v *Commission* [1985] ECLI:EU:C:1985:340, para. 21; case T-43/92 *Dunlop Slazenger* v *Commission* [1994] ECLI:EU:T:1994:79, para. 56, Case T-41/96 Bayer AG v Commission of the European Communities, ECLI:EU:T:2000:242, para. 66.

[13] 102(1) TFEU: *Any abuse by one or more undertakings of a dominant position within the internal market or in a substantial part of it shall be prohibited as incompatible with the internal market in so far as it may affect trade between Member States.*

[14] Joined cases 25/84 and 26/84 *Ford and Ford Europe* v *Commission* [1985] ECLI:EU:C:1985:340, case C-2/01 P *Bundesverband der Arzneimittel-Importeure eV and Commission of the European Communities v Bayer AG* [2004] ECLI:EU:C:2004:2

ment within the meaning of that provision can be deduced from the conduct of the parties concerned"[15], however, it ruled that "*such an agreement cannot be based on what is only the expression of a unilateral policy of one of the contracting parties, which can be put into effect without the assistance of others*."[16]

The second element is related to the formal requirements. As laid down by case law, "[…] *it is sufficient that the undertakings in question should have expressed their joint intention to conduct themselves on the market in a specific way* […]"[17]. This expression does not have to fulfil any formal requirements, it may be expressed or implied.[18] The agreement may be in an oral form.[19] Therefore, it is well possible that a valid contract under national contract law is not concluded.[20] It was established in early case law that a gentlemen's agreement may fall under Article 101(1) TFEU.[21]

The agreement may be evidenced by documents in a written form. For instance, a correspondence between undertakings may serve as evidence that there was a concurrence of wills.[22]

What is required in essence is a concurrence of wills of the undertakings concerned, "[…] *the form in which it is manifested being unimportant so long as it constitutes the faithful expression of the parties' intention*."[23] This approach is necessary due to the fact that many undertakings would like to hide their agreement, especially if they are aware of the fact that the agreement is prohibited by Article 101(1) TFEU. Thus, what may occur is a situation where a conduct appears to be unilateral, however, it is, in fact, an agreement between two

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15 Case C-2/01 P *Bundesverband der Arzneimittel-Importeure eV and Commission of the European Communities v Bayer AG* [2004] ECLI:EU:C:2004:2, para. 100.

16 *Ibidem*, para. 101.

17 Case T-41/96 *Bayer AG v Commission of the European Communities* [2000] ECLI:EU:T:2000:242, para 67. See also Case 41/69 *ACF Chemiefarma* v *Commission* [1970] ECLI:EU:C:1970:71, para. 112; joined cases 209/78 to 215/78 and 218/78 *Heintz van Landewyck SARL and Others v Commission of the European Communities* [1980] ECLI:EU:C:1980:248, para. 86; Case T-7/89 *SA Hercules Chemicals NV v Commission of the European Communities* [1991] ECLI:EU:T:1991:75, para. 256.

18 Case T-41/96 *Bayer AG v Commission of the European Communities* [2000] ECLI:EU:T:2000:242, para. 72.

19 Case 28/77 *Tepea BV v Commission of the European Communities* [1978], ECLI:EU:C:1978:133, para. 41.

20 Case T-41/96 *Bayer AG v Commission of the European Communities* [2000], ECLI:EU:T:2000:242, para. 68.

21 Case 41-69 *ACF Chemiefarma NV v Commission of the European Communities* [1970] ECLI:EU:C:1970:71, para. 9.

22 Case C-260/09 P Activision Blizzard Germany GmbH v European Commission [2011] ECLI:EU:C:2011:62; para. 73.

23 Case T-41/96 *Bayer AG v Commission of the European Communities* [2000], ECLI:EU:T:2000:242, para 69.

undertakings. This is the case if one undertaking conducts an apparently unilateral conduct and it receives a tacit acquiescence from the other undertaking.[24]

Following the economic rather than legal view on the notion of agreement, it is not relevant whether the persons who concluded the agreement has the authority to do so. "*It is rarely the case that an undertaking's representative attends a meeting with a mandate to commit an infringement*".[25] Therefore, it is not required that partners or CEOs of the undertaking authorised such agreement. As a matter of fact, they do not have to have a knowledge about it at all. "[…] *action by a person who is authorised to act on behalf of the undertaking suffices*".[26]

The third element of the agreement's definition is related to its implementation. Article 101(1) TFEU prohibits the agreement itself. Even if the agreement was never implemented, undertakings concerned may still be punished for infringement of EU competition law.[27]

2.2. Concerted practices

Before jumping into the discussion related to concerted practices themselves, it is important to note that a concerted practice may be applied together with an agreement in its narrow sense. One of the parties in *LVM* case challenged the double classification of the conduct as an agreement and/or concerted practice.[28] The Luxembourg court ruled that "[…] t*he Commission cannot be expected to classify the infringement precisely, for each undertaking and for any given moment, as in any event both those forms of infringement are covered by Article* [101 TFEU]"[29]

From legal point of view, both agreements and concerted practices may be forbidden by Article 101 TFEU. Thus, it is not crucial to distinguished between an agreement and a concerted practice. These may be only different manifestations

[24] *Ibidem*, para 71.

[25] Case C-68/12 *Protimonopolný úrad Slovenskej republiky v Slovenská sporiteľňa a.s.* [2013] ECLI:EU:C:2013:71, para. 26.

[26] *Ibidem*, para 25; joined cases 100/80 to 103/80 *Musique Diffusion française and Others* v *Commission* [1983] ECLI:EU:C:1983:158, para. 97.

[27] WHISH, R., BAILEY, D. *Competition Law. Ninth Edition*. Oxford: Oxford University Press, 2018, p. 104.

[28] Joined Cases T-305/94, T-306/94, T-307/94, T-313/94, T-314/94, T-315/94, T-316/94, T-318/94, T-325/94, T-328/94, T-329/94 and T-335/94 *Limburgse Vinyl Maatschappij NV, Elf Atochem SA, BASF AG, Shell International Chemical Company Ltd, DSM NV, DSM Kunststoffen BV, Wacker-Chemie GmbH, Hoechst AG, Société artésienne de vinyle, Montedison SpA, Imperial Chemical Industries plc, Hüls AG and Enichem SpA v Commission of the European Communities* [1999] ECLI:EU:T:1999:80, para. 695.

[29] *Ibidem*, para 696.

of the very same infringement of Article 101(1) TFEU.[30] The same applies for decisions of associations of undertakings.[31] In order words, the crucial point is to distinguish between collusive and non-collusive behaviour.

There are several points to make in relation to concerted practices themselves. First, we must bear in mind that undertakings, especially cartelists, are aware of the fact that they are committing an infringement of competition law. Consequently, they will do all in their power to hide the collusion between them, especially they can destroy incriminating evidence based on which an agreement between them may be proved.[32]

Second, there is a thin line between collusive practice and parallel behaviour on the market. The situation on the market and the behaviour of undertakings may be determined by their collusive intention as well as by their economic rationalisation of how to respond to competitors' tactics.

The case which laid down the fundaments of concerted practices theory is *ICI v Commission*. In the given time, there were three general and uniform price increases of dyestuffs.[33] The Court acknowledged that[34]:

- coordination may become apparent from the behaviour of undertakings on the market;
- parallel behaviour may serve as a strong evidence of a concerted practice "if it leads to conditions of competition which do not correspond to the normal conditions of the market, having regard to the nature of the products, the size and number of the undertakings, and the volume of the said market"[35];
- a concerted practice possibly occurs if the parallel conduct stabilises the prices on an above-competition level.

In this case, the existence of the concerted practice was substantiated by price developments in particular member states;[36] instructions to raise prices[37] and contacts between undertakings[38].

In *Suiker Unie* case, the Court defined a concerted practice as "*a form of coordination between undertakings, which, without having been taken to the stage*

[30] Case C-49/92 *Commission of the European Communities v Anic Partecipazioni SpA* [1999] ECLI:EU:C:1999:356, para. 113.

[31] Ibidem.

[32] WHISH, R., BAILEY, D. *Competition Law. Ninth Edition*. Oxford: Oxford University Press, 2018, p. 116.

[33] Case 48/69 *Imperial Chemical Industries Ltd. v Commission of the European Communities* [1972] ECLI:EU:C:1972:70, para. 1.

[34] Ibidem, paras. 65–68.

[35] Ibidem, para. 66.

[36] Ibidem, paras. 69 et seq.

[37] Ibidem, p. 642, para. 88.

[38] Ibidem, para. 96.

where an agreement properly so-called has been concluded, knowingly substitutes for the risks of competition, practical cooperation between them which leads to conditions of competition which do not correspond to the normal conditions of the market, having regard to the nature of the products, the importance and number of the undertakings as well as the size and nature of the said market"[39]

For an agreement to be conclude, a concurrence of wills must take place. For a concerted practice to occur, undertakings must knowingly substitute competition for cooperation.[40] There is no need for a meeting of minds or existence of a common course of conduct.[41] Hence, an undertaking that want to be out of reach of concerted practices shall independently determine its business strategy.[42] Naturally, the undertaking may react on behaviour of its competitors, however, it may not be in contact with them, especially if such contact would influence their business strategies.[43]

The Court of Justice was engaged with digital aspects of collusion in *Eturas* case.[44] Travel agencies were using an information system to sell travel packages. This system was supposed to uniform booking method. The administrator of the system sent (through a personal e-mailbox) a message that the discounts on products sold through that system would henceforth be capped. Subsequently, the system was technically modified. The travel agencies were presumed that they have participated in a concerted practice, provided that they had been aware of the message. However, if they publicly distanced themselves from the practice, reported it to the administrative authorities or adduce other evidence to rebut that presumption, the assumption did not apply.[45]

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[39] Joined cases 40 to 48, 50, 54 to 56, 111, 113 and 114–73 *Coöperatieve Vereniging "Suiker Unie" UA and others v Commission of the European Communities* [1975] ECLI:EU:C:1975:174, para. 26.

[40] Joined cases C89/85, C104/85, C114/85, C116/85, C117/85 and C125/85 to C129/85 *Ahlström Osakeyhtiö and Others* v *Commission* [1993] ECLI:EU:C:1993:120, para. 63; case C8/08 *TMobile Netherlands and Others* [2009] ECLI:EU:C:2009:343, para. 26.

[41] Case T587/08 *Fresh Del Monte Produce, Inc. v European Commission* [2013] ECLI:EU:T:2013:129, para. 300.

[42] Ibidem, para. 301; Joined cases C89/85, C104/85, C114/85, C116/85, C117/85 and C125/85 to C129/85 *Ahlström Osakeyhtiö and Others* v *Commission* [1993] ECLI:EU:C:1993:120, para 63; case C7/95 P *John Deere* v *Commission* [1998] ECLI:EU:C:1998:256, para. 86; case C8/08 *TMobile Netherlands and Others* [2009] ECLI:EU:C:2009:343, para. 32

[43] Case T587/08 *Fresh Del Monte Produce, Inc. v European Commission* [2013] ECLI:EU:T:2013:129, para. 302.

[44] Case C-74/14 "Eturas" UAB and Others v Lietuvos Respublikos konkurencijos taryba [2016] ECLI:EU:C:2016:42.

[45] For comments on this case, see, for instance, LAMADRID, A. *ECJ's Judgment in Case C-74/14, Eturas (on the scope of "concerted practices" and on technological collusion)*. [online]. Available at: < https://chillingcompetition.com/2016/01/22/ecjs-judgment-in-case-c-7414-eturas-on -the-scope-of-concerted-practices-and-on-technological-collusion/>; LAWRANCE, S.,

2.3. Decisions of associations of undertakings

Anti-competitive agreements *stricto sensu* may have various forms. The scope of Article 101(1) TFEU is even broadened by concerted practices, not requiring the concurrence of wills to take place. However, that is not all. The infringement of Article 101(1) TFEU may take a form of a decision of an association of undertakings.

Firstly, it shall be remembered that associations of undertakings do not need to fulfil the definition for undertakings. They do not necessarily need to be involved in an economic activity. However, Article 101(1) TFEU covers decisions of such associations.

It is important that an association associates undertakings and not some other entities. The Court of First Instance stated in FNCBV that farmers are involved in economic activity, i.e. production of goods for remuneration; hence *"the unions which bring them together and represent them, and the federations which bring the unions together, may be described as associations of undertakings"*.[46]

Secondly, associations of undertakings may serve for legitimate purposes. However, they may also be established for anticompetitive purpose. Suppose a group of undertakings intend to commit a price fixing. They may form an association which will issue guidelines or rules on prices. A price cartel would effectively be established. Associations may be especially fruitful if the cartel shall comprise large number of undertakings which would otherwise be difficult to manage and monitor their compliance with cartel rules.[47]

Thirdly, as to the type of restriction, decisions of associations of undertakings may take the form of by object as well as by effect restrictions. For instance, if associations fix minimum prices for certain goods, with the aim of making them binding on all traders, such dealing has the object of restricting competition.[48]

LISNER, M. *Eturas – Any conclusions on platform collusion… ?* [online]. Available at: < http://competitionlawblog.kluwercompetitionlaw.com/2017/01/19/eturas-conclusions-platform-collusion/?doing_wp_cron=1598453604.6673059463500976562500>

[46] Joined cases T-217/03 and T-245/03 *Fédération nationale de la coopération bétail et viande (FNCBV) (T-217/03) and Fédération nationale des syndicats d'exploitants agricoles (FNSEA) and Others (T-245/03) v Commission of the European Communities* [2006]. ECLI:EU:T:2006:391, para. 54.

[47] WHISH, R., BAILEY, D. *Competition Law. Ninth Edition*. Oxford: Oxford University Press, 2018, p. 114.

[48] Joined cases T-217/03 and T-245/03 *Fédération nationale de la coopération bétail et viande (FNCBV) (T-217/03) and Fédération nationale des syndicats d'exploitants agricoles (FNSEA) and Others (T-245/03) v Commission of the European Communities* [2006]. ECLI:EU:T:2006:391, para. 85; case 123/83 *Bureau national interprofessionnel du cognac v Guy Clair* [1985] ECLI:EU:C:1985:33, para. 22.

Fourthly, Article 101(1) prohibits *decisions* of associations of undertakings. The notion of decisions has an EU definition. It was established in case law that decisions cover, for instance, a recommendation, even if it is not binding, if compliance with such recommendation has an appreciable influence on competition.[49] If recommendations determine the conduct of a large number of association's members, they have an appreciable influence on competition.[50] The association does not necessarily have to be in a position to force its members (undertakings) to fulfil the obligations imposed on them.[51]

Apart from that, Whish and Bailey identified that decisions may take form of constitution of a trade association, regulations governing the operation of an association, agreement entered into by an association.[52]

3. Digital environment

The world is inevitable moving towards a digital age. Even before the pandemic of COVID-19, many offline activities were moved into the online world. This was enhanced by the pandemic which may result into aggravation of the legal enforcement.[53]

Digital environment is related to many factors.[54] A lot has been written about big data and their influence on competition policy.[55] However, not all issues are related to data *per se*. The technology that processes data is equally challenging from the regulatory perspective.[56]

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[49] Joined cases 96–102, 104, 105, 108 and 110/82 *NV IAZ International Belgium and others v Commission of the European Communities* [1983] ECLI:EU:C:1983:310, para. 20.

[50] *Ibidem*, para. 21.

[51] Joined cases T-217/03 and T-245/03 *Fédération nationale de la coopération bétail et viande (FNCBV) (T-217/03) and Fédération nationale des syndicats d'exploitants agricoles (FNSEA) and Others (T-245/03) v Commission of the European Communities* [2006]. ECLI:EU:T:2006:391, para. 89; case 71/74 *Nederlandse Vereniging voor de fruit- en groentenimporthandel, Nederlandse Bond van grossiers in zuidvruchten en ander geimporteerd fruit "Frubo" v Commission of the European Communities and Vereniging de Fruitunie* [1975] ECLI:EU:C:1975:61, paras. 29 to 31.

[52] WHISH, R., BAILEY, D. *Competition Law. Ninth Edition*. Oxford: Oxford University Press, 2018, p. 114 and the references therein.

[53] The impact of the pandemic on legal regulation is preview in many fields. See, for instance, PATAKYOVÁ, M., GRAMBLIČKOVÁ, B. Mandatory and Default Regulation in Slovak Commercial Law. *Bratislava Law Review*, 2020, vol. 4, no. 1, pp. 93–111, p. 107.

[54] Naturally, it is not only competition law which must adapt to digital age. See, for instance, CIBUĽKA, T., KAČALJAK, M. Tax Treaty Override in Slovakia – Digital Platform Permanent Establishment. *Bratislava Law Review*, 2018, vol. 2, no. 1, pp. 80–88.

[55] *See*, for instance, STUCKE, M. E., GRUNES, A. P. *Big Data and Competition Policy*. Oxford: Oxford University Press, 2016, pp. 16–28.

[56] How competition law is affected by digital environment is also a subject matter of many conferences. See, for instance, BLAŽO, O. The Challenges of Regulating and Enforcing Competition

AI technologies are characterised by opacity, complexity, unpredictability and partially autonomous behaviour.[57] Under such conditions, the compliance with legal regulations is, in general, complicated. The following part will be dedicated to the issues of pricing algorithms and their assessment under 101(1) TFEU.

3.1. The problem of pricing algorithms

Algorithms may serve for various purposes. They are capable of making the processes more efficient, thus be to the benefit of consumers. As put by Competition & Markets Authority, "*algorithms can reduce transaction costs for firms, reduce frictions in markets, and give consumers greater information on which to base their decisions*"[58] Pricing algorithms may use artificial intelligence, big data techniques, data and analysis of competitors' and consumers' behaviour.[59]

Yet, they may also be used for illegal acts, e.g. cartels. Several authors have claimed that digital environment is able to facilitate collusion.[60] It is not the aim of this paper to assess all aspects related to pricing algorithms. Rather, the paper would like to present one possible scenario and analyse whether it will be covered by any of the forms of agreements recognised by Article 101(1) TFEU.

3.2. Pricing algorithm in a supposed scenario

Suppose a parallel use of the same pricing algorithm by economic operators in public procurement, i.e. tenderers. These tenderers would be undertakings at the same time.[61] The facts of the case would be as follows: there is a pricing

Law (Bucharest 14 –15 November 2019). *Bratislava Law Review*, 2019, vol. 3, no. 2, pp. 100–103.

[57] EUROPEAN COMMISSION. *WHITE PAPER On Artificial Intelligence - A European approach to excellence and trust*. [online]. Available at: <https://ec.europa.eu/info/publications/white-paper-artificial-intelligence-european-approach-excellence-and-trust_en>, p. 13.

[58] Competition & Markets Authority. *Pricing algorithms*. [online]. Available at: <https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/746353/Algorithms_econ_report.pdf >, p. 3.

[59] GAL, M. S. *Algorithms as Illegal Agreements*. [online]. Available at: < https://ssrn.com/abstract=3171977>, p. 11.

[60] *Ibidem*, p. 13.

[61] For the clarification of the notion, see 7. KALESNÁ, K., PATAKYOVÁ, M. T. Subjects of Legal Regulation – Different Approaches of Comeptition, Public Procurement and Corporate Law. In MILKOVIC, M., KECEK, D., HAMMES, K. (eds.): *Economic and Social Development ,46th International Scientific Conference on Economic and Social Development – „Sustainable Tourist*

algorithm on the market which is used by tenderers/undertakings to calculate the price for their product or services. This pricing algorithm is developed by a third party, a software company. Undertakings purchase the pricing algorithm from the third party and they do not have a written agreement among themselves that they must purchase the price algorithm from the third party. The market is characterised by a relatively small number of undertakings and high barriers to entry.

The use of the same pricing algorithm is likely to be present.[62] The purchase of an off-the-shelf pricing algorithm is not imaginary as such pricing algorithms do exists.[63] A question arises whether and under which circumstances will the use of the same pricing algorithm by undertakings, purchased from the same third party, be considered as an infringement of Article 101(1) TFEU.[64]

In the terminology used by Ezrachi and Stucke[65], this scenario would fall within the second category of collusion, a so-called "*Hub and Spoke*". This category of collusion is characterised by "*the use of a single algorithm to determine the market price charged by numerous users.*"[66] As an example, Exrachi and Stucke present the price algorithm Uber uses to set the price for a taxi drive.[67] The agreement between algorithm developer and algorithm users exists. However, this agreement does not have to comprise an agreement on price fixing. It may be the parallel use of the same algorithm which may lead to the same result as price fixing.[68] Pursuant to the authors, it is necessary to see the internal design

Destinations", Book of Proceedings. Varazdin: Varazdin Development and Entrepreneurship Agency, 2019, pp. 210–219.

62 Competition & Markets Authority. *Pricing algorithms*. [online]. Available at: <https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/746353/Algorithms_econ_report.pdf >, p. 4.

63 GAL, M. S. *Algorithms as Illegal Agreements*. [online]. Available at: < https://ssrn.com/abstract=3171977>, p. 11.

64 If so, such collusion may have severe consequences. KOVÁČIKOVÁ, H. Uncompetitive practices in public procurement in EU/Slovak context. *European studies - The review of European law, economics and politics*, 2018, Vol. 5, pp. 283-294, p. 288; PATAKYOVÁ, M. T. Initial Thoughts on Influence of Artificial Intelligence on Bid Rigging. *EU Business Law Working Papers*, 2019, no. 1, pp. 1-9. [online] Available at: < https://ces.sze.hu/images/working_papers/eublaw_wp_1_2019.pdf>, p. 4.

65 EZRACHI, A., STUCKE, M. E. *ARTIFICIAL INTELLIGENCE & COLLUSION: WHEN COMPUTERS INHIBIT COMPETITION* [online]. Available at < https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2591874>.

66 Ibidem, p. 1782.

67 Ibidem, p. 1788.

68 As put by the same authors elsewhere, the use of the same algorithm may be an attempt to restrict competition as well as an unintentional alignment and use of the same/similar algorithm to monitor prices. EZRACHI, A., STUCKE, M. E. *Virtual Competition. First Edition*. Cambridge, Massachusetts: Harvard University Press, 2016, p. 48.

of the algorithm to see whether it may lead to exploitation. If so, the anti-competitive character may be established. If not, the nature of the agreement may be established, evidence on parties' intent may be useful.[69]

The distinctive feature between our scenario and the Uber-like Hub and Spoke scenario is a lack of further relations between the third party developing the pricing algorithm and the undertakings that use it.[70] However, the Hub and Scope category appears to cover our scenario nevertheless.[71]

3.3. Does it fall within any form of agreement?

Would such parallel use of the same pricing algorithm be prohibited? There is no clear-cut answer to the question. First, there is no clear horizontal agreement between undertakings. The concurrence of wills might have taken place, but this is not clear from external evidence. The competition authority would need to inspect the internal documents, emails etc. in order to find out whether there was an agreement or not. If no evidence is find, the first form of agreement pursuant to Article 101(1) TFEU cannot be established.

Regarding an agreement, there is clearly a vertical agreement (or rather agreements) between the third party and each of the undertakings. The question is whether these vertical agreements were anticompetitive. If the third party has merely supplied the pricing algorithm to every undertaking that asked for it, vertical agreement is probably not anticompetitive.

Second, even if no evidence on agreement *stricto sensu* is found, undertakings may have adopted a concerted practice. For this to take place, there is no need to meeting of minds or concurrence of wills. What competition authorities would be looking for here is an unnatural behaviour on the market, where undertakings have knowingly substituted a practical cooperation between them for the risks of competition.

However, the undertakings may claim, as in *Austrienne and Rheinzink*,[72] that the concerted practice is not the only explanation of the parallel use of the pricing algorithm. They may claim that the algorithm was working properly, had a good

[69] EZRACHI, A., STUCKE, M. E. *ARTIFICIAL INTELLIGENCE & COLLUSION: WHEN COMPUTERS INHIBIT COMPETITION* [online]. Available at < https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2591874>, pp. 1788-1789.

[70] For further discussions regarding Hub and Spoke conspiracies, see EZRACHI, A., STUCKE, M. E. *Virtual Competition. First Edition.* Cambridge, Massachusetts: Harvard University Press, 2016, pp. 46 et seq.

[71] Ibidem, p. 49.

[72] Joined cases 29/83 and 30/83 *Compagnie Royale Asturienne des Mines SA and Rheinzink GmbH v Commission* [1984] ECLI:EU:C:1984:130.

price, had a stable support etc. It is questionable how the competition authorities would cope with such situation.

Without a piece of evidence on collusion, such as instructions on price developments or contacts between undertakings, it may be difficult to establish that the undertakings colluded. The pieces of evidence such as current prices and price developments of particular undertakings may not prove the concerted practice itself, as all undertakings use the same pricing algorithm which may explain their similar or even identical pricing behaviour.

Third, collusion may take a form of decision of association of undertakings. If the undertakings are associated in an association which instructed them (even on a non-binding basis) to use the same pricing algorithm, Article 101(1) might be breached. However, if there is no such association, or if the association did not instruct them in any way, this form of collusion did not take place.

4. Conclusion

This article dealt with the notion of agreement within Article 101 TFEU. Three forms of agreements, agreements in their narrow sense, concerted practices and decisions of associations of undertakings were presented. The article briefly introduced the problems which may occur due to the digital environment the competition takes place in and it focused on pricing algorithms. In order to show how the notion of agreement in its broader sense may be insufficient to cover all anticompetitive agreements, the article presented a supposed scenario where undertakings in a particular sector would use the same pricing algorithm provided by the same third party. The paper pointed out that certain types of collusion may not be caught by any of the forms mentioned in Article 101 TFEU.

The most useful of the three forms seem to be a concerted practice. However, in order to establish that such practice takes place on the market, competition authorities might need to have more evidence than only a piece of evidence on prices and their development. This is due to the fact that undertakings may claim that the use of the same pricing algorithm is substantiated by other reasons than collusion. For instance, that particular algorithm might be the best on the market.

Naturally, the borderline between the parallel behaviour and tacit collusion has always been a thin one. The question is whether it is not getting thinner in digital environment. If this is so, one may wonder whether stricter liability for undertakings is not necessary. For instance, undertakings might be asked to intentionally avoid the creation of possible concerted practices. This might be a similar obligation as the one which is imposed on dominant undertakings by Article 102 TFEU. It may, of course, be justifiable only in certain sectors,

such as the undertakings which are participating in tendering procedures. Apart from the sector approach, the sticker liability may be applicable if a red flag is present.

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