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Leiden  
The Netherlands

## **The application of EU antitrust law to (dominant) online platforms**

Mândrescu, D.

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*This chapter is based on the two articles published on this topic covering the substantive and practical perspectives of the challenges posed by online platforms for the process of market definition. The first part of this chapter is based on the publication *Applying (EU) competition law to online platforms: Reflections on the definition of the relevant market(s)* (2018) 41(3) *World Competition* 453. The second part of the chapter is based on the publication *The SSNIP test and Zero-Pricing Strategies: Considerations for Online Platforms* (2018) 2(4) *European Competition and Regulatory Law Review* 244.*

### 3.1 INTRODUCTION

The developments of the past decades in online markets have demonstrated the potential for online platforms to create new markets as well as disrupt established ones. The success of platforms such as Facebook, Amazon and Google has resulted in unprecedented market valuations in relatively short periods of time.<sup>1</sup> This success has increasingly attracted the attention of competition law authorities that hope to address future competitive concerns before they might materialize.<sup>2</sup> Despite the consensus that online markets are highly dynamic and competitive, such reality does not exempt online platforms from competition law scrutiny. In fact, this dynamic character may constitute a strong argument for intervention in order to prevent stagnation in innovation, resulting from anti-competitive practices.<sup>3</sup>

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1 See e.g. Accompany, 'Growth of Apple, Google (Alphabet), Amazon & Facebook. A Comparison of Financial Performance', <https://www.accompany.com/insights/growth-of-apple-amazon-google-facebook/> (since this publication Accompany has been acquired by Cisco thus its site no longer exists in its previous form).

2 See e.g. Commission, Staff Working Document on Online Platforms Accompanying the document Communication of Online Platforms and the Digital Single Market, COM(2016) 288; Bundeskartellamt and Autorite de la concurrence, *Competition law and data*, at. 11-25 <<https://www.bundeskartellamt.de/SharedDocs/Publikation/DE/Berichte/Big%20Data%20Papier.html>>; MonopolKommission, *Competition policy: The challenge of digital markets*, special Report No. 68. <[http://www.monopolkommission.de/images/PDF/SG/s68\\_fulltext\\_eng.pdf](http://www.monopolkommission.de/images/PDF/SG/s68_fulltext_eng.pdf)>; Directorate General for Internal Policies, *Challenges for Competition Policy in a Digitalized Economy*, IP/A/ECON/2014-12, PE 542.235; House of Lords Select Committee on European Union, *Online Platforms and the Digital Single Market*, 10th Report of Session 2015–16, HL paper 129 (20 April 2016).

3 See e.g. OECD Global Forum for Competition Law, *The impact of disruptive innovation on Competition Law Enforcement*, DAF/COMP/GF(2015)16/FINAL.

In the context of EU competition law, much of the interest in online platforms relates to possible abuses of dominance. Abuse of dominance cases are inherently dependent upon establishing the existence of a dominant position held by the concerned undertaking. The definition of the relevant market constitutes one of the two main steps of establishing dominance in the context of art. 102 TFEU.<sup>4</sup> It is therefore essential that the market definition be carried out adequately to prevent erroneous application and incorrect findings concerning art. 102 TFEU. Performing this exercise in the case of online platforms requires additional caution due to the challenges posed by their two- or multisided nature.

In practice, delineating the relevant market will entail both substantive and practical challenges. Substantive difficulties concern primarily the requirement to determine the number of markets that need to be defined as online platforms deal with at least two separate customer groups, which may be part of a single or multiple relevant markets.<sup>5</sup> Practical difficulties concern the reduced compatibility of the legal and economic tools used for the purpose of the market definition.<sup>6</sup> The most prominent issue in this second category of difficulties is the application of the small but significant non-transitory increase in price (SSNIP) test in the context of zero-pricing strategies,<sup>7</sup> which significantly undermine its usefulness by removing the prices that would otherwise be used for the purpose of the test.

Therefore the purpose of this chapter is to examine both the substantive and the practical challenges that can be expected when attempting to define the relevant market in the case of multisided online platforms. These two types of challenges will be addressed separately in this chapter, which is divided into two main parts. The first main part will address the substantive challenges involved in the market definition process in the case of platform. Accordingly this part will address the matter of how many markets need to be defined when defining the relevant market for a two or multisided

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4 Robert O'Donoghue and Jorge Padilla, *The law and Economics of Article 102 TFEU*, at. 94 (2<sup>nd</sup> edn, Hart, 2013).

5 See Lapo Filistrucchi, Damien Geradin, Eric van Damme, Pauline Affeldt, 'Market Definition in Two-Sided Markets: Theory and Practice' (2014) 10(2) *Journal of Competition Law & Economics* 293; OECD, 'Rethinking Antitrust Tools for Multi-Sided Platforms' (2018) <[www.oecd.org/competition/rethinking-antitrust-tools-for-multi-sided-platforms.htm](http://www.oecd.org/competition/rethinking-antitrust-tools-for-multi-sided-platforms.htm)>; in practice this aspect of the market definition was most visibly discussed in the US in *OHIO ET AL. v. AMERICAN EXPRESS CO. ET AL.*, 585 U. S. (2018), pp.2-8 due to the two-sided nature of credit card schemes.

6 See eg David S Evans and Richard Schmalensee, 'The Antitrust Analysis of Multi-Sided Platform Businesses' in Roger Blair and Daniel Sokol (eds), *Oxford Handbook on International Antitrust Economics* (Oxford University Press 2014).

7 *Ibid* and OECD (2018) *supra* (n 5); David S Evans, 'Two-Sided Market Definition' (2009) in ABA Section of Antitrust Law, *Market Definition in Antitrust: Theory and Case Studies* <<https://ssrn.com/abstract=1396751>>.

platform and how such decision should be made. The second part of the chapter will address the practical challenge posed by zero pricing strategies for the application of the SSNIP test. This second part will discuss the matter of how the price oriented SSNIP test could and should be adjusted so as to remain relevant in zero pricing settings that are common to online platforms. When taken together, the discussion in both parts of this chapter provides a cleaner view on the challenges and potential solutions for the definition of relevant markets in the case of online platforms as a whole.

### 3.2 DEFINING THE RELEVANT MARKET(S) FOR ONLINE PLATFORMS: A SUBSTANTIVE PERSPECTIVE

Online platforms cater their services to at least two separate customer groups by facilitating an interaction between them. Accordingly, when assessing the market power of an online platform, which in turn requires defining the relevant market, it is essential to establish whether those customer groups are part of a single relevant market or multiple relevant markets. Once a decision in this regard is made, the exact scope of the relevant market must be determined based on the assessment of substitutability between the online platform and its closest competitors. The Commission, EU Courts and several national authorities have some experience with complex market definitions that include multiple relevant markets, yet this experience may not be equally relevant to online platforms. The two- or multisided nature and diverging business structures of online platforms combined with the dynamics of online markets fuelled by constant technological developments have not been addressed extensively by competition authorities, yet these aspects may have a decisive impact on the outcome of future investigations. It is therefore the purpose of this section to provide practical guidance on the market definition process for online platforms in light of their distinctive characteristics so as to minimize the risk of erroneous findings in future cases.

In order to present coherent guidance this first part of the chapter will be divided into three sections. The first section will shortly discuss the importance of the market definition for the purpose of applying art. 102 TFEU in practice. The second section will address the approach to the market definition process in the case of online platforms based on the interactions they facilitate between the customer groups participating on the platform. Accordingly, this section will provide a new method for determining the number of relevant markets that must be defined in each case. The third and final section, followed by concluding remarks, will provide some insight with regard to the key considerations in the assessment of substitutability between online platforms and their closest online and offline competitors. Such insight will equally play a key role in determining the number of relevant markets required in each case, as well as their scope.

### 3.2.1 Article 102 TFEU and market definition

The objective of art. 102 TFEU is the protection of competition on the market, which is expected to result in enhanced consumer welfare.<sup>8</sup> Attaining this objective at times requires intervention in the business practices of undertakings by the EU Commission or national competition law authorities (NCAs). Intervention in the context of art. 102 TFEU depends, however, on meeting the jurisdictional threshold of dominance in the absence of which it will not apply.

The legal meaning of dominance in the context of an Art. 102 TFEU procedure has been provided in the jurisprudence of the European courts in various formulations. In the seminal case of *United Brands*, the Court of Justice of the European Union (CJEU) found that dominance is a situation in which an undertaking can act, to an appreciable extent, independently of its competitors, customers and eventually its consumers.<sup>9</sup> This was later repeated by the Court in *Hoffmann-La Roche* with an additional refinement. According to the Court, a position of dominance does not require an absence of competition for the dominant undertaking but rather the ability of such undertaking to influence the degree of competition on the market, unrestrained.<sup>10</sup> Similar indications can be found in the Commission discussion paper and guidelines that were published after these judgments.<sup>11</sup> In later cases, additional elements were added to this definition that are still relevant today.<sup>12</sup> Although this definition is firmly set in the legal framework, it does not fully square with the economic concept of dominance. The idea of an undertaking acting independently from its competitors, customers and consumers is something that cannot occur from an economic perspective.<sup>13</sup> Instead, the economic concept of dominance entails an undertaking that enjoys a substantial degree of market power that could manifest an increase of price above competitive level or a reduction

8 J. Faull and A. Nikpay (eds), *The EU Law of Competition* (3rd edn, OUP, 2014) at 332-335.

9 Case 27/76 *United Brands v. Commission* [1978] ECLI:EU:C:1978:22, para. 65.

10 Case 85/76 *Hoffmann-La Roche & Co. AG v Commission* [1979] ECLI:EU:C:1979:36, paras. 38-39.

11 Commission, DG Competition discussion paper on the application of Article 82 of the Treaty to exclusionary abuses, public consultation, December 2005, paras. 21-23; Communication from the Commission — Guidance on the Commission's enforcement priorities in applying Article 82 of the EC Treaty to abusive exclusionary conduct by dominant undertakings (2009/C 45/02), C 45/7, paras. 9-13 ('Guidance on the Commission's enforcement priorities in applying Article 82').

12 Case 322/81 *NV Nederlandsche Banden Industrie Michelin v Commission* [1983] ECLI:EU:C:1983:313, para. 57.

13 Damian Geradin, Nicolas Petit, Mike Walker, Paul Hofer and Frédéric Luis, 'The Concept of Dominance in EC Competition Law' (2005) <<https://ssrn.com/abstract=770144>>; Gunnar Niels, Helen Jenkins and James Kavanagh, *Economics for Competition Lawyers* (2nd Ed, Oxford press publishing, 2016) at 97-99.

of output or quality below competitive level over a significant period of time.<sup>14</sup> Bringing the two approaches together means, in practice, translating a predominantly economic measurement of market power into the legal finding of dominance. The transition from an economic measurement to a legal finding has never been a simple process. This is because the legal threshold of dominance under Art. 102 TFEU is a binary one; an undertaking either is or is not dominant, whereas market power measurement is a matter of degree. The difference between the two approaches to dominance is further complicated by the lack of an absolute reference point where a specific degree of market power entails dominance.<sup>15</sup> Therefore, findings of dominance must ensure an adequate measurement of market power and a justified transition from market power to dominance, a determination that is initially dependent upon a properly defined relevant market. Despite the practice of market definition being often-criticized,<sup>16</sup> it nonetheless remains a prerequisite to the finding of dominance according to the EU courts.<sup>17</sup>

Beyond the matter of establishing dominance, the market definition is required for the purpose of evaluating any possible efficiency arguments that would justify the practices of the concerned undertaking. Currently there is no established practice on how such justification would be assessed by the CJEU, as this justification possibility has only been discussed by the case law but has never been successfully applied.<sup>18</sup> Nonetheless, the Commission seems to indicate that the approach under Art. 102 TFEU will be similar to that utilized under art. 101 (3) TFEU.<sup>19</sup> In the context of art. 101

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14 Guidance on the Commission's enforcement priorities in applying Article 82 of the EC Treaty, *supra* (n 11) para. 11.

15 Despite the attempt to provide an indication of a reference point for dominance in Case C-62/86 *AKZO v. Commission* [1991] ECLI:EU:C:1991:286, para. 60, practice has shown that dominance is a matter of case-by-case analysis depending on the circumstances of the case. See e.g. Case T-340/03 *France Télécom v Commission* [2007] ECLI:EU:T:2007:22, paras. 100-111. In this regard the application of the Akzo market share benchmark is not always applied uniformly across member states, see Brenda Sufrin, 'The notion of dominance in competition law: An overview of EU and national case law', (2012) e-Competitions <<http://awa2013.concurrences.com/business-articles-awards/article/the-notion-of-dominance-in->>.

16 See e.g. Luis Kaplow, 'Why (Ever) Define Markets?' (2010) 124 *Harv. L. Rev* 437; Daniel A. Crane, 'Market Power Without Market Definition' (2014) 90 (1) *Notre Dame L. Rev* 31.

17 Case T-62/98 *Volkswagen v Commission* [2000] ECLI:EU:T:2000:180, para. 230; Case C-7/97 *Oscar Bronner GmbH & Co. KG v Mediaprint Zeitungs- und Zeitschriftenverlag GmbH & Co. KG* [1998] ECLI:EU:C:1998:569, para. 32; Case C-52/07 *Kanal 5 Ltd and TV 4 AB v Föreningen Svenska Tonsättares Internationella Musikbyrå (STIM) upa* [2008] ECLI:EU:C:2008:703, para. 19.

18 Case C-95/04 P *British Airways v Commission* [2007] ECLI:EU:C:2007:166, para. 86; Case C-209/10 *Post Danmark v Konkurrenceradet* [2012] ECLI:EU:C:2012:172, para. 42.

19 Guidance on the Commission's enforcement priorities in applying Article 82 (n 11) para. 30.

(3) TFEU, the Commission and EU Courts established that evidence of efficiencies is required primarily in the relevant market where the anti-competitive effects are present.<sup>20</sup> According to the CJEU in *Mastercard*, in the case of two- or multi sided markets, evidence of efficiencies is not necessarily limited to the relevant market but can be considered jointly with advantages in related markets.<sup>21</sup> Relying on efficiencies obtained solely in separate yet related markets will, however, not suffice for the purpose of relying on art. 101(3) TFEU.<sup>22</sup> If the same is true with regard to art. 102 TFEU, the manner in which the market definition is performed will determine which out-of-market efficiencies are taken into account for the purposes of analysis and thus the success of potential justifications. Particularly, determining the number of relevant markets that must be defined in each case may prove to be of great importance in this context.<sup>23</sup>

In light of the important role that the market definition currently plays in the application process of art. 102 TFEU, this process must also be addressed in the context of online platforms where some fine-tuning of current practices may be required.

### 3.2.2 Market definition and online platforms

The starting point of the market definition process is identifying the product or service of the concerned undertaking for which dominance must be established; this is also referred to as the focal product or service.<sup>24</sup> The market is then defined predominantly based on demand side substitutability with regard to competitors of the concerned undertaking.<sup>25</sup> The demand side substitutability analysis in previous practice has primarily been single-sided, as the concerned undertakings were mostly single-

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20 Commission Guidelines on the Application of art. 101(3) of the Treaty, (2004) OJ C 101/08, para. 43.

21 Case C-382/12P *MasterCard Inc and Others v Commission*, [2014] ECLI:EU:C:2014:2201, paras. 236-242.

22 *Ibid*, para. 242. Accordingly, proof of efficiencies must first be provided with relation to the market where the anti-competitive behaviour has been identified.

23 Alfonso Lamadrid de Pablo, 'The Double Duality of Two-Sided Markets' (2015) 64 *Comp Law* 1, 5, 9-15 (2015); Daniel Mandrescu, 'Applying EU competition law to online platforms: the road ahead- Part 1' (2017a) 38(8) *ECLR* 353, 362-365 (2017); Daniel Mandrescu, 'Applying EU competition law to online platforms: the road ahead- Part 2' (2017b) 38(9) *ECLR* 410, 420-422.

24 Gunnar Niels, Helen Jenkins and James Kavanagh (2016) *supra* (n 13) pp. 41-47.

25 Commission Notice on the definition of the relevant market for the purposes of Community competition law [1997] Official Journal C 372/5, para. 13-20.

sided.<sup>26</sup> Online platforms by contrast are based on the two-or multi sided market model, which also constitutes the cornerstone of the definition according to the Commission and other competition authorities.<sup>27</sup> Although the literature on two-sided markets may differ with regard to the qualification of online platforms,<sup>28</sup> such platforms display all the main undisputed characteristics of two- or multi sided markets which possess competition law relevance.<sup>29</sup> Therefore, approaching the market definition process in the case of online platforms adequately will first require revisiting the manner in which the process is approached in light of their two- or multisided nature.

Online platforms interact with two or more customer groups and meet the demands of these groups by facilitating interaction between the two. The core product or service they provide is, in essence, the interaction between those distinct customer groups in some form of matchmaking.<sup>30</sup> Accordingly, demand-side substitutability can be assessed with regard to more than one customer group, meaning that the market definition process might result in multiple relevant markets. For example, Deliveroo facilitates the interaction between restaurants, self-employed delivery cyclists and consumers. Deliveroo does not own a restaurant or delivery service that consumers access via the platform. The product or service offered by Deliveroo is facilitating and managing the three-sided interaction between these distinct customer groups. The success of Deliveroo depends on the demand for its interaction facilitation service by all three parties. If an undertaking like Deliveroo were to be subject to an abuse of dominance investigation, dominance would have to be established, in principle, with regard to this three-sided interaction. From a competition law perspective this interaction facilitating service will constitute the focal product of the market definition process for which demand-side substitutability should be tested for all

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26 In the previous case practice of the Commission and EU courts there were multiple chances to deal with a market definition in two-sided market, however, the matter has been limited to the acknowledgment of network effects. On this matter, see Dirk Auer and Nicolas Petit, 'Two-Sided Markets and the Challenge of Turning Economic Theory into Antitrust Policy' (2015) 60(4) *The Antitrust Bulletin* 426; The recent case of Google Shopping represents an example where the importance of two-sided markets in the context of competition law is being better understood and explicitly addressed. See *Google Search (Shopping)* (Case AT.39740) Commission decision of 27 Jun. 2017.

27 Bertin Martens, 'An Economic Policy Perspective on Online Platforms', Institute for Prospective Technological Studies Digital Economy working paper 2016/05, at 12. <https://ec.europa.eu/jrc/sites/jrcsh/files/JRC101501.pdf>.

28 Dirk Auer and Nicolas Petit (2015) *supra* (n 26) at 431-438.

29 Those characteristics are: the interaction between at least two separate customer groups, indirect network externalities, skewed pricing structure and multi-single homing patterns. See OECD Round table on two-sided markets [2009] DAF/COMP/WD(2009)69, at 3.

30 Pieter Ballon and Eric Van Heesvelde, 'ICT platforms and regulatory concerns in Europe' (2011) 35(8) *Telecommunications Policy* 702, 702-708.

three customer groups. The perspective and demand of the three customer groups with regard to the interaction service provided by Deliveroo may, however, differ.

Consumers may not care whether the food is delivered by a self-employed delivery cyclist or by one hired by the restaurant. Restaurants may equally not care whether the delivery cyclists are self-employed. Self-employed delivery cyclists may not care whether they are hired to deliver food orders or documents. Accordingly, the interaction may prove to be more than one product due to such different perspectives by the customer groups of the platform. If that is the case, the demand-side substitutability assessment for each of these groups might offer different results which would indicate that the three are not part of the same market. In the case of consumers, the interaction service may fall within the market for home-delivered food while in the case of the cyclists it may be part of the delivery market for small deliveries. Thus, when defining the market for such a multi-sided platform, one must first consider whether the interaction, facilitated by the platforms for two or more distinct customer groups it serves, requires the definition of one or more relevant markets. The current approach to market definition in this regard is platform-type oriented that, as will be seen, requires some refinement in order to provide adequate guidance in ongoing as well as future cases.

#### A. *Market definition based on platform typology*

The current literature and practical guidance on online platforms builds upon the general literature on two-sided markets and addresses the process of market definition based on a typology approach with regard to future practices.<sup>31</sup> The recent contribution by the Bundeskartellamt developed a rather general approach for online platforms and market definition based on the nature of the platform at hand and the network effects between the distinct customer groups interacting on the platform.<sup>32</sup> The Bundeskartellamt describes two types of platforms; namely, matching platforms and audience-providing platforms, also referred to as advertising platforms.<sup>33</sup> Matching platforms enable the intermediation or interaction between two or more distinct user or customer groups based on their mutual demand for each other. Matching platforms can then be further divided into platforms

31 According to the literature on two-sided markets the number of relevant markets per case is dependent on whether the matter concerns a transaction or non-transaction market. See e.g. Lapo Filistrucchi, Damien Geradin, Eric van Damme, Pauline Affeldt (2014) *supra* (n 5).

32 Bundeskartellamt, *Working Paper – Market Power of Platforms and Networks* B6-113/15 (2016) <[https://www.bundeskartellamt.de/SharedDocs/Publikation/EN/Berichte/Think-Tank-Bericht-Langfassung.pdf?\\_\\_blob=publicationFile&v=2](https://www.bundeskartellamt.de/SharedDocs/Publikation/EN/Berichte/Think-Tank-Bericht-Langfassung.pdf?__blob=publicationFile&v=2)>.

33 *Ibid*, at 19-30; See similar discussion in OECD, 'Rethinking Antitrust Tools for Multi-Sided Platforms' (2018) *supra* (n 5) at 55-64.

that provide a transaction function and platforms without a transaction function.<sup>34</sup> Audience-providing or advertisement platforms facilitate an interaction between users brought to the platform by content matching their interests, and advertisers seeking access to those users.<sup>35</sup> Unlike the matching platforms, the interaction facilitated on the advertisement platforms between users and advertisers is not a result of mutual interest in the interaction, as it is generally only the advertisers that are interested in that aspect.<sup>36</sup>

The demand of the users in the case of advertisement platforms could be met even in the absence of the advertisers. For example, users visit the Dailymail site to read the latest news and gossip, it is this context that pulls them to the platform. Accordingly, reducing the amount of advertisement on the platform will not influence user traffic on the platform negatively, in fact it may even result in an increase.<sup>37</sup> This is observable when examining the indirect network effects in such cases, which are likely to be unilateral or rather modest bilateral. In practice, consumers may be willing to be exposed to advertisements when this results in gaining access to certain services free of charge and even more so if the respective advertisements are well targeted. Nonetheless this rather positive attitude towards advertisements is not so significant so as exhibit true demand interdependency between users and advertisers. Meeting the demand of such users is still predominantly depended on the service provided by the online platform. The amount of advertisements and their targeting accuracy may be perceived as a quality of the entire service, which may determine the scope of the relevant market but not the number of markets that need to be defined. On a matching platform such a situation would not be possible, as the demand curves of the distinct user groups and interrelated ones was described by the example of Deliveroo. The differences between platform types will determine the number of relevant markets required in each case, according to the Bundeskartellamt.

The definition of a single relevant market for all the involved customer groups could be required in the case of a matching platform where the product is the intermediation service, which cannot be provided without the involvement of all the distinct customer groups.<sup>38</sup> In addition to this interdependency of demand between the user groups, defining a single

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34 Bundeskartellamt (2016) *supra* (n 32) at 21.

35 *Ibid*, at 21-22.

36 This one-directional interest in the interaction is primarily true with regard to display advertisements that are presented on an unsolicited basis to consumers. Search-based advertisement on the other hand may exhibit a degree of mutual positive indirect network effects between consumers and advertisers; See David. S. Evans, 'The Economics of the Online Advertising Industry' (2008) 7(3) *Review of Network Economics* 359.

37 *Ibid*.

38 Bundeskartellamt (2016) *supra* (n 32) at 28.

relevant market for the platform also requires that the demands of these users cannot be met by other means than through intermediation by the platform.<sup>39</sup> In the absence of the above-mentioned circumstances, multiple relevant markets would be required for the distinct user groups participating on the matching platform. In the case of audience-providing platforms, the advertisers pulled to the platform will always be analysed within a separate relevant market than the other user groups participating on the platform.<sup>40</sup> In contrast to the Bundeskartellamt, academic contributions devoted specifically to online platforms have addressed the matter on a more tailor-made basis, tackling the market definition hurdle based on the business model type of specific platforms. Such studies concern primarily market definitions for social media platforms, search engines and online marketplaces that focus largely on currently prominent platforms such as Google, Facebook, eBay and Amazon.<sup>41</sup> Although these contributions represent a valuable evolution in the practice of competition law and online platforms, they are not entirely suitable to serve as guidelines for future cases.

Generally speaking, a typology-based approach to legal matters can help simplify the analysis process greatly by providing several frameworks within which the legal assessment should be executed. This is, however, a rather static approach that presupposes a typology with a definite number of categories, which is not the case when dealing with online platforms. Online platforms do not have a predetermined number of types or business models but can take any shape or form depending on the value they create and how it is monetized.<sup>42</sup> In this sense, online platforms are fluid like water and developing categories or typology for platforms is similar to categorizing the shapes that water can take. Albeit an exaggeration, the analogy to water can serve as a useful tool for explaining the disadvantages of the current typology approach to online platforms as well as their added value.

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39 Ibid, at 29.

40 Ibid, at 29-30.

41 See e.g. Justus Haucap & Ulrich Heimeshoff, 'Google, Facebook, Amazon, eBay: Is the Internet driving competition or market monopolization', (2014) 11 Int Econ Policy 49; Florence Thépot, 'Market Power in Online Search and Social Networking: A Matter of Two-Sided Markets' (2013) 36(2) World Competition 195; Lina M. Khan, 'Amazon's Anti-trust Paradox' (2017) 127 Yale Law Journal 710; Thomas Hoppner, 'Defining Markets for Multi-Sided Platforms: The Case of Search Engines' (2015) 38(3) World Competition 349; A. Gebicka and A. Heinemann, 'Social Media & Competition Law' (2014) 37(2) World Competition 149.

42 See Sangeet Paul Choudary, *Platform Scale: How an emerging business model helps start-ups build large empires with minimum investment* (1<sup>st</sup> ed. Platform Thinking Labs publishing, 2015) at 149-211. Platforms do not have a predestined purpose to fulfill that requires a specific form of platform incorporation but rather constitute a moldable form of business organization.

A tailor-made, case-by-case approach to the market definition of online platforms based on their business model is similar to describing the shape of water based on its container. Every description will be accurate but there is an infinite number of container forms, which limits the relevance of each finding to the matter of describing the shape of water. Following this analogy, the approach of the Bundeskartellamt to online platforms would be equivalent to describing the shape of water based on the geometric tree to which the shape of the water container belongs. Such an approach provides general guidance but does not recognize the possibility of hybrid shapes. Despite the shortcomings of each approach, they both contribute greatly to distilling an essential finding that is always true, namely that the shape that water will take depends on the form of its container. In the case of online platforms, this essential finding is the link between the nature of the interaction between the sides of the platform, which is under competition law scrutiny and the market definition for the platform. This link is addressed to some extent by the Bundeskartellamt, however, it is framed as a criterion of platform typology rather than an interaction typology. In contrast to online platforms as such, the interactions facilitated by platforms can be divided into finite categories that will remain constant. A short inquiry into the business reality of online platforms demonstrates the importance of the difference between the two approaches.

In their early stages, all online platforms face the same chicken-and-egg problem. The platform must convince one user group to join the platform before members of the other group necessary for the interaction also join. The idea is that once one group of users joins the platform, the other group will join as well and the platform will scale up due to indirect network effects. Solving the chicken-and-egg problem is far more complex than it appears, as the members of the first group have nothing to gain from their participation on the platform before users on the other side appear.<sup>43</sup> A marketplace without sellers is just as unattractive to buyers as a marketplace without potential buyers is to sellers, which was the chicken-and-egg problem faced by EBay. In order to overcome this obstacle, various launching strategies have been adopted by online platforms based on the nature of the value they seek to create and monetize. If the launching phase is successful, online platforms may achieve critical mass and thus become viable.<sup>44</sup> In these early stages it is highly unlikely that an online platform

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43 Bernard Caillaud and Bruno Jullien, 'Chicken & Egg: Competition among Intermediation Service Providers' (2003) 34(2) *RAND Journal of Economics* 309.

44 David S. Evans and Richard Schmalensee, 'The Antitrust Analysis of Multi-Sided Platform Businesses' in Roger Blair and Daniel Sokol, eds., *Oxford Handbook on International Antitrust Economics* (Oxford University Press 2014); D.S. Evans and R. Schmalensee, 'Failure to Launch: Critical Mass in Platform Businesses' (2010) <<https://ssrn.com/abstract=1353502>>.

will fall under the scope of art. 102 TFEU, as substantial market power is incompatible with an undertaking struggling to survive. Once the platform is viable and shows signs of stability, the next steps focus on increasing future revenue, which brings it closer to the scope of art. 102 TFEU.

In order for an online platform to obtain more revenue, it must increase the value created for its customer groups. The increase in value could then increase the number of participants on the platform (implicitly increasing the number of interactions), raise the willingness of such participants to pay for the platform participation or a combination of the two. The increase in value can take two forms: optimization and expansion. Optimization refers to improving the quality of the interaction that is facilitated by the platform. For example, an online marketplace can improve the interaction between sellers and buyers by making it more user-friendly or improving transaction security. Expansion possibilities are twofold; namely, expanding the territorial reach of the interaction and expanding the number of interaction types.<sup>45</sup> Airbnb serves as a good example for both types of expansion. In the course of time, Airbnb expanded from San Francisco to various major cities in the United States and now offers its matching functionality in over one hundred and ninety countries.<sup>46</sup> In addition to expanding the territorial reach of matching guests to short stay accommodations, Airbnb also introduced matching functions for experiences and restaurants.<sup>47</sup> By adding these matching functionalities, Airbnb attracted two more groups of users to the platform: experience providers and restaurant owners. Accordingly, its matching service is now active in additional markets. If the purpose of the platform typology was to determine whether one or two relevant markets must be defined in the case of a matching platform, this consideration is no longer relevant. Each additional matching functionality on a platform entails potentially two additional relevant markets that may need to be defined for the purpose of finding dominance. While the choice of defining one or two relevant market remains true with regard to each interaction, it is no longer true for the platform as a whole once the platform becomes multi-sided. Thus the guidance of the Bundeskartellamt with regard to matching platforms would perhaps be useful in the launching stage of the platform<sup>48</sup> but once the platform expands, such guidance becomes less relevant.

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45 Functionality expansion possibilities for online platforms are equally two-fold, namely expansion into a constellation of platforms and functionalities bundling. For further discussion see Kalina S Staykova and Jan Damsgaard, 'Platform Expansion Design as Strategic Choice: The case of WeChat and Kakaotalk' (2016) Research Papers. 78 <[https://aisel.aisnet.org/ecis2016\\_rp/78](https://aisel.aisnet.org/ecis2016_rp/78)>.

46 See territorial reach of Airbnb online at: <<https://www.airbnb.com/about/about-us>>.

47 Ibid.

48 This is provided that the platform does not launch as a multi-sided matching platform from day one.

The possibility of expansion also undermines the division of platforms to matching and audience-providing platforms as a functionality expansion can result in hybrid models. For example, YouTube, which started as a platform for video sharing. In its early days YouTube could have been considered a matching platform that matched video producers to viewers based on their search query. Through continued development, this matching characteristic has been preserved and even enhanced by adding professional content that is accessible for a fee.<sup>49</sup> But in addition to the matching functionality, YouTube also displays both video and non-video advertisements.<sup>50</sup> Furthermore, and perhaps more importantly, the division between the two types of platforms as provided by the Bundeskartellamt is one that cannot be made in practice. This is because matching refers to an operational core functionality of the online platform whereas advertisement is a form of commercial application and monetization of such an operational functionality. Thus the two can coexist in practice as can be seen in the case of price comparison sites that match sellers and buyers, which can nonetheless be considered a form of advertisement.<sup>51</sup>

Finally, it must be added that platform expansions from a two-sided to a multi-sided online platform will similarly undermine the tailor-made analysis approach. A market definition analysis performed for a particular platform with a particular business model will lose its relevance as expansion inevitably entails certain changes to the business model. The more changes a platform will undergo in the phase of expansion, the less usable such tailor-made analysis will be in prospective cases. Therefore, in order to develop an approach that can serve as a guideline in future cases, it is preferable to address that market definition process based on the type of interaction it facilitates.

#### *B. Interaction typology as the cornerstone of the market definition*

The various business models relied upon by online platforms entail, essentially, a series of interactions that are designed to offer a certain value to the platform participants that such participants cannot achieve on their own or at least not as efficiently. The division of interactions or functionalities facilitated by online platforms with regard to the separate customer groups they serve can be framed as a division between bi-or multilateral matching and

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49 See terms and conditions with regard to paid content online at: <[https://www.youtube.com/t/usage\\_paycontent](https://www.youtube.com/t/usage_paycontent)>.

50 See types and functionalities of the various advertisement possibilities online at: <<https://support.google.com/youtube/answer/2467968?hl=en>>.

51 Commission, Staff Working Document Accompanying the document Report from the Commission to the Council and the European Parliament Final report on the E-commerce Sector Inquiry, COM(2017) 229 final, at 164-165.

unilateral matching.<sup>52</sup> These two matching variations are then applied and monetized in practice in various ways such as pay-per-click ads, personal data registration, per-transaction fees, membership fees and others. Accordingly, depending on the business model, online platforms may entail multiple unilateral as well as bi-or multilateral matching interactions.

Bi-or multilateral matching refers to situations where the interaction between customer groups on the platform is sought after by all customer groups that are part of a particular interaction. This mutual interest in the interaction is then confirmed by a degree of bi-or multi-lateral positive indirect network effects. Accordingly, the increase in the number of participants of each user group will increase the attractiveness of the platform for the other user group on the platform, provided this growth is managed efficiently.<sup>53</sup> Conversely, unilateral matching refers to situations where one user group wishes to reach another, separate customer group(s) on the platform but this will is not necessarily observable the other way around, as is the case with non-search display advertisements or data aggregators.<sup>54</sup> This unilateral interest in the interaction is also manifested by the one-directional positive indirect network effects in such cases. Accordingly, on a platform with user groups A and B the increase in the number of users in group A will increase the attractiveness of the platform for users in group B but not vice-versa. That does not mean that the presence of group B on the platform is entirely irrelevant, particularly when it may have a significant effect on the price structure of the platform. Accordingly in some cases the participation of group B on the platform will enable the platform to offer zero priced access to the platform to members of group A. Although this relation between groups A and B will still not become one of true mutual interdependence, it will very likely limit the scope of substitutability from the perspective of group A to zero-priced alternatives.

In the context of market definition, approaching the question of how many relevant markets must be defined based on an interaction typology allows one to focus the legal analysis on the relevant context of the anti-competitive behaviour at hand. Such context may require defining the relevant market only with regard to some of the interactions facilitated by the platform when

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52 Hereinafter the terms interaction and functionality will be used as interchangeable.

53 An imbalance in the ratio between the various customer groups interconnected by the platform or congestion may reduce such attractiveness. On this matter see David S. Evans and Richard Schmalensee, 'The Industrial Organization of Markets Based on Two-Sided Platforms' (2007) 3(1) Competition Policy International 151.

54 Based on the Commission's e-commerce sector inquiry, both marketplaces and price comparison platforms aggregate multiple types of user data which in some cases is shared with third parties for a fee. See Commission COM(2017) 229 final, *supra* (n 51) at 182-185.

the said platform is multi-sided.<sup>55</sup> For example, if LinkedIn, a multi-sided platform, were to be accused of excessive pricing with regard the posting of vacancies by recruiters, defining the relevant market for online courses offered on LinkedIn would not be useful. This is because the presence and strength of indirect network effects may vary greatly between the separate customer groups on LinkedIn or any other online platform.<sup>56</sup> Consequently, the presence of a certain customer group on the platform may not always affect the market power of the online platform with regard to the other platform participants. Alternatively, in the case of an anti-competitive practice such as leveraging of market power on a multi-sided platform, it may be necessary to define multiple relevant markets on such a platform.<sup>57</sup> Once the relevant interactions for the purpose of the market definition have been identified, the difference between the two types of interaction facilitation determines the need to define one or more relevant markets for each of those specific interactions.

In the case of unilateral matching, the outcome with regard to market definition is relatively straightforward. Due to the fact that the demand of the customer groups is not mutually dependent and thus indirect network effects are predominantly one-directional, these customer groups will not belong to the same relevant market. Accordingly, the definition of the market for such a platform with regard to its customer groups, interlinked by a unilateral matching functionality, will result in two or more markets. Platforms that provide a bi-multilateral matching functionality become slightly more complex. In the case of such platforms, meeting the demand of the different customer groups interconnected by the bi-multilateral matching functionality is dependent on their simultaneous participation on the platform. Therefore, in cases concerning a bi-multilateral matching functionality, the definition of a single relevant market for the customer groups connected by such functionality may be justified. The dependency between separate customer groups is observable to a great extent in the intensity of indirect network effects that is then translated to the pricing scheme of the

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55 A good example of such a situation can be seen in the recent ruling of the district Court of Amsterdam dated 21 March 2018 concerning real estate platform Funda. Case available online at: <https://uitspraken.rechtspraak.nl/inziendocument?id=ECLI:NL:RBAMS:2018:1654> (in Dutch). In this case the platform subject to the competition law claim was a multi-sided one facilitating multiple interactions including those between sellers and buyers of residential real estate, renters and tenants of residential real estate, sellers and buyers of commercial real estate. The court in this case however, dealt only with the market of buyers and sellers of real estate. Thus only addressing one of the interactions facilitated by the platforms.

56 In the case of LinkedIn, online courses creators and recruiters are rather ambivalent to each other's participation on the platform however both are very dependent on the participation of users on the platform.

57 See e.g. *Google Search (Shopping)* (Case AT.39740) Commission decision of 27 Jun. 2017.

platform.<sup>58</sup> In such cases, the greater the dependency between the customer groups in terms of meeting their demand, the more likely it is that such separate customer groups belong to a single relevant market. Accordingly, in such cases substitution concerns the bi-multilateral matching functionality of the platform as the focal product, which is seen as the same product by all the connected customer groups.

Although both types of matching interactions can be found pertaining to any online platform, the qualification of an interaction as unilateral matching, a bi-or multilateral matching cannot be done in abstract. Determining which type of matching interaction the online platform facilitates with regard to its respective customer groups requires looking into the business model of the platform. Such an inquiry will entail considering the value propositions that the platform offers its customer groups, as well as the manner in which the participation of such customer groups and their mutual interaction is being monetized. Such an inquiry is not only necessary to determine the type of matching interaction but also in order to determine whether two or more relevant markets must be defined for a bi-or multi-lateral matching interaction. In this regard, some guidance can be formulated concerning the link between the matching functionalities and the value propositions of the platform for each of its interactions.

In the case of unilateral matching where only one customer group is interested in the matching, the value proposition for that group will include the other customer group to which it is being matched but not the other way around. For example, the value proposition for the various businesses that pay for display and video advertisements on YouTube entails exposure to the vast number of YouTube users. The value proposition for YouTube users however, does not include being exposed to display advertisements but rather revolves around access to the enormous amount of content on YouTube. In the case of bi- or multi-lateral matching where all the customer groups are interested in the matching, the value proposition for all the groups will include the other customer groups interconnected by the interaction to some extent. Accordingly, a bilateral matching interaction between groups A and B will have value propositions for A and B which basically entail gaining access to each other can be the case between buyers and sellers, renters and landlords, jobs seekers and employers among many other options. Determining whether A and B should also be part of the single relevant market depends on the focus of the value proposition. Accordingly, when the value proposition entails the mutual interaction between the groups, the platform essentially offers one and the same

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58 See e.g. Marc Rysman, 'The Economics of Two-sided Markets' (2009) 23(3) *Journal of Economic Perspectives* 125; OECD Roundtable on two-sided markets, (2009), DAF/COMP/WD(2009)69, at 8.

product to both A and B and these may be part of the same relevant market. This is the case on LinkedIn, for example, with regard to the job placement interaction which matches job seekers and potential employers. Alternatively, when the value proposition with regard to group A is not focused on the interaction with group B, but rather on the product or service supplied by group B, separate relevant markets may be required for A and B. This is likely the case with online marketplaces to which buyers are attracted by a value proposition concerning the variety of products and prices but not so much by the number of sellers.<sup>59</sup> In practice, however, determining the focus of the value proposition may be more complex, particularly when the product or service is not fully severable from its producer or supplier as in the case of hotels on Booking.com. Such complex cases will require additional analysis of the business model of the platform and of other (non) platform alternatives that provide customer groups with comparable value propositions.

### C. *Matching interactions and substitution*

The decision concerning whether two or more customer groups form part of the same relevant market is one of great importance for matters of substitution and thus for the scope of the relevant market. The previously mentioned example of Deliveroo demonstrates the consequences of this decision in this regard. Defining a single relevant market in the case of Deliveroo would mean that consumers, bicycle delivery workers and restaurants are all part of the same market. Accordingly, when looking for substitution the only relevant alternatives would be those that meet the trifold demand of these three customer groups simultaneously. As a consequence, alternatives that only meet the demand of only one or few of the user groups cannot be considered a substitute for the purpose of defining the relevant market. Thus, in the Deliveroo example, a two-sided platform that provides consumers access to restaurants with delivery services should not be considered a substitute. This finding would be very difficult to maintain as there is limited reason for consumers to consider these options different. Consequently, establishing that two or more separate customer groups of an online platform are part of the same relevant market should be done diligently, as such a finding substantially limits the range of substitution. Cases concerning bilateral matching functionality would exclude single-sided substitutes and cases involving multilateral matching interactions would exclude both two-sided and single-sided substitutes for the various customer groups involved. Such dramatic restriction in the range

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59 See e.g. Commission, COM (2017) 229 final (n 51) at 50; See also EU Commission, Study on the coverage, functioning and consumer use of comparison tools and third-party verification schemes for such tools', Final report prepared by ECME Consortium (EAHC/FWC/2013 85 07), at. 176-177.

of substitutes is more likely to lead to an erroneous finding of dominance where such a position may not exist. Thus, finding the two or more or customer groups that are part of the same relevant market (meaning that a single relevant market should be defined for a bi-or multilateral matching functionality), should be done when the intermediary matching service by the platform is indispensable for meeting the demands of each separate customer group.<sup>60</sup> Furthermore, this indispensability should be also confirmed by the lack of obvious alternatives for either customer groups to have their demand met by a non-platform alternative. Thus, evaluating the indispensability criteria requires looking beyond the business model of the concerned platform, which may fully be dependent on a bi-or multilateral interaction as in the case of marketplaces or a hotel room-booking platform.

Cases concerning bi-or multilateral matching functionalities that do not meet the indispensability requirement would entail looking at each customer group of the platform as a separate, related, market.<sup>61</sup> Such a situation would occur, for example, in the case of marketplaces that have a bilateral matching functionality, namely between buyers and sellers, and that include the possibility to conclude a financial transaction. Meeting the demand of both sellers and buyers participating on the platform depends on their mutual participation, thus for the purpose of using the platform, mutual participation is required. However, it is quite unlikely that buyers would not consider online marketplaces and big online retailers substitutable, particularly when these appear to be one and the same, like in the case of Amazon. Accordingly, from the perspective of buyers the use of the marketplace is not likely to be indispensable for meeting their demand but rather entail some aspect of convenience. Consequently, from the perspective of the buyers the relevant market is not limited to the platform market even if that may be the case from the perspective of the sellers. Thus the bilateral matching function may not be linked to the demand of both user groups in the same manner. Therefore, the focal product for which substitution should be tested is no longer the intermediation provided by the platform. Instead, in such cases there are two or more different focal products based on the different demand characteristics of the user groups

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60 In this regard, a parallel can be drawn from the literature on two-sided transaction markets, the transaction between the interconnected customer groups takes place on the platform or does not take place at all. See Lapo Filistrucchi, Damien Geradin, Eric van Damme, Pauline Affeldt (2014) *supra* (n 5). A starting point with regard to the manner in which indispensability should be evaluated can be seen in Bundeskartellamt (2016) *supra* (n 32) at 27-32.

61 Separate markets imply that the demand of one or more of the user groups can also be met through other means, making the intermediary matching function of the platform a matter of efficiency or convenience rather than necessity.

involved.<sup>62</sup> In such cases, substitutability assessments are done separately for each of these user groups, similar to current practice. This allows for a broader substitutability analysis for at least one of the participant groups involved in the interaction, as, in such cases alternatives no longer have to be strictly two- or multi sided.

In light of the above, it can be concluded that approaching the market definition process should be done on an interaction typology rather than on a platform typology to allow for a more accurate analysis. Approaching the market definition accordingly prevents incorrect findings with regard to the number of relevant markets that need to be defined in each case. As previously discussed, however, the number of relevant markets that need to be defined in each case cannot be solely determined based on the type of matching interaction facilitated by the platform. Determining the number of relevant markets needed in the case of bi- or multilateral matching interactions requires assessing the degree of indispensability of the platform for the customer groups connected by such interaction. Such an assessment entails determining whether the demand of such customer groups can easily be met by other (non-platform) undertakings. Throughout this assessment, the substitutability between the concerned online platform and other platform and non-platform alternatives, online as well as offline will need to be tested. The insights of such assessment will be essential to the entire market definition process since, in addition to determining the number of relevant markets in each case, one must eventually also determine the scope of each relevant market that is entirely dependent on the assessment of substitutability.

### 3.2.3 Platform substitution – a tale of (at least) two perspectives

In the digital economy the absolute majority of online platforms will include one or more bi- or multi-lateral matching interactions. Such matching interactions form the core of many platforms such as marketplaces, booking gateways, vacancies-posting websites, crowdfunding platforms, e-learning platforms, and many others. Therefore, with regard to such platforms there is a great likelihood that future Art. 102 TFEU cases will concern the bi- or multilateral matching interaction. Accordingly, such cases will require establishing dominance with regard to such interaction, which calls for performing the market definition process with regard to all customer groups interconnected by this functionality. Consequently,

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62 For example, generic online marketplaces are an efficient way for consumers and sellers to interact and eventually transact. For sellers that are not renowned and cannot afford their own retail web shop, the intermediation aspect of the marketplace may be essential for meeting their demand to sell merchandise. However, for consumers, the intermediary matching function of the marketplace is perhaps convenient but often not indispensable for purchasing goods.

the number of relevant markets in each case as well as their scope will need to be determined in light of a substitutability assessment. Generally speaking, the market definition in such cases will require defining the market for platform participants that are seeking a service or product and for the participants that offer their services or products through the platform. For the purposes of clarity, the first customer group of the platform will be referred to as 'consumers' and the latter as 'merchants' hereinafter. Given that such customer groups consist of different kind of participants, it is expected that their views on substitutability and the criteria affecting it also differ. Therefore, when assessing the competitive relation between online platforms and other undertakings with regard to both consumers and merchants, it is important to consider which platform characteristics are predestined to affect this assessment. However, with regard to both merchants and consumers it must be noted that the following discussion concerning the analysis of substitutability is not intended to establish an all-encompassing practice for such an analysis. Instead, the following aims to provide guidance with regard to several key aspects that will help identify the presence or absence of obvious substitutes for the platform so as to determine the number of relevant markets required in each case and to obtain an initial impression concerning the scope of such markets.<sup>63</sup> Such guidance will allow for a better understanding of the competitive pressure that online platforms may experience in practice that may prove to be more complex than the common 'one click away'. For the purpose of this section, the term 'platform' refers to platforms that facilitate the interaction between commercial parties and consumers, also known as Business-to-Consumer (B2C) platforms.<sup>64</sup>

#### A. *The merchant perspective*

The platform participants that offer their services or products on the platform will use such platforms primarily as either a sale or an advertisement channel depending on whether the online platform offers a transaction functionality.<sup>65</sup> In order to participate on online platforms, such participants will be required to pay some kind of remuneration.<sup>66</sup> Unlike in the case of end consumers, online platforms will usually not use zero-pricing with these platform participants.<sup>67</sup> Defining the relevant market with regard to

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63 In practice, however, the process of delineating the precise scope relevant markets which will require a more detailed analysis including the geographic aspect of the relevant market, supply-side substitution and barriers to entry, which goes beyond this scope of this article.

64 Although as Business-to-Consumer (B2C) and Business-to-Business (B2B) rely essentially on the same two-sided market economic model, the business reality of the two types of platforms differ when concerning their position in the supply chain.

65 See Commission COM(2017) 229 final, *supra* (n 51) at 164-165.

66 *Ibid*, at 37-40, 190.

67 *Ibid*.

such participants then requires assessing whether they will be willing to switch to a competitor in the case of a participation fee raise by the online platform. Online platforms that provide these participants with mutual matching and transaction functionalities will be used as a sales or distribution channel from their perspective. Accordingly, the willingness of the platform participants that offer their products or services on the platform to switch in such cases will indicate that other (possibly non-platform) sales or distribution channels are considered substitutes to the online platform. In the context of a substitutability assessment among sales or distribution channels, it is important to consider that the facilitation of direct interactions by online platforms in essence means that these constitute a distinct kind of intermediary. This distinctive nature is a result of a business governance that is primarily targeted at facilitating, rather than owning or fully controlling, the interaction between its customer groups.<sup>68</sup> Such distinct form of intermediation in practice may significantly limit potential substitution with other sales or distribution channels.

The facilitation of interactions by online platforms that offer mutual matching and transaction functionalities translates, in practice, into processing transactions between sellers and buyers, managing bookings between service providers and customers or even facilitating funding by bringing together creators and investors.<sup>69</sup> From the perspective of merchant participants, this facilitation of interactions positions online platforms in a different stage of the supply chain when compared to non-platform alternatives.<sup>70</sup> Online platforms allow such merchant participants to interact directly with their customers, a feature that non-platform sale channels cannot offer. In practice, the direct interaction between the two means that platform participants can maintain more control over the service or products they offer on the platform compared to non-platform single-sided alternatives.<sup>71</sup> A look into practice clarifies this matter and indicates the reasons behind why the degree of substitution between online platforms and other sales channels is not obvious and is likely more limited than would appear.

Online marketplaces allow producers to sell their products directly to end consumers. In return for facilitating this interaction and processing the transaction, the retailers or producers pay a participation fee to the

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68 See e.g. Andrei Hagiu and Julian Wright, 'Enabling Versus Controlling', (2015) Harvard Business School Working Paper, No. 16-002 < <https://www.hbs.edu/faculty/Pages/item.aspx?num=49375>>.

69 Known examples of platforms that offer such services are for example Amazon.com, Booking.com and Kickstarter.com.

70 See *supra* (n 68); Andrei Hagiu and Julian Wright, 'Marketplace or reseller?' (2015) 61(1) Management Science 184.

71 *Ibid.*

online platform in the form of a fixed membership fee, a percentage of the transactions value or a combination of the two.<sup>72</sup> The producers that sell their product on the online marketplace are free to determine their price and can generally adjust it as they see fit; consumer relations are dealt with by the marketplace and the individual sellers to a certain extent.<sup>73</sup> This is a very different form of sales when compared to non-platform alternative outlets. In practice, when considering sales outlets or channels, producers can choose to sell their products to wholesalers, retailers or directly to consumers. From the producers' perspective, the sale of products via the wholesale or retail outlets means transferring control of the price-setting decision and consumer relations together with the sale of the products to the next step in the supply chain. Attempts to maintain a substantial degree of price control throughout the supply chain will run the risk of falling foul of competition law as it may be considered a form of retail price maintenance.<sup>74</sup> The difference in the business organization of these single-sided outlets compared to an online marketplace evidently has an impact on the manner in which revenue is generated by the producer in each case.<sup>75</sup> For retailers, these circumstances remain the same but alternative outlets to an online platform are even more limited, as retailers are positioned further down the supply chain than producers.<sup>76</sup> Similarly, when the online platform is facilitating an interaction between service providers and their potential customers, the non-platform alternatives include wholesalers, retailers and in some cases even employers, which present a completely different form of conducting business.<sup>77</sup> In the case of entrepreneurs, seeking financing a non-platform alternative to online crowdfunding platforms would typically entail sacrificing a percentage of the business they hope to realize.<sup>78</sup> The differences between non-platform alternatives and online platforms with mutual matching and transaction functionalities indicate that the two are positioned in a different place in the supply chain. When comparable circumstances arise, it may therefore be justified to establish

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72 See Commission COM(2017) 229 final, *supra* (n 51) at 37-40, 190.

73 *Ibid.*

74 See art. 4(a) of 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, OJ L 102/1.

75 Producers that sell their products via wholesalers or retailers enjoy a certain degree of financial security once the products are sold to these parties whereas direct sale to the consumers via an online platform entails more uncertainty since it requires fulfilling each sale separately.

76 In this scenario, it is rather unlikely that a retailer would be able to profitably sell its inventory of products to another retailer and even less so with regard a wholesaler.

77 See the example of Deliveroo or UberRush where the non-platform alternative for freelance delivery cyclists would be an employer that caters to multiple restaurants or companies such as Foodora or Quiqup.

78 Unlike traditional venture capital, crowd funding platform Kickstarter allows entrepreneurs to raise capital in exchange for product or service discounts rather than sacrificing equity.

that online platforms do not form part of the same relevant product market that non-platform alternatives do with regard to the platform participants that offer their products or services on the platform. In this regard, it must be noted that differences in the supply chain positioning can also occur among two-multi-sided platforms. This will be most evident when the interaction facilitated by the platform does not concern the same customer groups when compared to potential alternatives.<sup>79</sup>

Defining the relevant market based on the position of a sales or distribution channel in the supply chain in the case of online platforms entails applying current practice in a different setting, as this approach has been acknowledged in the context of EU competition law. The Commission's Notice on the definition of the relevant market indicates that separate product markets can be established for different levels of the production or distribution of the products or services in a given case.<sup>80</sup> This is a practice that is common in the context of mergers in order to evaluate the effects of such a merger along the vertical and horizontal lines of production or distribution.<sup>81</sup> In the context of art. 102 TFEU cases, however, defining the market in such a manner is uncommon as it concerns rather exotic cases such as dominant buyers, essential facilities, refusals to supply and margin squeezes.<sup>82</sup> By contrast, all future cases involving online platforms with a mutual matching and transaction functionalities will require taking into account the position of such a platform in the supply chain. This is because the substitutability for the platform from the merchant perspective will always require a comparison across all other alternative sales channels.

The market definition, in light of differences in the supply chain positioning of online platforms, has been performed in the context of merger decisions in the online travel industry as well as cases concerning the use of MFN clauses in this industry. These cases provide valuable guidance as they address the matter of substitution for the platform from the merchant as well as the consumer perspective. Accordingly, it has been found that various sales channels including multiple types of platforms were some-

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79 For example such difference can be observed between business-to-business (B2B) wholesale or retail marketplaces and business-to-consumer (B2C) marketplace platforms. In this respect it may be considered that non-platform alternatives will be closer substitutes for B2B online platforms than to B2C online platforms from the perspective of the producers as the contracting parties may be the same.

80 Commission Notice on the definition of the relevant market (1997) *supra* (n 25) para. 33.

81 See Commission Guidelines on the assessment of non-horizontal mergers under the Council Regulation on the control of concentrations between undertakings [2008] OJ C 265/6 and Commission Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings [2004] OJ C 31/5.

82 Commission Notice on the definition of the relevant market (1997) *supra* (n 25) paras. 17-18; Guidance on the Commission's enforcement priorities in applying Article 82, *supra* (n 11) paras. 75-90.

times part of different relevant product markets.<sup>83</sup> This is because such sale channels entailed different contractual links between the service providers and their potential customers. Therefore, it is important to stress that establishing the position of an online platform in the supply chain cannot be done in abstract based on the abovementioned general remarks. A proper analysis will require a thorough inquiry into the business model and governance of the online platform while taking into account the legal and economic context in the given case.

The decisions of the German Bundeskartellamt and the Swiss Competition Commission (COMCO) in the cases concerning MFN clauses, provide an example of the detailed analysis that would be required in order to establish the position of online platforms in the supply chain.<sup>84</sup> According to these decisions, hotel portals form part of different product markets than hotels' own websites, online travel agencies, tour operator portal and meta-search engines from the perspective of hotels.<sup>85</sup> These findings result from the fact that such sales channels differ in their in their position in the supply chain,<sup>86</sup> as well as provide different functionalities and market exposure.<sup>87</sup> The analysis of the Bundeskartellamt in the MFN cases adduces that the differences in the positioning of online platforms in the supply chain occur with regard to both non-platform alternatives and two- or multisided platform alternatives. The findings of the Bundeskartellamt are similar to those of the COMCO in their investigation concerning the use of MFN clauses by online booking platforms.<sup>88</sup> The COMCO analysis also indicates that the inclusion or absence of transaction functionalities on a platform that facilitates a bi-or multilateral matching interaction will also determine the degree of substitution between such platforms greatly. Accordingly, online platforms with solely a bi-or multilateral matching functionality – price comparison sites for example – may not constitute a substitute to online platforms with bi-or multilateral matching and transaction functionalities such as an online marketplace. This is because the transaction functionality defines the business model of such platforms and has a substantial impact on their contractual relation with the customer groups that participate on

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83 *Travelport/Worldspan* (Case Comp/M. 4523) Commission decision of 21 Aug. 2007; Bundeskartellamt Prohibition decision 20 Dec. 2013 in the case of HRS, B9-66/10; Bundeskartellamt Prohibition decision, 22 Dec 2015, in the case of Booking.com B.V, B9-121/13; Competition Commission COMCO prohibition decision, 19 Oct. 2015, *Online-booking Platforms for Hotels*.

84 *Ibid*, Bundeskartellamt Prohibition decision, B9-66/10; Bundeskartellamt Prohibition decision B9-121/13.

85 Bundeskartellamt Prohibition decision, B9-66/10, *supra* (n 83) para. 73.

86 *Ibid*, paras. 91, 93, 96, 100.

87 *Ibid*, paras. 92, 93, 94, 97.

88 Competition Commission COMCO prohibition decision, *supra* (n 83) para. 254. Although the COMCO did not refer specifically to the placement of the online booking platforms alternatives position in the distribution chain, their findings refer to the same elements as the Bundeskartellamt.

the platform. In the case of e-commerce marketplaces and online booking platforms, the existence or absence of transaction functionalities determines whether a platform is a sales channel or an advertisement tool.<sup>89</sup>

Assessing substitution for platforms with solely a mutual matching functionality may therefore also result in similar findings, as has been observed by the Commission in the recent Google shopping decision.<sup>90</sup> In the absence of a possibility to process a financial transaction, the bi-or multilateral matching functionality essentially means that in practice, merchants use the platform as a comparison tool for the purpose of advertising rather than as a sales channel.<sup>91</sup> Consequently, the substitutability will be tested across the various advertisement possibilities that, unlike sales channels, will inherently be two-or multi-sided to some degree.<sup>92</sup> Therefore, with regard to the platform indispensability test, from the merchant perspective some form of two-or-multi-sided platform is indispensable for meeting its demand for the advertisement service. Thus the relevant market from the merchant perspective is solely a platform market. When delineating the exact scope of such relevant market, however, it would appear that there is limited substitution among the various advertisement platforms (both online and offline). The findings of the Commission in the *Google Shopping* decision indicate that the various types of online platforms offering a bi-or multilateral matching functionality used primarily as a form of advertisement are not really substitutable. These findings concern the assessment of substitutability among the search shopping services of Google, specialized search services platforms and online search advertising platforms.<sup>93</sup> Furthermore, according to the previous findings by the Commission online and offline advertisement services are not considered to be part of the same relevant market.<sup>94</sup> This has been confirmed multiple times by the Commis-

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89 *Travelport/Worldspan* (Case Comp/M. 4523) Commission decision of 21 Aug. 2007, paras. 24-33; Bundeskartellamt Prohibition decision, B9-66/10 (n 83) para. 73, 97-101; Competition Commission COMCO prohibition decision, *supra* (n 81) paras. 232-247; Commission COM(2017) 229 final, *supra* (n 51) at 164-165. Additionally, the importance of the transaction functionality with respect to substitution among platforms can also be observed in the manner in which the MFN clauses were formulated. In all cases, the MFN clauses included solely other platforms with mutual matching and transaction functionalities that concerned the same customer groups. Accordingly, also from the perspective of the platforms other alternatives appear not to be considered direct competitors that may free-ride on their success.

90 See *Google Search (Shopping)* (Case AT.39740) Commission decision of 27 Jun. 2017, paras. 216-246.

91 *Ibid*; Commission COM(2017) 229 final, *supra* (n 51) at 164-165.

92 See e.g. David S. Evans, 'The Economics of the Online Advertising Industry' (2008) 7(3) *Review of Network Economics* 359.

93 *Google Search (Shopping)* (Case AT.39740) Commission decision of 27 Jun. 2017 paras. 192-247.

94 *Telia/Telenor/Schibstedt* (Case IV/JV.1) Commission decision of 27 May 1998; *Telia/Telenor* (Case IV/M.1439) Commission decision of 3 Oct. 1999, para. 107; *Vodafone/Vivendi/Canal Plus* (Case IV/M.0048) Commission decision of 20 Jul. 2000, paras. 42-44.

sion including in the Google Shopping decision.<sup>95</sup> Consequently, the scope of the relevant market in such case is likely to be rather narrow. Finally, although not a competition law matter, the recent case of Uber also demonstrates the importance of performing an inquiry into the governance of the online platform.<sup>96</sup> Although Uber marketed itself as an intermediary that facilitates the interaction between consumers and self-employed drivers, its governance with regard to this interaction led to a different legal qualification, namely that of an employer.<sup>97</sup> Such a diverging legal qualification of the platform, based on its governance, equally affects the position of the concerned undertaking in the supply chain since it determines what kind of intermediary it constitutes, if any at all.

In light of the above, it can be said that in the case of platforms with a bi-or multilateral matching function, the relevant product market from the perspective of merchants will very likely be a platform market (i.e. one that consists solely of two-or multi-sided undertakings), regardless of whether the platforms also offer transaction possibility. The scope of such relevant markets, meaning the number of competing undertakings included in the relevant market, may nonetheless be somewhat narrower than would first appear.<sup>98</sup> With regard to reaching such findings, adequately approaching the market definition based on interaction typology in combination with the analysis of the business model and governance of the platform as performed in the Booking.com, Google Shopping and Uber cases will be essential.

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95 *Google Search (Shopping)* (Case AT.39740) Commission decision of 27 June 2017 paras. 247-250; *Google/Double Click* (Case COMP/M.4731) Commission decision of 11 Mar. 2008, paras. 45-46; *News Corp/BSkyB* (Case COMP/M.5932) Commission decision of 21 Dec. 2010, para. 262; *Viacom/ Channel 5 Broadcasting* (Case No COMP/M.7288) Commission decision of 9 Sep.2014, paras. 34-35. The reason for this division was primarily based on the way online and offline advertising were perceived by advertisers in light of their different pricing structure and the targeting capability.

96 Case C-434/15 *Asociación Profesional Élite Taxi V Uber Systems Spain SL* [2017] ECLI:EU:C:2017:981.

97 Although EU Courts did not explicitly say that Uber is to be considered an employer AG Szipunar did note that Uber relationship with its drivers resembles that of an employer's relationship with its employees, see Case C-434/15 *Asociación Profesional Élite Taxi V Uber Systems Spain SL* [2017] ECLI:EU:C:2017:364 Opinion of AG Szipunar paras. 52-54. In contrast, national courts found that Uber was indeed an employer and not an intermediary platform, see e.g. UK Employment Tribunal Appeal No. UKEAT/0056/17/DA- Uber BV v. Mr. Y Salam and Others.

98 It goes without saying that these initial findings may change to a certain extent based on the particular circumstances of the respective case when the analysis will include the geographic aspect of the relevant market, supply-side substitution and barriers to entry. However, such change is more likely to translate into finding a more restricted relevant market rather than one exhibiting a greater degree of competitive pressure with respect to the concerned online platform.

### *B. The consumer perspective*

From a consumer perspective, the difference in the positioning of a sales channel in the supply chain is unlikely to be an issue as this does not determine whether its demand for a product or service can be met. A consumer will likely not care much about whether a product is purchased from an online retailer or an online marketplace as long as the same products are received and the terms of the transaction are similar. From a consumer perspective, the assessment of demand substitution for online platforms when used as a sales channel (thus having bi- or multilateral matching and transaction functionalities) will likely depend on other aspects, which have been addressed to some extent by current practice. The first and perhaps most obvious aspect that must be addressed entails the question of whether offline alternatives can be substitutes for online platforms. The numerous variables involved in the substitutability assessment in each case will result in a myriad of arguments for or against the inclusion of online and offline alternatives in the same relevant market. This difficulty is also observed in practice, where this matter has been addressed on various occasions.

Despite the rather chaotic appearance of decisions on the matter, it can be said that the degree of substitution between online and offline alternatives depends on the implications such difference has on the product or service in question. For example, in the case of shopping for non-digital goods, the difference between shopping online or offline concerns primarily a form of distribution or selling form and shopping experience. The purchased good does not change. Buying a CD on Amazon or at a local music shop does not alter the CD as such. In such cases, the implication of the online or offline difference in the matter is external to the product from the perspective of the consumer. In contrast, in other cases the services or products offered online and offline, the difference in the service offered may be an integral one. This can be the case when substitution is assessed between a CD and a music streaming or downloading site. The consumer pays for music in both cases but the differences between the online and offline alternatives also involve integral differences with regard to the product itself, which in fact transforms from a product into a service. Consequently, when assessing substitutability between online and offline alternatives from a consumer perspective, the degree of substitution will depend on whether the difference between the two alternatives entails a variation of an integral or external characteristic of the product or service at hand. Current practice appears to indicate that online and offline alternatives are less interchangeable in cases concerning integral changes than in cases concerning external changes. This indication is confirmed by the Commission decisional practice in the case of online advertising, retail of consumer goods, travel services, payment services, music distribution and TV content services. In these cases, the finding of separate relevant markets for online and offline alternatives was prevalent in cases where the online element of the product

or service in question entailed a difference in an integral characteristic of the product or service concerned.<sup>99</sup>

Where the choice between the online and offline alternatives entailed a difference in an external characteristic of the product or service substitution between the two appeared more feasible.<sup>100</sup> The importance of the online aspect for the product in a given case evidently also applies in situations where all the envisaged alternatives for the online platform consist of online undertakings. An undertaking selling CDs will not be considered an obvious substitute for an online platform that sells individual songs in a digital format or provides music streaming services, regardless of whether the sale of CDs occurs online or in a brick-and-mortar shop. Accordingly, based on these previous findings, one can conclude that offline alternatives (both platform and non-platform) may in principle be interchangeable from

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99 *Telefónica UK/Vodafone UK/Everything Everywhere/JV* (Case No COMP/M.6314) Commission decision of 4 Sep. 2012, paras. 127-139; *Telefonica/CaixaBank/Banco Santander* (Case No COMP/M.6956) Commission decision of 14 Aug. 2013, paras. 34-41; *Thomas Cook/Travel Business of Cooperative Group/Travel Business of Midlands Cooperative Society* (Case No COMP/M.5996) Commission decision of 6 Jan. 2011, paras. 27-28; *Axa/Permira/Opodo/Go Voyages/EDreams* (Case No COMP/M.6163) Commission decision of 30 May 2011, para. 23; *Telia/Telenor* (Case IV/M.1439) Commission decision of 3 Oct. 1999, para. 107; *Vodafone/Vivendi/Canal Plus* (Case IV/M.0048) Commission decision of 20 July 2000, paras. 42-44; *Google/Double Click* (Case COMP/M.4731) Commission decision of 11 Mar. 2008, paras. 45-46; *News Corp/BSkyB* (Case COMP/M.5932) Commission decision of 12 Oct. 2010, para. 262; *Viacom/Channel 5 Broadcasting* (Case No COMP/M.7288) Commission decision of 9 Sep. 2014, paras. 34-35; *Vivendi/Canal+ Seagram* (Case No COMP/M.2050) Commission decision of 13 Oct. 2000, paras. 26-28; *Sony/BMG* (Case No COMP/M.3333) Commission decision of 19 Jul. 2004, paras. 21-29; *Sony/SonyBMG* (Case No COMP/M.5272) Commission decision of 15 Sep. 2008, paras. 13-28; *Universal Music Group/EMI Music* (Case No COMP/M.6458) Commission decision of 21 Sep. 2012, paras. 116-128; *ACCESS/PLG* (Case No COMP/M.6884) Commission decision of 14 May 2013, paras. 12-19; *Vodafone/Liberty Global/Dutch JV* (Case COMP/M.7978) Commission decision of 3 Aug. 2016, paras. 59-62.

100 *News Corp/BSkyB* (Case COMP/M.5932) Commission decision of 12 Oct. 2010, paras. 102-105; *Vodafone/Kabel Deutschland* (Case COMP/M.6990) Commission decision of 20 Sep. 2013, paras. 49-51; *Liberty Global/Ziggo* (Case COMP/M.7000) Commission decision of 10 Oct. 2014, paras. 105, 111-113; *Liberty Global/Discovery/All3media* (Case COMP/M.7282) Commission decision of 16 Sep. 2014, paras. 114, 125, 126; *21st CENTURY FOX/APOLLO/JV* (Case COMP/M.7360) Commission decision of 9 Oct. 2014, para. 28; *Liberty Global/Corelio/W&W/De Vijver Media* (Case COMP/M.7194) Commission decision of 24 Feb. 2015, paras. 96, 97, 125, 126; *Vodafone/Liberty Global/Dutch JV* (Case COMP/M.7978) Commission decision of 3 Aug. 2016, paras. 170, 178, 179; *Vivendi/Telecom Italia* (Case COMP/M.8465) Commission decision of 30 May 2017, paras. 17-19. In the above-mentioned cases, the finding of a single relevant market for all distribution technologies was found on both the retail and wholesale markets. That was however not always the case see *Egmont/Bonnier* (Case COMP/M.4611) Commission decision of 15 Oct. 2007, paras. 13-19; *Ahold/Flevo* (Case COMP/M.6543) Commission decision of 7 May 2012, paras. 13-16; *Otto/Primondo Assets* (Case COMP/M.5721) Commission decision of 16 Feb. 2010, paras. 24-30; *Tui/Transat France* (Case COMP/M.8046) Commission decision 20 Oct. 2016, paras. 24-26.

a consumer perspective for online platforms that are used as sales channels. Therefore, unlike in the case of merchants, online platforms may not necessarily be considered indispensable for meeting the demand of consumers for a certain product or service. Consequently, the definition of the relevant market for the bi-or multilateral matching and transaction functionality of such an online platform may require the definition of separate markets for the consumers and merchants interconnected by such functionality.

In addition to taking account of the gap between the online and offline world, the scope of the products or services offered by online platforms, when used as sales channels, will also be important for assessing substitution from the consumer perspective.<sup>101</sup> Online platforms such as eBay, Amazon or Alibaba often offer far more categories of products, variety of products within a category as well as a variety of offers with regard to the same specific product compared to other outlets. This increased level of choice provided by online platforms is confirmed to be as a distinguishing positive characteristic according to consumer perceptions.<sup>102</sup> In the context of e-commerce, it is thus likely that the relevant product market for a marketplace from a consumer perspective will not include all other online alternatives and certainly very few offline ones.<sup>103</sup> The link between the scope of products or services and substitutability has been addressed in the decisional practice of the Commission concerning mergers. In such cases, it was considered that width and depth of the range of the products offered resulted in excluding specialized sellers from the daily consumer goods market.<sup>104</sup>

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101 See Commission COM(2017) 229 final, pp. 46-50. According to the results of the sector inquiry online marketplaces compete for buyers firstly on the basis of scope of products while price comparisons sites firstly compete based on the availability of the latest models and second based on scope of products. In contrast hybrid retailers compete firstly based on price similar to online pure player retailers.

102 Commission COM(2016) 288 *supra* (n 2) at 11-13; Oxera, 'Benefits of online platforms' (2015) at 30 < <https://www.oxera.com/wp-content/uploads/2018/07/The-benefits-of-online-platforms-main-findings-October-2015-1.pdf-1.pdf> >.

103 In practice, such scope may prove even more limited once the geographical aspect of the relevant market is also assessed. See e.g. Simon Genevaz and Jérôme Vidal, 'Going Digital: How Online Competition Changed Market Definition and Swayed Competition Analysis in Fnac/Darty' (2017) 8(1) *Journal of European Competition Law & Practice* 30; *Google Search (Shopping)* (Case AT.39740) Commission decision of 27 Jun. 2017 paras. 251-263.

104 *Reve/Meinl* (Case IV/M.1221) Commission decision of 3 Feb. 1999, paras. 10-16; *Kesko/ICA/JV* (Case COMP/M.3464) Commission decision of 15 Nov. 2004, paras. 11-13; *Tesco/Carrefour* (Case COMP/M.3905) Commission decision of 22 Dec. 2005, paras. 10-11; *Reve/Plus Discount* (Case COMP/M.5112) Commission decision of 3 Jul. 2008, paras. 14-17; *Triton/Suomen Lähikauppa* (Case COMP/M.6847) Commission decision of 22 Feb. 2013, paras. 10-12.

The guidance of the Commissions' findings is, however, not necessarily limited to retail of goods. Such findings could provide guidance in any context where the width and depth of the range of the offers made by alternative outlets varies substantially.<sup>105</sup> The variation in the range of goods on offer observed in e-commerce is likely to occur in the case of online platforms also with regard to services or service providers,<sup>106</sup> as well as content or content creators.<sup>107</sup> The existence of such variation in the range of the offers made by online platforms compared to other outlets will be inevitable in practice as platforms are essentially aggregators of demand for multiple customer groups. The success of the platform then depends on increasing the number of interactions between these customer groups by meeting the demands of each group for each other, which requires effective and accurate matching. Since the chances of meeting the demands of multiple groups increases with the number of members in each customer group, the platform will generally try to increase the volume of such groups up to an optimal maximum.<sup>108</sup> Consequently, in the case of platforms with mutual matching and transaction functionalities this increase in volume will translate into an increase in the scope of product or service offers on the platform. Therefore, in practice, the offers that non-platform online or offline outlets provide will likely be substantially outnumbered by those of online platforms.<sup>109</sup> The exact scope of offers needed to influence demand substitutability from a consumer perspective will differ from case to case, however, it should be broad enough so as to allow for comparisons across offers as this is considered an important characteristic of online platforms for consumers.<sup>110</sup>

Therefore, as in the case of the online aspect for the product or service, the scope of offers may determine the degree of substitution for the online platform from the perspective of consumers and thus the definition of the relevant market. If the scope of offers of an online platform is of great importance to consumers and significantly outnumbers that of other non-platform undertakings (online and offline), the relevant market from the perspective of such consumers may be the (online) platform market. This means that a single relevant market can be defined for both consumers and merchants, which consists solely of two- or multisided competi-

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105 *Tesco/Carrefour* (Case COMP/M.3905) Commission decision of 22 Dec. 2005, para. 17. A different range of products appears not to be sufficient to exclude substitutability when the difference is not substantial.

106 E.g. a volume comparison between LinkedIn and websites of recruitment agencies.

107 E.g. the content aggregated by YouTube or Coursera is highly unlikely to ever be reproduced by a single creator.

108 The maximum optimal number of offers will depend on the type of offer involved in the case and the manner in which these are filtered and presented by the platform.

109 This is observable in e-commerce when comparing online marketplaces and retailers as well as in the case of online booking platforms when compared to online travel agents.

110 Commission COM(2016) 288, *supra* (n 2) at 11-13; Oxera (2015) *supra* (n 102) at 21, 32, 33.

tors. In contrast, if the scope of offers is not of critical importance and/or it can reasonably be matched by other non-platform (online or offline) undertakings, substitutability will not be restricted to two-or multi-sided alternatives. Consequently, when such circumstances arise, the market definition for the bi-or multilateral matching and transaction functionalities may require defining separate relevant markets for the consumers and merchants interconnected by such functionalities. In such circumstances, the scope of the relevant market from the perspective of consumers, while limited, would nevertheless not be restricted exclusively to two-or multi-sided undertakings.

Finally when the bi-or multilateral matching functionality does not include a possibility to conduct a financial transaction, the online platform will, generally speaking,<sup>111</sup> provide consumers with some form of information comparison service. In practice such platforms include price comparison sites, specified search engines, customer review websites, real estate platforms, dating platforms and many others.<sup>112</sup> In this context it is very likely that substitutability from the perspective of consumers will be limited to two-or multi-sided alternatives. While single-sided alternatives may exist,<sup>113</sup> such options will almost inevitably mean that consumers will have to pay to gain access to such comparable services which are predominantly provided without pay by online platforms. Consequently, in such cases, the relevant market from the perspective of consumers will be limited to the platform market, as their demand cannot easily be met through other non-platform alternatives. Accordingly, based on the similar findings with regard to merchants, the market definition for such a bi-or multilateral matching functionality would require defining a single market for both consumers and merchants. The findings of the Commission in the Google Shopping decision indicate the scope of such relevant markets would be

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111 In this regards content platforms will constitute somewhat of an exception. In the case of content platforms such as YouTube or Coursera, the absence of a transaction functionality (or better yet obligation to pay for the content), may indicate the use of a freemium business model as an alternative to the transaction model. In such cases the bi-or multilateral interaction is often financed by the merchants or alternatively through the display of advertisements paid for by a third parties participating on the platform. In such cases the platform may be considered as a tool combining both advertisement and sales channel characteristics.

112 In the context of social media/ communication platforms, such as Facebook, it must be noted that the interactions among private users does not fall under the scope of the term bi-or multilateral matching because such interactions occur among members within a single customer group of the platform. In contrast interactions between (paying) business users and such private users may fall under the scope of the term bi-or multilateral matching.

113 Examples of such an alternative would be the Dutch consumer association ([www.consumentednbond.nl](http://www.consumentednbond.nl)) or US based Consumer Reports ([www.consumerreports.org](http://www.consumerreports.org)), which test and review products and services accompanied with a variation of information on price and availability.

rather limited, at least for the time being, given the current lack of substitutability with offline platform alternatives and quite restricted substitutability among various kinds of online platforms.<sup>114</sup>

### 3.2.4 Preliminary conclusion on the substantive challenges of the market definition for online platforms

The application of the market definition process in the case of online platforms in future cases will not be an easy task. The execution of the market definition will pose multiple challenges throughout the entire process and require adaptation of current practice. The approach to market definition requires starting with an inquiry into the number of relevant markets that need to be defined in each case. This aspect has unfortunately not been dealt with properly until recently. Therefore, as mentioned above, this phase is best addressed based on the nature of the matching interaction facilitated by the platform that raises competitive concerns in the respective case. In cases concerning a unilateral matching functionality, the definition of the market for such an interaction will require separate relevant markets for the interconnected customer groups. Cases concerning bi- or multilateral matching functionalities will require a more in-depth inquiry into the business model and governance of the online platforms on a case-by-case basis. Whether two or more relevant markets will need to be defined in such cases will depend greatly on the substitutability assessment of all customer groups that are intercommoned by the matching functionality. When such assessment will indicate that the demand of the platforms' customer groups cannot be easily met by non-platform undertakings, defining a single relevant market for all the interconnected customer groups may be justified. In other cases, separate relevant markets will need to be defined for such customer groups while taking into account the indirect network effect between such separate but related markets in the context of the legal analysis.

In cases where the platform is used as a sales channel by one of its customer groups (i.e. merchants), it is important that the demand substitutability analysis for such customers take into account the positioning of the online platform in the chain of supply. The differences in the chain of supply positioning between platforms and non-platform alternatives with respect to these platform customers may limit demand substitution solely to platforms. Platform participants who seek to gain access to services or purchase products on online platforms (consumers) will, however, be less sensitive to implications resulting from the positioning of online platforms in the supply chain. The interchangeability between online platforms and potential alter-

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114 *Google Search (Shopping)* (Case AT.39740) Commission decision of 27 Jun. 2017 paras. 192-227.

natives with respect to these platform participants will be influenced by the broad scope of offers provided by online platforms that operate as demand aggregators. Moreover, the implications of obtaining access to a service or product via the internet rather than through more traditional offline channels will also inevitably play a role in the demand substitutability of such platform customers. In practice, however, when online platforms constitute a sales channel it is more likely that substitutability for the platform of this latter customer group will not be limited solely to platform undertakings. In contrast, when the online platform facilitates a bi-or multilateral matching functionality without the possibility to conduct a financial transaction, substitution for the platform is likely to be limited solely to platform undertakings with all the customer groups interconnected by such interaction (i.e. both merchants and consumers).

Upon reflection, one may conclude that the challenges posed by online platforms primarily concern changes to the application practice that do not exceed the boundaries of current practice. Accordingly, the envisaged issues highlighted by this article do not indicate any need for the introduction of specific regulation or a substantive revision of art. 102 TFEU. Beyond the necessity to first assess the number of relevant markets that need to be defined, there are no truly unfamiliar matters to be addressed from a substantive point of view. In practice, the challenges in this regard lay in the correct application of current tools and translation of existing concepts to platforms rather than the lack thereof. Over time, experience will prove whether and how such application can indeed be performed adequately.

### 3.3 DEFINING THE RELEVANT MARKET(S) FOR ONLINE PLATFORMS: PRACTICAL IMPLICATIONS

The use of quantitative tools for the process of the market definition has significant value in practice. In this regard, the SSNIP test can be said to entail the main tool used for this purpose. Unfortunately in the case of online platforms that commonly rely on zero pricing strategies this test may lose (some of) its relevance. This is because the application of the price centred SSNIP test to situations where prices are absent leads to a practical impossibility. Although there is no legal obligation to make use of the SSNIP test in the context of the market definition process,<sup>115</sup> its growing importance in practice calls for exploring adjustment possibilities that would allow for the application of its logic even in the absence of positive prices. Current literature suggests that in the presence of zero-pricing the SSNIP test should be modified from a price centred test into either a

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115 Case T-699/14 *Topps Europe Ltd v Commission* [2017] EU:T:2017:2, para. 82.

cost or quality centred test.<sup>116</sup> In this second part of the chapter both suggestions will be evaluated in light of their potential for application in cases concerning online platforms that rely on zero-pricing strategies.

Therefore, the purpose of this second part of the chapter is to examine the difficulties that the reliance of online platforms on zero-pricing strategies may create for the process of the market definition in light of the incompatibility of such pricing strategies with the SSNIP test, and provide some suggestions on how to overcome such difficulties. In order to provide a coherent evaluation and practical guidance on this matter for future cases this part of the chapter is divided into three sections. The first section will shortly discuss the use of zero-pricing strategies by online platforms and the implications of these strategies in the context of the market definition. The second section will cover the role of the SSNIP test in the process of the market definition together with the expected complexities following from its application in cases concerning zero-pricing strategies. Within the scope of this section, potential conversion suggestions for the SSNIP test will be evaluated in light of their suitability and feasibility for cases concerning online platforms. The third section will shortly address the implications of zero-pricing for the future state of practice in the absence of a modified SSNIP test, followed by some concluding remarks.

### 3.3.1 Online platforms and zero-pricing – the inevitable task of defining the relevant market of ‘free’

The use of zero-pricing strategies by companies is neither a novel business practice nor one that is exclusive to online platforms. Similar to the concept of platforms, zero-priced goods and services have existed before the age of Internet.<sup>117</sup> In modern times, the use of zero-pricing has often been adopted by companies in the context of tying practices, complementary products, two- or multi sided markets and ‘freemium’ products or services.<sup>118</sup> In some cases, such use of zero-pricing strategies, mainly in tying cases, has been found to be abusive in the context of Article 102 TFEU.<sup>119</sup> The use of zero-

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116 See, eg John M. Newman, ‘Antitrust in Zero-Price Markets: Applications’ (2016) 94(29) Wash U L Rev 51; John M Newman, ‘Antitrust in Zero-Price Markets: Foundations’ (2015) 164(149) University of Pennsylvania Law Review 150; OECD, ‘Policy Roundtable - The Role and Measurement of Quality in Competition Analysis’ DAF/COMP(2013) <<http://www.oecd.org/competition/Quality-in-competition-analysis-2013.pdf>> accessed 2 May 2018.

117 David S Evans, ‘The Antitrust Economics of Free’ (2011) 7(1) Competition Policy International 1; Michal S Gal and Daniel L Rubinfeld, ‘The Hidden Costs of Free Goods: Implications for Antitrust Enforcement’ (UC Berkeley Public Law Research Paper No 2529425, 2015) <<https://ssrn.com/abstract=2529425>>.

118 *ibid.*

119 Prominent examples of such cases are Case T-30/89 *Hilti v Commission* [1991] ECLI:EU:T:1991:70; Case T-201/04 *Microsoft v Commission* [2007] ECLI:EU:T:2007:289.

pricing does not mean that undertakings make zero profits or no longer compete, it merely means that undertakings compete on other aspects and profits are made with regard to a different but related product or service.<sup>120</sup> However, when the need to define a market for the free product or service was discussed, it is not until recently that such markets were even considered to exist.<sup>121</sup> Today, there is an agreement that the provision of free goods or services does not stand in the way of establishing the existence of a relevant market for such products or services for competition law purposes.<sup>122</sup> Although in previous instances, the question of the market definition for zero-priced products or services was rarely addressed, in the case of online platforms it will be one that can hardly be avoided. Online platforms are currently identified and approached predominantly from an economics perspective with reference to their two- or multi sided nature.<sup>123</sup> This nature entails that online platforms constitute intermediaries which cater their services to two or more separate customer groups by facilitating an interaction between them, in some form of matchmaking,<sup>124</sup> in return for remuneration by all or part of these platform participants.<sup>125</sup> The success of online platforms as intermediaries is thus depended on their ability to get (and keep) all the parties of their matchmaking interactions 'on board' and internalise the indirect network effects between them.<sup>126</sup> Accordingly, online platforms will often implement a skewed pricing scheme reflecting the intensity of the indirect network effects between their various customer groups and their respective market power with regard to the platform and one another.<sup>127</sup> In practice the skewed pricing scheme means that one of the customer groups participating on the online platform, composed very often of end consumers, will do so without any charge by the online platform since their participation is subsidised by the other customer groups of the platform.<sup>128</sup>

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120 J. Newman (2015) *supra* (n 116) at 153-158.

121 David S Evans, 'The Antitrust Economics of Free' (2011) 7(1) Competition Policy International at 78-81.

122 *ibid* at 81- 86; Michal S Gal and Daniel L Rubinfeld (2015) *supra* (n 117) 30-48; Bundeskartellamt (2016) *supra* (n 32) at 32-39.

123 See eg Bertin Martens (2016) *supra* (n 27); Commission staff working document on online platforms COM(2016) 288, SWD(2016)172, *supra* (n 2) at 1-9.

124 *ibid*.

125 Pieter Ballon and Eric Van Heesvelde (2011) *supra* (n 30) at 702-708.

126 OECD, 'Round table on Two-sided Markets' (2009) DAF/COMP/WD(2009)69, 3 <[http://ec.europa.eu/competition/international/multilateral/2009\\_jun\\_twosided.pdf](http://ec.europa.eu/competition/international/multilateral/2009_jun_twosided.pdf)>.

127 Julian Wright, 'One-Sided Logic in Two-Sided Markets' (AEI-Brookings Joint Center Working Paper No 03-10, 2003) <<https://ssrn.com/abstract=459362>>; OECD (2009) *supra* (n 126) at 19-32.

128 See e.g. a short overview of some of the prominent online platforms in the US and their pricing choices in David S. Evans, 'Multisided Platforms, Dynamic Competition, and the Assessment of Market Power for Internet-Based Firms' (2016) University of Chicago Coase-Sandor Institute for Law & Economics Research Paper No. 753 <<https://ssrn.com/abstract=2746095>>.

In cases where the alleged abuse of dominance may occur with respect to such a subsidized group of customers, the market definition will inevitably have to be performed with regard to the free product or service provided to them by the online platform. This is currently the case concerning the abuse of dominance investigation of Facebook in Germany where Facebook is accused of exploiting its users by violating data protection law.<sup>129</sup> Furthermore, when the alleged abuse of dominance occurs with regard to a paying customer group that is interlinked with a non-paying customer group, it may still be required to define the relevant market for the non-paying customer group in case of bi- or multilateral indirect network effects. Such indirect network effects are present where the value of the interaction facilitated by the online platform for its customer groups is dependent on the mutual participation of the respective customer groups interlinked by the interaction. For example if Deliveroo, were to be accused of charging excessive prices from restaurants, determining the market power of Deliveroo with regard to the restaurants would also require defining the relevant market for Deliveroo with regard to consumers. This is because the market power of Deliveroo vis-a-vis the restaurant owners using its platform depends upon the demand of consumers for Deliveroo and vice-versa. In absence of any market power with regard to either customer group (i.e. no demand) Deliveroo would simply not exist as its business model relies on the monetisation of the interaction between restaurants and consumers. Similar conditions apply, in principle, to any online platform which facilitates a bi- or multilateral matching interaction that matches members of a paying customers group to members of another customer group which does not pay to participate on the platform. Bi- or multilateral matching refers to situations where the facilitated interaction between customer groups on the platform exhibits bi- or multilateral positive indirect network effects indicating the existence of demand interdependency between those customer groups.<sup>130</sup> Such bi- or multilateral matching interactions, which allow for the participation of consumers on the platform without any monetary charge, constitute the core of most online platforms including marketplaces, travel booking platforms, meta search engines, e-learning platforms, price comparison websites, crowd funding platforms and many others.<sup>131</sup> Therefore, future cases concerning the abuse of dominance by online platforms will very likely require defining the relevant market with regard to the customer group(s) of the platform which participate on the platform without paying any monetary fee.

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129 The German Competition authority is currently in an ongoing case against Facebook for a potential abuse of dominance, see press release online <[https://www.bundeskartellamt.de/SharedDocs/Meldung/EN/Pressemitteilungen/2017/19\\_12\\_2017\\_Facebook.html](https://www.bundeskartellamt.de/SharedDocs/Meldung/EN/Pressemitteilungen/2017/19_12_2017_Facebook.html)> accessed 30 July 2018.

130 Daniel Mandrescu, 'Applying (EU) Competition Law to Online Platforms: Reflections on the Definition of the Relevant Market(s)' (2018) 41(3) *World Competition* 453, 464–468.

131 *Ibid* 470.

The methodology involved in the current market definition process relies however greatly on the SSNIP test, which is price oriented.<sup>132</sup> The dependency on the use of positive pricing therefore makes the SSNIP test unsuitable for cases concerning zero-priced products or services as is commonly the case with online platforms. Accordingly, it is important to examine how this friction between zero-pricing and the SSNIP test may interfere with the market definition process and whether the SSNIP test can be adapted in a manner that can compensate for its current shortcomings.

### 3.3.2 Market definition and the SSNIP test

The definition of the relevant market starts with defining the relevant product market which includes all the products or services that compete with those offered by the concerned undertaking.<sup>133</sup> The process is then followed by the definition of the relevant geographic market. Due to the fact the both aspects of the market definition are performed similarly,<sup>134</sup> the following addresses only the relevant product market, but the findings are equally applicable to the relevant geographic market. The level of competition between the product or service offered by the concerned undertaking and those of its closest competitions is established primarily based on demand – side substitutability.<sup>135</sup> This is because the greatest competitive constraint on the behaviour of undertakings comes from customers that are willing to switch to substitutes offered by competitors in the event of a price increase or other undesired practices.<sup>136</sup> The result of the demand side substitution assessment indicates the closest competing products or services to those offered by the concerned undertaking. Accordingly, the undertakings that offer these competing products or services are considered to be in the relevant product market as the concerned undertaking.<sup>137</sup>

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132 The development, application and reliance on the hypothetical monopolist test (HTM) that represents a key aspect of the market definition process is entirely dependent upon predictable effects on customer demand in light of price changes by the concerned undertaking. Essentially, beyond the traditional forms of qualitative forms of evidence the majority of the quantitative tools used for the purpose of market definition are price-centered.

133 See OECD Roundtable On Market Definition (11 October 2012) DAF/COMP(2012)19.

134 O'Donoghue and Padilla, *The Law and Economics of Article 102 TFEU* (2<sup>nd</sup> edn, Hart 2013) at 125.

135 Commission Notice on the definition of the relevant market (1997) *supra* (n 25) paras 13, 14, 20; OECD Roundtable of market definition, Note by the Delegation of the European Union 31 May 2012 (DAF/COMP/WD(2012)28), para 11. Supply substitution will only play a role to the extent its effects on the behaviour of the concerned undertaking are likely to be similar to those of demand substitution, which rarely happens in practice.

136 Commission Notice on the definition of the relevant market (1997) *supra* (n 25) para 13.

137 *Ibid*, paras 13, 14, 20.

Demand side substitution can be assessed based on direct and indirect evidence of substitution. Direct evidence of substitution refers to previously observed behaviour indicating substitution patterns with regard to the product or service offered by the concerned undertaking and those offered by its competitors.<sup>138</sup> When direct evidence is not available, not sufficient or not helpful, competition authorities can make use of indirect evidence of substitution. Indirect evidence of substitution includes quantitative evidence, such as price elasticity estimates, as well as qualitative evidence including the inspection of product or service characteristics and intended use.<sup>139</sup> From a legal point of view there is no hierarchy with regard to qualitative or quantitative evidence despite that the latter is often considered more accurate.<sup>140</sup> Consequently, there is a growing opinion that qualitative evidence should serve as a second check for the findings of quantitative evidence rather than being considered equal in evidentiary value.<sup>141</sup>

In the context of indirect quantitative evidence, the need for an accurate economic tool for determining substitution resulted in the reliance on the hypothetical monopolist test (HMT). The test, originally developed by US competition authorities in the context of merger evaluations, has gained substantial acknowledgement worldwide including its adoption by the Commission and EU Courts.<sup>142</sup> In the context of the HMT, the defined market in each case contains the product or set of products for which a hypothetical monopolist could increase its prices in a profitable manner on a long lasting basis. The test entails three main steps and is performed based on quantitative and qualitative evidence. In the first step, the candidate set of products or services controlled by the hypothetical monopolist is established. In the context of an Article 102 TFEU case such candidate set of products or services normally entails those products or services which are the subject of the alleged abuse of dominance.<sup>143</sup> In the second step, demand-side substitutability is assessed based on a hypothetical increase in the price of the candidate products or services set. Finally, in the third step, the possible effect of supply-side substitution is also brought into the picture. In practice, however, this aspect has often played a rather limited role due to fact that establishing the existence of effective supply side constraints

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138 O'Donoghue and Padilla (2013) *supra* (n 134) at 101.

139 *ibid*; Vivien Rose and David Bailey (eds), *Bellamy and Child: European Union Law of Competition* (7<sup>th</sup> edn, Oxford 2013) 231-234.

140 O'Donoghue and Padilla (2013) *supra* (n 134) at 110.

141 *ibid*.

142 See the history of the SSNIP in e.g. OECD, 'Roundtable on Market Definition- background note by the Secretariat' (2012) DAF/COMP(2012)13.

143 This can differ however if the investigated abuse of dominance concerns multiple separate but related markets such as in the case of tying, bundling, leveraging or margin squeeze.

depends on meeting several strict criteria.<sup>144</sup> The test may require several iterations, namely if the hypothetical monopolist is not capable to raise its prices profitably the candidate market is enlarged so as to include the identified substitutable products or services and the test is performed repeatedly until the market worth monopolising is found (ie demand-side substitutability is no longer present). In the framework of the HMT, which may be performed based on various quantitative approaches,<sup>145</sup> the SSNIP test constitutes perhaps the main tool for testing demand-side substitutability.<sup>146</sup> The SSNIP assess whether a small but significant non-transitory increase in price of 5-10% by the concerned undertaking could be implemented in a profitable manner. Accordingly, the SSNIP test essentially constitutes a direct form of applying the thought experiment behind the HMT, which explains the preference for this test in practice. Given the preference for the SSNIP test in practice one may thus say that it constitutes the main source of indirect quantitative evidence in the process of the market definition and therefore influences greatly the outcome of such process, particularly where direct evidence is not available, sufficient or suitable for this purpose.

The application of the SSNIP test in the case of two-sided markets, however, has been one of the main subjects of debate concerning the definition of the relevant market in such circumstances. Currently, there appears to be no agreement on whether of the test should be applied to the entire price structure of the platform or per side and whether the test should take into account the possibility of price structure modifications by the concerned undertaking.<sup>147</sup> In the case of online platforms this difficulty seems to be accentuated by a preceding lack of clarity concerning the identification of the candidate set of products or services.<sup>148</sup> Namely it is often difficult to establish whether the interaction among various separate customer groups facilitated by the online platform constitutes a single product or multiple ones for which the HMT should be should be performed. Although these difficulties are also capable of interfering with the market definition process they are not insurmountable nor do they always arise. The SSNIP test can in principle be applied in various forms in practice after which the relevance of the outcomes can be assessed in light of other forms of evidence. Furthermore the difficulty of identifying the candidate product or service in each case is not inherent in each analysis involving online platforms and will nevertheless be eventually overcome through practical experience.

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144 See eg O'Donoghue and Padilla (2013) *supra* (n 134) at 102-106; Gunnar Niels, Helen Jenkins and James Kavanagh (2016) *supra* (n 13) 56-62.

145 See eg Malcolm B Coate and Jeffrey H Fischer, 'A Practical Guide to the Hypothetical Monopolist Test for Market Definition' (2008) 4(4) *Journal of Competition Law & Economics* 1031.

146 O'Donoghue and Padilla (2013) *supra* (n 134) at 109.

147 Evans and Schmalensee *supra* (n 42) at 21-23; Lapo Filistrucchi, Damien Geradin, Eric van Damme, Pauline Affeldt (2014) *supra* (n 5) at 329-339.

148 See e.g. OECD, 'Rethinking Antitrust Tools' (2018) *supra* (n 31).

By contrast, the use of zero-pricing strategies by online platforms will inevitably eliminate any evidentiary value resulting from the application of the SSNIP since such strategy removes the core aspect of the test itself, namely the positive price charged for the product or service offered by the concerned undertaking. The SSNIP test simulates a theoretical nominal increase in the price of the product or service provided by the concerned undertaking. This exercise is however mathematically impossible when the price of the product or service is zero: an increase of 5-10% of zero is still zero. The increase of a price of zero to any positive price is no longer a nominal one but a different thing altogether, as studies show that zero-pricing has a distinct impact on the customers' decision making process. Consequently, a theoretical increase in price as is intended in the context of a SSNIP test cannot be performed when defining the market for a zero-priced product or service.<sup>149</sup> The incompatibility between the price centred SSNIP and zero-pricing is not only a mathematical one but also a logical one. Online platforms that do not charge certain customer groups in return for their participation on the platform are very unlikely to switch from zero-pricing to positive pricing regardless of their market power.<sup>150</sup> Thus, posing the underlying question of the SSNIP test (or the HMT) even as a thought experiment is not entirely sensible since the theoretic scenario depicted, namely the raise of price cannot or at least will not occur in practice with respect to those customers. This outcome is rather problematic as the SSNIP test is the main source of indirect quantitative evidence of substitution for the purpose of the market definition. Consequently, the inability to rely on the SSNIP test, or on any price centered quantitative tools for this matter means that the relevant market may often be defined to a great extent based on qualitative indirect evidence. In order avoid this outcome and overcome the mathematical and logical incompatibility between the SSNIP test and zero-pricing strategies, alternative approaches for the SSNIP test have been developed which rely on a nominal change in quality or cost.<sup>151</sup>

Although both approaches are theoretically sound from an economic point of view, the feasibility of their application in practice may differ significantly due to their respective practical complications. Therefore it is important consider and evaluate these proposals for modification in the context of

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149 John M Newman (2016) (n 116) 65-66; David S. Evans (2011) *supra* (n 121) at 81- 86; Michal S. Gal and, Daniel L. Rubinfeld *supra* (n 117) at 32-35.

150 See e.g. *Microsoft/Skype* (Case COMP/M.6281) Commission decision of 7 Nov. 2011, paras 13, 76, 121. In the context of the merger it was observed that despite the prominent position of Skype in the relevant markets for consumer communication services, over 75% of its customers would switch if it started charging them for the services that were regularly provided for free; See also *Facebook/WhatsApp* (Case COMP/M.7217) Commission decision of 3 Oct. 2014, paras 90-91 where it was noted that zero-pricing is an industry standard.

151 OECD, 'Rethinking Antitrust Tools' (2018) (n 5).

online platforms relying on zero-pricing strategies in light of the legal and business reality of such actors in order to avoid findings and suggestions which may have solely theoretical relevance.

A. *Testing substitution based on information and attention costs – an attractive yet unworkable alternative*

Modifying the price oriented SSNIP into a cost oriented test, would mean that the purpose of the test would be to assess whether the concerned undertaking is capable of imposing a small but significant non-transitory increase in cost for customers in a profitable manner (SSNIC).<sup>152</sup> In the context of such a test, the costs for customers in the case of zero-priced markets are divided into information and attention costs.<sup>153</sup> Information costs refer to the amount of data that the customer needs to provide in order to make use of the free product or service.<sup>154</sup> Attention costs refer to the exposure of customers to advertisements during their use of the zero-priced product or service.<sup>155</sup> Both types of costs can be identified in the case of zero-priced products or services offered by online platforms.<sup>156</sup> Although these costs depict the existence of a certain form of trade or exchange that resembles that of monetary exchanges,<sup>157</sup> they are not fully compatible as a yardstick for a demand-side substitutability analysis in the case of online platforms.

Asking customers, particularly consumers, to evaluate their behaviour in light of theoretical increases in price is a wholly different matter than asking them to do the same with regard to an increase in information or attention costs. In contrast to prices, information or attention costs are far less comprehensible for consumers, and so their value among consumers may differ to great extent. Accordingly, theoretical increases in such costs are difficult to evaluate in an abstract manner. This may require that consumers must first experience such increase in order to make a decision on whether they will switch over to a competing undertaking.

The obscure nature of information and attention costs will also pose a challenge when the theoretical degree of increase in either cost will ultimately have to be translated in practice in a more specific manner. Both informa-

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152 J. Newman (2016) *supra* (n 116) at 66-70.

153 J. Newman (2015) *supra* (n 116) 165-167; J. Newman (2016) *supra* (n 124) 67;

154 J. Newman (2015) *supra* (n 116) 166-169.

155 *Ibid.*, at 169.

156 Many online platforms expose customers to unsolicited display ads that qualify in this regard as attention costs. Similarly, numerous online platforms require a form of registration and acceptance of cookies prior to allowing customers to access the platform, which can qualify as information costs.

157 J. Newman (2015) *supra* (n 116) 163-174.

tion and attention costs can come in a variety of shapes and forms, which can also be combined. Information costs can translate into sensitive and less sensitive types of personal data and the combination thereof. Attention costs can be translated into the number of ads displayed, the length of display, size of each ad, the frequency of their appearance as well a combination thereof. Although these elements represent a form of cost, they are different kinds of cost and there is no indication with regard to the kind of cost or combination thereof that is particularly relevant for the purpose of a SSNIC in the way the prices are relevant for the purpose of a SSNIP. Accordingly, if a SSNIC is to be adopted in practice, a methodology must first be developed with regard to establishing the relevant cost in each case. In the absence of such a methodology, which determines the relevant cost in each case, there is no possibility to test the theoretical increase of such cost in a statistical manner, as there will be no set reference point. Furthermore, the meaning of a nominal increase of information or attention costs is rather challenging. On the one hand, it is uncertain whether a 5-10% change is as important for consumers as in the case of a similar price increase, particularly when taking into account the 'free effect' of zero-prices that has been found to lead to overconsumption.<sup>158</sup> On the other hand some types of (personal) information increases, although minimal in terms of quantity, may be considered unreasonable thus giving the, possibly mistaken, impression that an increase of data by an online platform cannot be done in a profitable manner. For example job seekers may be less averse to providing their entire work experience history compared to stating the reasons behind their (perhaps involuntary) unemployment and transfer of work placements.

On top of these considerations, the use of information and attention costs requires looking into situations that may not be entirely realistic in the case of the online economy in general, nor in the case of online platforms in particular. This is because the SSNIC test simulates an increase of cost with the sole purpose of maximising the profits of the concerned undertaking, as is the case of the SSNIP test.<sup>159</sup> In practice however, increases of information costs in the case of online platforms are often linked to product or service improvements. Similarly, an increase of attention costs may be moderated by the increased relevance of advertisements, which may entail a certain added value for consumers.<sup>160</sup> Moreover, while an increase in attention costs can occur in practice it is not a suitable benchmark because attention costs, meaning exposure to advertisements, are not an inherent aspect of

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158 On the effect of zero-pricing see Kristina Shampanier, Nina Mazar and Dan Ariely, 'Zero as a Special Price: The True Value of Free Products' (2007) 26(6) *Marketing Science* 742.

159 See e.g. Bundellekartelamt and Autorite de la concurrence, 'Competition law and data' (n 2) 11-25; See also Andres V Lerner, 'The Role of 'Big Data' in Online Platform Competition' (2014) 7-19 <<http://ssrn.com/abstract=2482780>> accessed 7 April 2018.

160 See e.g. D S Evans, 'The Economics of the Online Advertising Industry' (2008) 7(3) *Review of Network Economics* 359.

the business models of all online platforms. While some online platforms relay on advertisements as a primary source of revenue, other see it as a secondary source of revenue and some do not use it at all.<sup>161</sup> Consequently a hypothetical increase in attention costs, even when it is measurable, will not be an adequate test for demand-side substitution with respect to all online platforms.

Finally, theorising about an increase in information costs for the sole purpose of maximising profit without any product or service improvement may also not be sensible due to the legal framework covering such a situation. Under EU law the processing of personal data by online platforms falls under the scope of the General Data Protection Regulation (GDPR).<sup>162</sup> The GDPR requires, in Article 5, that personal data is collected for specific, explicit and legitimate purposes and only to the extent that the data is truly necessary for such purposes. Following the collection of personal data, the processing should be done lawfully, fairly and in a transparent manner. In light of these requirements it appears that an increase in information costs based on the SSNIC logic is rather problematic. The data that a platform requests from its users (data subjects in the sense of the GDPR) must serve a specific purpose that is communicated to such users. Accordingly, increasing the amount of data required from users for the purpose of profit maximising (without any intention to improve the service provided by the platform) would entail disclosing such purpose to them so as not to breach Article 5 of the GDPR.

It is evident that in practice undertakings, even dominant ones, would be reluctant to take such steps in order to get access to more user data and users may be less willing to accept such surcharge when it is posed in such a transparent manner. Furthermore, the same article also states that the collection of personal data should be limited to the absolute minimum necessary for the purposes for which it is collected. Therefore, an 'overcharge' of data for a given stated purpose, including service development, is essentially prohibited by the GDPR in light of its data minimisation objective.<sup>163</sup> Moreover, using personal data that was collected for the purpose of product development in a manner that does not relate to achieving such

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161 Online platforms, which facilitate monetary transactions, will usually treat advertisements as a secondary or optional source of revenues. For example marketplaces and booking platforms rely primarily on the transaction and membership fee by the merchants participating on the platform and advertisement is usually limited to products or services offered on the platform itself in order to increase the number of transactions.

162 Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation) OJ L 119/1 ('GDPR').

163 See GDPR, arts 5(1)(c), 25 and para 125 of the Preamble.

progress is equally not allowed unless specifically communicated to users, which in principle must first express their consent for such use.<sup>164</sup> In light of such legal framework, simulating an increase in information costs in the form of personal data seems rather futile given that the entire exercise may concern a situation that is unnatural or illegal and thus cannot occur due to other reasons than the lack of market power. In case the increase in information costs concerns primarily non-personal data the GDPR would not apply, however, users may be rather ambivalent to such ‘overcharges’ thus possibly resulting in erroneous findings of narrow markets that are worth monopolising.

In light of the above, it can be said that although the economic logic behind the SSNIC test appears sound in theory, it is unsuitable for application in cases concerning online platforms in practice. The increase in attention costs is very difficult to quantify and will not be a suitable for evaluating the market power of an online platform where these costs do not constitute its only or at least main source of revenue. Similarly, the use of information costs entails a myriad of complexities with regard to the quantification thereof, which are complemented by the legal hurdles of the newly adopted GDPR that significantly hampers the collection and processing of personal data solely for profit maximising purposes. Consequently, a conversion of the SSNIP into a SSNIC cannot be recommended as it will require making highly complex decisions and adaptations with no real prospect of being as reliable as the SSNIP in non-zero-priced markets.

By contrast, the suggestion to modify the SSNIP test into a quality-centred test, as discussed below, may constitute a feasible option. Although such a conversion also entails overcoming multiple practical challenges, it constitutes a more suitable test for general application. The benchmark of quality can be applied to any possible online platform and the relation between quality and substitution has long been recognized in competition law practice. Furthermore, unlike in the case of information costs, the current legal framework applicable to online platforms does not stand directly in the way of theorising changes in the quality of a product or a service.

*B. Quality as a benchmark for testing substitution – the intuitive choice that may deliver*

Testing demand substitutability based on quality entails some similar practical complexities as in the case of a cost-based test despite the soundness of its economic foundation. In the context of a quality-oriented test, the core question will concern the effect of a small but significant non-transitory decrease in quality (SSNDQ), which is comparable to an increase of price

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164 GDPR, art 6.

from an economic perspective.<sup>165</sup> The quality of a product or service has long been recognized as one of the main criteria based on which undertakings compete with each other in the context of digital markets, particularly in light of zero-pricing strategies.<sup>166</sup> This is to be expected since, in the absence of positive prices, consumers will inevitably make their decision to use a product or service based on some form of quality considerations. That being said, it is also true that consumers will find it more difficult to assess quality instead of prices.<sup>167</sup> Thus, using quality as a benchmark for a quantitative assessment of demand substitutability in the context of online platforms remains problematic. Similar to the case of information or attention costs, choosing the relevant quality for the purpose of the assessment is not as straightforward as choosing prices in the case of the SSNIP. Quality is a general term that can encompass a wide variety of criteria.<sup>168</sup> In the case of online platforms, the criteria covered may include privacy, user friendliness, security and others.<sup>169</sup> Given that different kinds of online platforms will compete based on different quality parameters, the relevant quality that needs to be the subject of the SSNDQ test will likely differ from case to case. Therefore, as in the case of a SSNIC, a methodology must first be developed with regard to establishing the quality that should be tested in each case.

When dealing with a two- or multisided online platform, it must also be considered whether the quality that is being tested will solely concern the zero-priced side of the platform or the other sides as well. For example, reducing the user friendliness of an ordering system of a marketplace for consumers may also result in a decrease in the quality of the order system for the sellers participating in the online marketplace. Such an application would be incorrect if the purpose of the SSNDQ is to test the degree of demand side-substitution of consumers alone. In any event, however, the

165 See OECD Directorate for Financial and Enterprise Affairs Competition Committee, 'The Role and Measurement of Quality in Competition Analysis' (2013) DAF/COMP (2013)17.

166 *Microsoft/Skype* (Case COMP/M.6281) Commission decision of 7 Nov. 2011 para 81.

167 OECD (2013) *supra* (n 165).

168 *Ibid*, at 12-21. Certain methodologies have already been developed by economists in order to select the qualities that are most appreciated by consumers.

169 See e.g. Commission, 'Staff Working Document Accompanying the document Report from the Commission to the Council and the European Parliament Final report on the E-commerce Sector Inquiry' (2017) COM(2017) 229 final, SWD(2017) 154 final, 40-50. In the context of the sector inquiry the Commission observed that the online marketplaces and price comparison site compete based on different features of quality. In the context of mergers in the financial payment industry between online and mobile payment platforms, the matter of user interface, security of transaction and speed of transaction were considered key aspects of competition see *Telefónica UK/Vodafone UK/Everything Everywhere/JV* (Case COMP/M.6314) Commission decision of 4 Sep. 2012, paras 127-149; *Telefónica/CaixaBank/Banco Santander/JV* (Case COMP/M.6956) Commission decision of 14 August 2013, paras 34- 41. In Case M.7217 *Facebook/WhatsApp* decision of 3 Oct. 2014, paras 87, 102 and *Microsoft / LinkedIn* (Case M.8124) Commission decision of 6 Dec. 2016, paras 349-352 privacy was a quality that was an important quality for competition in the respective markets of the merging undertakings.

test should take into account the interrelation between the various sides of the platform when considering the profitability of a certain quality change.<sup>170</sup> Accordingly, when simulating a decrease of quality on one side of the platform that leads to a loss demand (customer switch) on that side of the platform, it is important to consider what is the consequence of such reduced demand with respect to the other side(s) of the platform. In other words, testing the profitability of the quality decrease by the platform should take into account the relevance of the indirect network effects between the various sides of the concerned platform.<sup>171</sup>

Furthermore, the meaning of a nominal increase or decrease of quality in such cases must also be defined and translated into practice while taking into account the effect that zero-pricing has on consumers. It must be established whether a 5-10% decrease is suitable in the case of quality and how such a change can be measured in practice.<sup>172</sup> To the extent that the required decrease is higher than 5-10%, it should be considered from a policy perspective whether the results of such an assessment are comparable to those of the SSNIP test when applied to positive prices. Additionally, it should be noted that in many cases in the digital economy, it is the development of a certain product or service quality that is very costly rather than its provision to the consumers once it has been developed.<sup>173</sup> Accordingly, in such cases testing a hypothetical decrease of quality might not be representative of the true situation in practice, as an undertaking will have no incentive to reduce quality if such a reduction will not result in a significant increase of revenue.<sup>174</sup> Moreover, when dealing with the quality of a certain online platform, it is important to keep in mind that some aspects thereof are also dependent upon the customer groups present on the platform. This remains true even when the consumer is not entirely aware of the source of quality or the lack thereof. For example, an online marketplace may be in charge of curating the variety of products offered however the price, shipment costs, quality of goods and after sales services may also depend substantially on the sellers. Thus when choosing a quality that is tested in the context of a SSNDQ, the role of such shared accountability for quality between the online platform and its participants must be taken into account. In this regard the regulatory framework that applies to the concerned platform in a given case should be considered as the obligations

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170 David S. Evans and Richard Schmalensee (2014) *supra* (n 6) 27.

171 OECD (2018) *supra* (n 5) 10-20.

172 See OECD (2013) *supra* (n 165) 15. A decrease of quality that would impact consumer behavior may be as high as 25% in the context of this test.

173 For example, the difference between setting up an online marketplace website and the costs of maintaining it is almost tenfold. See a rough calculation of the costs online at Jon Jordan, 'How Much Does an eCommerce Website Cost in 2018?' (*Atlantic BT*, 9 April 2018) <<https://www.atlanticbt.com/blog/how-much-does-ecommerce-website-cost/>> accessed 1 November 2018.

174 J. Newman (2016) *supra* (n 116) 70.

and liabilities of online platforms may also determine the scope of qualities that can be tested. Testing a degradation of qualities that fall more within the legal ambit of the platform participants rather than that of the platform itself would be conceptually erroneous.

In this regard it is worth noting that the term online platform, does not constitute a category of undertakings nor does it refer to a specific sector of the economy. Rather, online platforms can be best seen as the undercarriage upon which an undertaking can be developed. The undertaking that eventually emerges on the market, from both a legal and commercial perspective, depends on the value that the platform intends to create for its various customer groups and the governance of such a platform. Currently there is no platform-specific regulation,<sup>175</sup> however online platforms will generally fall under the scope of various EU and national rules in the areas of competition, consumer protection, personal data protection and free movement.<sup>176</sup> The applicability of this general legal framework is unfortunately not always consistent, as it was not designed in a manner that foresees the contractual realities of the platform economy.<sup>177</sup> Consequently, establishing the legal framework for an online platform for the purpose of determining the qualities that may be tested in the context of a SSNDQ is something that will need to be done on a case-by-case basis. In this respect, the recent case of *Uber* demonstrates the importance of performing an inquiry into the business model and governance of the online platform.

Although Uber maintained that it is an intermediary that facilitates the interaction between consumers and self-employed drivers, its platform governance led to a different legal qualification, namely one that resembles an employer.<sup>178</sup> The importance of such a legal qualification of a platform cannot be overstated in the context of a SSNDQ and a competition law analysis as a whole. The legal qualification of a platform determines namely what kind of intermediary it constitutes, if at all. In the case of Uber the spectrum of legal qualifications entails at least three options: an information society service provider as claimed by Uber; an intermediary in the field of transport as indicated by the CJEU;<sup>179</sup> and an employer in the field

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175 The newest development towards such a legal framework is the Commission's proposal for a Regulation of the European Parliament and of the Council on promoting fairness and transparency for business users of online intermediation services 2018/0112 (COD).

176 Aneta Wiewiórowska-Domagalska, 'Online Platforms: How to Adapt Regulatory Framework to the Digital Age?' (Briefing for the IMCO Committee of the European Parliament, 2017) 3-4 [http://www.europarl.europa.eu/RegData/etudes/BRIE/2017/607323/IPOL\\_BRI\(2017\)607323\\_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/BRIE/2017/607323/IPOL_BRI(2017)607323_EN.pdf) accessed 19 May 2018.

177 Ibid.

178 See Case C-434/15 *Asociación Profesional Élite Taxi V Uber Systems Spain SL* [2017] ECLI:EU:C:2017:364, AG Opinion, paras 52-54.

179 Case C-434/15 *Asociación Profesional Élite Taxi V Uber Systems Spain SL* [2017] ECLI:EU:C:2017:981, paras 40-44.

of transport as found by national courts.<sup>180</sup> Each of the three qualifications entails a different legal framework and consequently a potentially different scope of qualities that can be tested for the purpose of a SSNDQ. In the case of the legal qualification of Uber as an employer, Uber is in fact no longer considered a two-sided platform, which means that replacing the SSNIP for the SSNDQ is no longer needed. If Uber is no longer a two-sided platform, demand-side substitution of consumers for Uber can be tested based on the positive prices they are charged for the rides, as the drivers are no longer a separate customer group of Uber but a part of it.<sup>181</sup>

In light of the above, it can be observed that the SSNDQ is sound from a substantive perspective, however, its application requires the development of an analytical and preferably also legal framework that regulate the selection of the relevant qualities to be tested in each case. In the absence of such a framework, the extensive modifications required to transform the SSNIP into a quantitative test suitable for zero-priced markets may add a layer of legal uncertainty to the existing criticism concerning the current SSNIP test.<sup>182</sup> Despite the identified hurdles in the process of adapting the SSNIP test to zero priced markets, the realisation of the SSNDQ may be a welcome step in the journey of adapting the current competition law practice to the reality online markets. In this regard it is worth noting that the importance of the abovementioned exceeds the mater of the SSNIP test alone. The complexities concerning zero-pricing depicted above can also be expected when considering other quantitative tools used for the purpose of defining the relevant market such as price correlations, co-integration analysis and critical loss analysis, since these are equally price-oriented tools.<sup>183</sup> Thus while the SSNIP test provides a straightforward example of the inevitable complexities resulting from the use of zero-pricing by online platforms for current practice, their implications may concern the entire quantitative evidence tool kit. Therefore, it is important that this conversation of the SSNIP test into a SSNDQ is pursued as a first stage to what may become the conversion of the entire quantitative tool kit in the long run so as to ensure compatibility with cases concerning zero-pricing.

The fact that the current quantitative tools may not be suitable does not mean, however, that the market definition process cannot be performed in the case of zero-priced markets as such. Rather, this challenging situation highlights the fact that zero-priced markets, particularly in case of online

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180 See UK Employment Tribunal Appeal No UKEAT/0056/17/DA *Uber BV v Mr Y Salam and Others*.

181 In the context of an art 102 TFEU case it also means that establishing of dominance only requires looking at the market from the perspective of the consumers instead of also looking at the market power Uber has with regard to taxi drivers.

182 O'Donoghue and Padilla (2013) *supra* (n 134) at 112-116; Rose and Bailey (2013) *supra* (n 139) at 240-242.

183 Niels, Jenkins and Kavanagh (2016) *supra* (n 11) at 35-82.

platforms, will for the time being constitute cases where price oriented quantitative tests such as the SSNIP cannot be applied due to an evident absence of suitable data. Accordingly, in such cases the market definition process will have to be based primarily on non-quantitative evidence sources as it has been prior to the introduction of such tools. Although situation confirms that current practice is sufficiently flexible so as to be applied even in rather novel scenarios, it does not mean that such partial compatibility is a desired or constitutes a sustainable outcome for long term purposes.

### 3.3.3 Back to (some) basics and plans for the future – a temporary SSNIP free market definition

The definition of the relevant product market has initially been performed by drawing a comparison of the price, characteristics and functionalities of the product or service concerned.<sup>184</sup> In art. 102 TFEU cases, such an approach to the definition of the relevant product market even appears to prevail.<sup>185</sup> The seminal case of *United Brands* is a textbook example wherein the market definition was executed predominantly according to qualitative evidence.<sup>186</sup> Following the introduction of the Commission Notice on the Relevant Market in 1997, the definition of the relevant market often resulted from a combination of quantitative evidence as well as non-quantitative sources of evidence depending on the amount of available data.<sup>187</sup> According to some scholars, this combined approach will eventually lead to a shift in favour of the quantitative evidence sources, leaving non-quantitative evidence to serve as a secondary check.<sup>188</sup> It is important to note that even if one were to be convinced of such a development in practice, the increased evidentiary value and use of quantitative evidence would only be possible in situations where sufficient data is available for this purpose. When that is not the case, non-quantitative evidence will always provide the most important guidance with regard to the market definition.<sup>189</sup> The reliance on non-quantitative evidence in light of the absence of price data can be observed in the case law of the EU Courts as well as the decisional practice of the Commission.<sup>190</sup> In the context of the recent mergers dealing with free products or services in digital markets the discussion around the

184 Commission Notice on the definition of the relevant market (1997) *supra* (n 25) para 7; Rose and Bailey (2013) *supra* (n 139) at 231.

185 O'Donoghue and Padilla (2013) *supra* (n 134) at 119.

186 Case 27/76 *United Brands v Commission* [1978] ECLI:EU:C:1978:22.

187 Rose and Bailey (2013) *supra* (n 139) at 232-233.

188 O'Donoghue and Padilla (2013) *supra* (n 134) at 120.

189 Rose and Bailey (2013) *supra* (n 139) at 233.

190 See cases where the product or service at hand concerned one which was offered for free e.g. *Facebook/WhatsApp* (Case COMP/M.7217) decision of 3 October 2014; *Microsoft / LinkedIn* (Case COMP/M.8124) Commission decision of 6 December 2016; Case T-201/04 *Microsoft v Commission* [2007] ECLI:EU:T:2007:289.

relevant market was based entirely on qualitative considerations regarding the various functionalities and uses of the concerned products or services.

In the merger between Microsoft and Skype the Commission noted that competition among consumer communication services (and thus substitutability) initially depends on the offering of several key functionalities in a package that is provided without cost to consumers.<sup>191</sup> The success of the players, who fulfil these criteria and are accordingly within this relevant market, is then depended on their ability to innovate and improve such services or products.<sup>192</sup> In the merger between Facebook and WhatsApp the Commission found that the markets for consumer communication and social networking services were prone to offerings of free services.<sup>193</sup> The competitive relation between Facebook and WhatsApp was therefore assessed in light of the functionalities and size of the networks the two undertakings were offering, as these aspects were considered to be the most important for consumer choice in the absence of prices.<sup>194</sup> According to the Commission the two undertakings were not close competitors in the market for consumer communication services nor in the market for social networking services due the differences in the functionalities of the WhatsApp and the Facebook messaging applications.<sup>195</sup> This functionality focused approach was also followed in a comparable manner in the merger between Microsoft and LinkedIn when the relevant product market for professional social networks, that are also offered free of monetary charge, was defined.<sup>196</sup> Similarly, in the tying case concerning Microsoft no mention was made with regard to that use of the SSNIP test to define the relevant market for media players which consisted of both free and priced media players (basic and premium versions). The definition of the relevant market for media players in that case was equally focused on the functionalities that were included in both free and paid versions of the media players offered by Microsoft and its competitors.<sup>197</sup> Finally in the recent case of *Google Shopping* the Commission explicitly chose to not use the SSNIP test when defining the relevant markets for general search services and comparison-shopping services because such services are provided for consumers without charge.<sup>198</sup>

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191 *Microsoft/Skype* (Case COMP/M.6281) Commission decision of 7 Nov. 2011 paras 17-19, 21-26, 75-77.

192 *ibid* paras. 81-84.

193 *Facebook/WhatsApp* (Case COMP/M.7217) Commission decision of 3 Oct. 2014, paras 47, 90-92.

194 *Ibid*, paras. 46-53, 86.

195 *Ibid*, paras. 101-107, 153-158.

196 *Microsoft/LinkedIn* (Case COMP/M.8124) Commission decision of 6 Dec. 2016 paras. 87, 95-117.

197 *Microsoft* (Case COMP/C-3/37.792) Commission decision of 24 Mar. 2004, paras. 107-145, 411-424.

198 *Google Search (Shopping)* (Case AT.39740) Commission decision of 27 Jun. 2017, para. 245.

The definition of the relevant market for zero-priced products or services provided by online platforms in future cases will inevitably constitute analogous situations where the data needed for quantitative tests is not adequate for their application. This challenging situation that can be expected in the case of online platforms is, however, not of such magnitude so as to completely obstruct the definition of the relevant market as is showed by the previously mentioned cases. This is due to the fact that there is no legal obligation to rely on quantitative tools such as the SSNIP test, nor do these quantitative tools possess a higher evidentiary value compared to qualitative evidence.<sup>199</sup> Accordingly the process of the market definition can be performed in future cases even in the absence of a workable SSNIP test. However, this final outcome, wherein the most basic tools of competition law practice are the most suitable for the market definition of one of the most recent and innovative business practices, is admittedly rather ironic. Nevertheless, it does not mean that the reliance on non-price qualitative evidence will lead to unsatisfactory or erroneous findings in practice, nor should this be considered as an indication that the current practice has reached an impasse. Instead, this situation should be treated as a call to further the proficiency of the existing competition law framework and tools in a more future resilient manner. Therefore, it is important that the possibility to define the relevant market without the use of a working SSNIP alternative remains the exception rather than the rule in future practice when dealing with zero-pricing. Any other attitude towards this current state of practice would imply a return to the pre-SSNIP practice signifying a deterioration of current practice rather than a necessary side step in the process of its development. Therefore, even if the market definition process is not impeded as such in the case of zero-pricing, the conversion of the SSNIP test into a SSNDQ should be pursued for the benefit of competition law practice as a whole.

The necessity to convert the SSNIP test into a quality centred SSNDQ in order to allow for the application of the HMT in a quantitative manner in future cases involving zero-pricing may indeed eventually lead to a broader acceptance and understanding of non-price competition. The path to a successful conversion will require a better comprehension of quality based competition which is becoming increasingly important in technology markets where competition for end-consumers is predominantly deter-

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199 Case T-342/07 *Ryanair v Commission* [2010] EU:T:2010:280, para 136; Case T-175/12 *Deutsche Börse v Commission* [2015] EU:T:2015:148, para. 133; Case T-699/14 *Topps Europe Ltd v Commission* [2017] EU:T:2017:2, para. 82.

mined in terms of functionalities and the quality thereof.<sup>200</sup> In this regard a better understanding of non-price competition is not only important for defining markets and evaluating market power but also, and perhaps more importantly, for assessing the anti-competitive nature or effects of practices which are investigated for constituting potential infringements of art. 101 or 102 TFEU. If competition in certain situations does not occur based on price it implies that also a potential increase or decrease of consumer welfare in the context of such investigations will equally relate to the non-price aspects of the service or product offered to consumers. Therefore while the conversion of the SSNIP test can serve as a specific element of adapting current practice to the realities of online markets, the process towards achieving this goal, if pursued, will undoubtedly have greater significance for practice than the creation of a quantitative test for assessing substitution in situation concerning zero-pricing alone.

### 3.3.4 Preliminary conclusion on the practical challenges of the market definition for online platforms

The application of the SSNIP test in future cases concerning online platforms will undoubtedly require overcoming multiple substantive as well as practical challenges. The two- or multi sided nature of online platforms will challenge the manner in which the SSNIP is applied due to the fact that the market definition for an online platform may result in multiple markets. When that is the case the application of the SSNIP, even in cases where prices are positive, will have to take into account the indirect network effects and demand interdependency between such markets when assessing the profitability of a theoretical increase in price.

In cases where the market definition concerns a product or service which is provided by the online platform without monetary charge, thus for a price of zero, the application of the SSNIP test is no longer possible from a substantive point of view. The absence of a positive price in such cases will prevent its application both as a quantitative tool for assessing substitutability as well as thought experiment used for a similar purpose. Theorising a price increase in relative terms will lead to a mathematical impossibility while theorising a price increase from zero to any positive price will be incompatible with the characteristics of competition among online plat-

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200 End consumers are usually the customer group of the platform which is considered to be more price sensitive, meaning that in the creating of the skewed pricing scheme that platforms almost always have such users will pay nothing or far less than the other customer groups participating on the platform. An exception to this model can be platforms which make use of the freemium / premium membership pricing schemes such as LinkedIn where some degree of price competition would be possible also on the side of the end consumer.

forms. In order to overcome these conceptual problems, the SSNIP test should be converted to a non-price centred test.

The conversion of the SSNIP into a SSNIC where demand substitution is tested based on increases in attention or information costs provides an attractive yet unsuitable solution for practice due to the significant complexities and uncertainties involved in such a modification. Although both types of costs play an important role in the business reality of online platforms generally speaking they are unfit as a benchmark for market power measurement, which implies the ability to maximise profits without any improvement to the offered product or service. The increase of attention costs (exposure to more advertisements) may occur in practice however such form of revenue generation is often not linked to the core service provided by the platform and thus cannot serve as a test subject of market power. Furthermore, profit maximising increases in information costs (data sharing requirements) without any prospect of product improvements are uncommon and prohibited to a great extent by the GDPR therefore equally unsuited to be used for market power evaluations.

In this regard, the conversion of the SSNIP into a SSNDQ constitutes an attainable and desirable option as the relationship between quality and competition has already been recognized and studied extensively. Nevertheless, realizing this conversion in practice requires additional adjustments so as to correctly incorporate the distinctive legal and economic nature of online platforms. Accordingly, a concrete procedure should be developed for choosing the relevant qualities to be tested in each case concerning a SSNDQ while taking into account the legal framework of the concerned platform in each case. Despite the complexity of such adjustments, the revision of the SSNIP test should be pursued in order to ensure the completeness of the current competition law tool kit by including both qualitative and quantitative tests. Therefore the creation of such a quantitative tool would in essence ensure a certain procedural equality between the definition of the relevant market in cases concerning two- or multisided platforms and cases dealing with single sided undertakings. Passing up on the conversion of the SSNIP to a SSNDQ however would create a *de facto* exception for cases concerning zero-pricing for which there is no legal or economic justification. Clearly such an outcome is not desirable as the adoption of the SSNIP test was aimed at increasing the trueness of the market definition in the first place. Furthermore, beyond reinstating a SSNIP equivalent for zero-pricing scenarios, the process of conversion will likely contribute greatly to current practice by facilitating further research in non-price competition and its implications for the existing (EU) competition law framework.

Until the adaptations discussed in this paper are implemented, the process of the market definition in the case of online platforms (as well as other undertakings which rely on zero-pricing strategies) will have to rely on

qualitative indirect evidence of substitution when direct evidence is not available, not sufficient or not helpful. Whether the application of these tools in practice will lead to satisfactory results is a matter that remains to be seen, however, it is important that in the meantime this practice does not become the rule in future cases and that further development of a more future resilient competition law framework is pursued.

### 3.4 CONCLUSION AND FINAL REMARKS

This chapter provides an answer to the sub-question: *'How should the definition of the relevant market be performed in the case of online platforms in light of their multi sided nature?'*.

The answer provided by this chapter covers both theoretical and practical perspectives of the market definition process. From a theoretical perspective the first part of the chapter shows that determining the number of market that need to be defined in each case should not be done based on an preliminary platform typology as previously suggested by certain academics and the German competition authority. This is because platform based typologies such as transaction vs. non-transaction platform or matching vs. advertisement platform do not take into account the possibility that platforms will take a hybrid form, which commonly occurs in practice. Furthermore, such approaches presuppose that the platforms will always be two sided and that the decision with regard to the market definition in their case will concern the question of whether each case should result in the delineation of one or at most two separate yet related markets. This assumption has also been shown to be mistaken as online platforms, even when they start off as two sided, may eventually evolve into multi sided platforms. Thus in practice the decision regarding the number of markets that should be defined will be more elaborate as each of the interactions or services provided by such platforms may require the definition of one or two relevant markets respectively. Therefore a more suitable approach for determining the number of relevant markets that need to be defined is, as suggested by this chapter, to look into the nature of the platform interaction or service that gives rise to the competitive concerns in a respective case. Such an approach is also more compatible with the Commission's own experience in the case of *Google Shopping*, which has also been confirmed by the General Court in the appeal, and multiple merger decisions concerning online platforms where the respective parties were found to be active in multiple markets simultaneously.

From practical perspective the chapter shows that in order for the SSNIP test to its important role in the process of the market definition in cases concerning online platforms it would require a conversion into a non-price centered test. The most feasible adjustment in this regard was found to

be the SSNDQ. In the absence of such a conversion the SSNIP test will be unusable in cases where zero-pricing strategies have been implemented by the concerned online platform with respect to its interaction or service that is under investigation. This is confirmed by the Commission's practice in *Google Shopping* where it refused to use the SSNIP test in the market definition process due to the use of zero-pricing by Google with respect to its search functionalities. The feasibility of the conversion of the SSNIP into a SSNDQ has been recently confirmed by the Commission practice in *Google Android* where this test variation was utilized. Nevertheless, as pointed out by this chapter such a conversion process would require an entirely new procedural framework which regulates such test. This aspect has, however, not been taken up by the Commission which constructed the quality criteria used by this test based on the input of Google's own staff without any further explanation.

