

Applying (EU) competition law to online platforms: Reflections on the definition of the relevant market

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Abstract

Future Art. 102 TFEU cases concerning online platforms will require revisiting the process of the market definition in light of the complexities that are likely to arise due to the two- or multisided nature of such platforms. This distinctive nature will firstly require determining the number of relevant markets that need to be defined in each case before the scope of such markets can be accurately delineated. Unfortunately, however, the current approaches to this first, new step, of the market definition process are incompatible with business reality. Therefore this article provides an alternative approach to this complexity, which is better suited to guarantee the trueness of the market definition findings. Accordingly, this article indicates that the number of relevant markets in each case should be determined based on the typology of the interactions facilitated by the online platform and the degree of substitutability of such online platform with other non-platform undertakings from the perspective of its customers groups. This approach allows reaching findings of market power in a manner that adequately reflects the business reality of such platforms in the digital economy and the degree of competitive pressure they may experience in practice.

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 underlying potential has given rise to what some say is the transition from pipeline markets to platform markets. The success of platforms such as Facebook, Amazon and Google has resulted in unprecedented market valuations in relatively short periods of time.¹ This success has increasingly attracted the attention of competition law authorities that hope to address future competitive concerns before they might materialize.² Despite the consensus that online

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¹ See e.g. Accompany, 'Growth of Apple, Google(Alphabet), Amazon & Facebook. A Comparison of Financial Performance' (ACCOMPANY, Feb. 3, 2017). Available online at: <<https://www.accompany.com/insights/growth-of-apple-amazon-google-facebook/>>.

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. Available online at: <<https://ec.europa.eu/digital-single-market/en/news/commission-staff-working-document-online-platforms>>; Joint report of the Bundellekartelamt and Autorite de la concurrence, Competition law and data (10th of May 2016), pp. 11-25. Available online at: <<http://www.autoritedelaconcurrence.fr/doc/reportcompetitionlawanddatafinal.pdf>>; See MonopolKommission, 'Competition policy: The challenge of digital markets', special Report No. 68. Available online at: <http://www.monopolkommission.de/images/PDF/SG/s68_fulltext_eng.pdf>; See also Directorate General for Internal Policies, 'Challenges for Competition Policy in a Digitalized Economy', IP/A/ECON/2014-12, PE 542.235. Available online at: <[http://www.europarl.europa.eu/RegData/etudes/STUD/2015/542235/IPOL_STU\(2015\)542235_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/STUD/2015/542235/IPOL_STU(2015)542235_EN.pdf)>; See House of Lords Select Committee on European Union, 'Online Platforms and the Digital Single Market', 10th

markets are highly dynamic and competitive, such reality does not exempt online platforms from competition law scrutiny. In fact, it may constitute a strong argument for intervention in order to prevent stagnation in innovation, which can result from anti-competitive practices.³ In the context of EU competition law, much of the interest in online platforms relates to possible abuses of dominance.⁴ 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.⁵ It is therefore essential that the market definition is 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 multi sided nature which is enhanced in the online environment.

In practice, delineating the relevant market will first require establishing the number of markets that need to be defined. Online platforms cater their services to at least two separate customer groups by facilitating an interaction. Accordingly, when assessing the market power of an online platform, it is essential to establish whether those customer groups are part of a single relevant market or multiple relevant markets. Beyond this stage, the scope of the relevant market must be determined based on the assessment of substitutability between the online platform and its closest competitors. This assessment will require looking into the distinctive characteristics that separate online platforms from other online or offline undertakings. 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 multi sided 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 article 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 article will be divided into three sections, each addressing an important aspect of the market definition process in the context of an Art. 102 TFEU investigation. 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 deal with the number of relevant markets that must be defined and discuss role of the operational functionalities and the business model of online platforms that determine the answer to this question. 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.

Report of Session 2015–16, 20 April 2016, HL paper 129. Available online at:<
<https://publications.parliament.uk/pa/ld201516/ldselect/ldcom/129/129.pdf>>.

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. Available online at:<
[http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=DAF/COMP/GF\(2015\)16/FINAL&docLanguage=en](http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=DAF/COMP/GF(2015)16/FINAL&docLanguage=en)>.

⁴ E.g. the recent cases against Amazon, Google and Facebook addressed by the Commission as well as by several national competition authorities.

⁵ Robert O’Donoghue and Jorge Padilla, ‘The law and Economics of Article 102 TFEU’ (2nd edn, Hart, 2013), pp. 94.

Such insight will equally play a key role in determining the number of relevant markets required in each case, as well as their scope.

I. Article 102 TFEU and market definition

The objective of Article 102 TFEU is the protection of competition on the market, which is expected to result in enhanced consumer welfare.⁶ 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.⁷ 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.⁸ Similar indications can be found in the Commission discussion paper and guidelines that were published after these judgments.⁹ In later cases, additional elements were added to this definition that are still relevant today. In *Michelin* it was made clear that once this threshold is met, the concerned undertaking has a special responsibility not to interfere with competition on the market.¹⁰ 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.¹¹ 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 of output or quality below competitive level over a significant period of time.¹² 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

⁶ J. Faull and A. Nikpay (eds): *The EU Law of Competition* (3rd edn, OUP, 2014), pp. 332-335.

⁷ Case 27/76 *United Brands v. Commission* ECLI:EU:C:1978:22, para. 65.

⁸ Case 85/76 *Hoffmann-La Roche & Co. AG v Commission of the European Communities* ECLI:EU:C:1979:36, para. 38-39.

⁹ Commission, 'DG Competition discussion paper on the application of Article 82 of the Treaty to exclusionary abuses', public consultation, December 2005, para. 21-23. Available online at: <

<http://ec.europa.eu/competition/antitrust/art82/discpaper2005.pdf>>; 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, para. 9-13.

¹⁰ Case 322/81 *NV Nederlandsche Banden Industrie Michelin v Commission of the European Communities* ECLI:EU:C:1983:313, para. 57.

¹¹ Damian Geradin, Nicolas Petit, Mike Walker, Paul Hofer and Frédéric Luis, 'The Concept of Dominance in EC Competition Law' [2005]. Available online at: <<https://ssrn.com/abstract=770144>>; Gunnar Niels, Helen Jenkins and James Kavanagh, *Economics for Competition Lawyers* (2nd Ed, Oxford press publishing, 2016), pp. 97-99.

¹² 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, para. 11.

approaches to dominance are further complicated by the lack of an absolute reference point where a specific degree of market power entails dominance.¹³ 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.¹⁴ Despite the practice of market definition being often-criticized,¹⁵ it nonetheless remains a prerequisite to the finding of dominance according to the EU courts.¹⁶

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.¹⁷ Nonetheless, the Commission seems to indicate that the approach under Art. 102 TFEU will be similar to that utilized under Art. 101 (3) TFEU.¹⁸ In the context of Art. 101 (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.¹⁹ 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.²⁰ Relying on efficiencies obtained solely in separate yet related markets will, however, not suffice for the purpose of relying on Art. 101(3) TFEU.²¹ 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

¹³ Despite the attempt to provide an indication of a reference point for dominance in Case C- 62/86 AKZO v. Commission 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 ECLI:EU:T:2007:22, para. 100-111 where it was noted that market shares are not sufficient or decisive for the finding of dominance. In this regard the application of the 50% market share benchmark of Akzo is not always applied in a uniform manner across member states, see Brenda Suffrin, 'The notion of dominance in competition law: An overview of EU and national case law' [2012] e-Competitions. Available online at: <<http://awa2013.concurrences.com/business-articles-awards/article/the-notion-of-dominance-in>>.

¹⁴ The transition from economic market power to a legal finding of dominance consists of a two-step assessment. In the first step, the relevant market must be defined for which dominance must be established. This is often also the market where the alleged abusive practices took place. In the second step, an assessment of the market power of the concerned undertaking on this relevant market is executed. See e.g. Gunnar Niels, Helen Jenkins and James Kavanagh (2016) n. 11, pp. 24-25.

¹⁵ See e.g. Luis Kaplow, 'Why (Ever) Define Markets?' [2010] Harvard Law Review Vol. 124, No. 2, pp. 437-517; Luis Kaplow, 'Market Definition: Impossible and Counterproductive' [2014] Antitrust Law Journal, Vol. 79, No. 1. Available online at: <<https://ssrn.com/abstract=2402953>>; Daniel A. Crane, 'Market Power Without Market Definition' [2014] Notre Dame L. Rev. Vol. 90, No. 1, pp. 31-79.

¹⁶ Case T-62/98 Volkswagen v Commission ECLI:EU:T:2000:180, para. 230; Case C-7/97 Oscar Bronner GmbH & Co. KG v Mediaprint Zeitungs- und Zeitschriftenverlag GmbH & Co. KG, Mediaprint Zeitungsvertriebsgesellschaft mbH & Co. KG and Mediaprint Anzeigengesellschaft mbH & Co. KG. 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 ECLI:EU:C:2008:703, para. 19.

¹⁷ Case C-95/04 P British Airways v Commission, ECLI:EU:C:2007:166, par. 86; Case C-209/10 Post Danmark v Konkurrenceradet, par. 42.

¹⁸ Commission's Guidance paper on Article 102 priorities, n. 9, par.30.

¹⁹ Commission Guidelines on the Application of Art. 101(3), para 43. Where the case involves two or more separate yet related markets, efficiencies could be considered only when the consumers in both markets are the same.

²⁰ Case C-382/12P MasterCard Inc and Others v Commission, ECLI:EU:C:2014:2201, para 236-242. When the advantages on the relevant market may sometimes not be sufficient in themselves to comply with Article 101(3) TFEU, their combination with other efficiencies identified in related markets may sway the balance towards a justified practice

²¹ Ibid, para 242. Accordingly, proof of efficiencies must first be provided with relation to the market where the anti-competitive behavior has been identified.

justifications. Particularly, the determining of the number of relevant markets that must be defined in each case may prove to be of great importance in this context.²²

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.

II. 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.²³ The market is then defined predominantly based on demand side substitutability with regard to competitors of the concerned undertaking.²⁴ The demand side substitutability analysis in previous practice has primarily been single-sided, as the concerned undertakings were mostly single-sided.²⁵ 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.²⁶ Although the literature on two-sided markets may differ with regard to the qualification of online platforms,²⁷ such platforms display all the main undisputed characteristics of two- (or multi) sided markets which possess competition law relevance.²⁸ 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.²⁹ 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

²² Alfonso Lamadrid de Pablo, 'The Double Duality of Two-Sided Markets' (2015) 64 *Comp Law* 5, 6, pp. 9-15; Daniel Mandrescu, 'Applying EU competition law to online platforms: the road ahead- Part 1', [2017] *ECLR* Vol. 38 No.8, pp. 362-365; Daniel Mandrescu, 'Applying EU competition law to online platforms: the road ahead- Part 2', [2017] *ECLR* Vol. 38 No.9, pp. 420-422.

²³ Gunnar Niels, Helen Jenkins and James Kavanagh, *Economics for Competition Lawyers* (2nd Ed, Oxford press publishing, 2016), pp. 41-47. This term is used for the choice of product and market in the context of applying the hypothetical monopolist test.

²⁴ 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.

²⁵ 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 an overview of cases in Dirk Auer and Nicolas Petit, 'Two-Sided Markets and the Challenge of Turning Economic Theory into Antitrust Policy' [2015] *The Antitrust Bulletin*, Vol. 60 Issue. 4, pp. 426-461; The recent case of Google Shopping represents another an example where the importance of two-sided markets in the context of competition law is being better understood and explicitly addressed. See Case AT.39740 Google Search (Shopping) decision of 27 June 2017.

²⁶ Bertin Martens, 'An Economic Policy Perspective on Online Platforms', Institute for Prospective Technological Studies Digital Economy working paper 2016/05, pp. 12. Available online at: <
<https://ec.europa.eu/jrc/sites/jrcsh/files/JRC101501.pdf>>.

²⁷ Dirk Auer and Nicolas Petit [2015] n. 25, pp. 431-438.

²⁸ 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*, pp. 3. Available online at:<
http://ec.europa.eu/competition/international/multilateral/2009_jun_twosided.pdf>.

²⁹ Pieter Ballon and Eric Van Heesvelde, 'ICT platforms and regulatory concerns in Europe' [2011] *Telecommunications Policy*, Vol. 35 No.8, pp. 702-708.

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 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 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.³⁰ 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.³¹ The Bundeskartellamt describes two types of platforms; namely, matching platforms and audience-providing platforms, also referred to as advertising platforms.³² 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 that provide a transaction function and platforms without a transaction function.³³ Audience-providing or advertisement platforms facilitate an interaction between users brought to the

³⁰ 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, 'Market Definition in Two-Sided Markets: Theory and Practice' [2014] *Journal of Competition Law & Economics* Vol. 10 No.2 pp. 293-339.

³¹ Bundeskartellamt, 'Working Paper – Market Power of Platforms and Networks' [2016] B6-113/15. Available online at: <https://www.bundeskartellamt.de/SharedDocs/Publikation/EN/Berichte/Think-Tank-Bericht-Langfassung.pdf?__blob=publicationFile&v=2>.

³² Ibid, pp. 19-30; See similar discussion in OECD, 'Rethinking Antitrust Tools for Multi-Sided Platforms'[2018], pp. 55-64. Available online at: <www.oecd.org/competition/rethinking-antitrust-tools-for-multi-sided-platforms.htm>.

³³ Supra note 3, pp. 21.

platform by content matching their interests, and advertisers seeking access to those users.³⁴ 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.³⁵ 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.³⁶ This is observable when examining the indirect network effects in such cases, which are predominantly unilateral. 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.³⁷ This is most likely to occur in the case of a matching platform that facilitates a transaction, such as travel booking platforms. Such platforms generally pull two types of users to the platform: end consumers and accommodation owners. In the absence of one of the two, the transaction is no longer possible and the demands of either group cannot be met by the platform.³⁸ In addition to this interdependency of demand between the user groups, defining a single 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.³⁹ 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.⁴⁰ 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.⁴¹

³⁴ Ibid, pp. 21-22.

³⁵ 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. On the difference between the two forms of advertisement and their implications in practice see David. S. Evans, 'The Economics of the Online Advertising Industry' [2008] Review of Network Economics, Vol. 7, No. 3. Available online at: <<https://ssrn.com/abstract=1086473>>.

³⁶ Ibid.

³⁷ Bundeskartellamt, 'Working Paper – Market Power of Platforms and Networks' [2016] B6-113/15, pp. 28.

³⁸ Accordingly there is a great degree of bilateral indirect network effects where the attractiveness of the platform for each user group increases with the increased use of the platform by the other group of users.

³⁹ Bundeskartellamt, 'Working Paper – Market Power of Platforms and Networks' [2016] B6-113/15, pp. 29.

⁴⁰ Ibid, pp. 29-30.

⁴¹ See e.g. Justus Haucap & Ulrich Heimeshoff, 'Google, Facebook, Amazon, eBay: Is the Internet driving competition or market monopolization?' [2014] Int Econ Policy Vol.11, pp. 49–61; Florence Thépot, 'Market Power in Online Search and Social Networking: A Matter of Two-Sided Markets' [2013] World Competition, Vol. 36 Issue 2, pp. 195–221; Lina M. Khan, 'Amazon's Antitrust Paradox' [2017] Yale Law Journal, Vol. 126. Available online at: <<https://ssrn.com/abstract=2911742>>; Thomas Hoppner, 'Defining Markets for Multi-Sided Platforms: The Case of Search Engines' [2015] World Competition, Vol.38 Issue 3, pp. 349-366; A. Gebicka and A. Heinemann, 'Social Media & Competition Law' [2014] World Competition Vol. 37, no. 2, pp. 149–172.

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.⁴² 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. 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.⁴³ 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. Some start off as a one-sided business such as Amazon and evolve into a platform, while others begin as a two-sided platform like travel booking platforms. If the launching

⁴² Platforms do not have a predestined purpose to fulfil that requires a specific form of platform incorporation but rather constitute a mouldable form of business organization. For an elaborate discussion of the business reality of platform business organization see Sangeet Paul Choudary, 'Platform Scale: How an emerging business model helps startups build large empires with minimum investment', (1st ed. Platform Thinking Labs publishing, 2015), pp. 49-211.

⁴³ Bernard Caillaud and Bruno Jullien, 'Chicken & Egg: Competition among Intermediation Service Providers, [2003] RAND Journal of Economics, Vol. 34 No. 2, pp.309-328.

phase is successful, online platforms may achieve critical mass and thus become viable.⁴⁴ In these early stages it is highly unlikely that an online platform 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.⁴⁵ Airbnb serves as a good example for both types of expansion. In its early days, Airbnb matched the three air mattresses of the two founders of Airbnb with people looking for a short stay in San Francisco. After many ups and downs, the business 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.⁴⁶ In addition to expanding the territorial reach of matching guests to short stay accommodations, Airbnb also introduced matching functions for experiences and restaurants.⁴⁷ 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 platform⁴⁸ but once the platform expands, such guidance becomes less relevant.

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

⁴⁴ David S. Evans and Richard Schmalensee, 'The Antitrust Analysis of Multi-Sided Platform Businesses' [2013] in Roger Blair and Daniel Sokol, eds., *Oxford Handbook on International Antitrust Economics*, Oxford University Press, Forthcoming; University of Chicago Institute for Law & Economics Online Research Paper No. 623, pp. 15-17. Available online at: <<https://ssrn.com/abstract=2185373>>; D.S. Evans and R. Schmalensee, 'Failure to Launch: Critical Mass in Platform Businesses' [2010]. Available online at: <<https://ssrn.com/abstract=1353502>>.

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

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

⁴⁷ See these possibilities online at: www.airbnb.com.

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

fee.⁴⁹ But in addition to the matching functionality, YouTube also displays both video and non-video advertisements.⁵⁰ 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.⁵¹ Such price comparison platforms will likely exhibit positive bilateral indirect networks, which may require the definition of one relevant market for two or more customer groups despite the fact that they entail a form of advertisement; something that would not be possible according to the Bundeskartellamt.⁵²

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 unilateral matching.⁵³ 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. Two or more customer groups are interested in meeting each other on the platform, which is 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.⁵⁴ Conversely, unilateral matching refers to situations

⁴⁹ See terms and conditions with regard to paid content online at: <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, pp. 164-165.

⁵² Bundeskartellamt, 'Market Power of Platforms and Networks' [2016] Working Paper B6-113/15, pp. 29-30.

⁵³ Hereinafter the terms interaction and functionality will be used as interchangeable.

⁵⁴ 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] Competition Policy International Vol.1 No.1. pp. 151-179.

where one user group wishes to reach another, separate customer group(s) on the platform but this will not necessarily be observable the other way around, as is the case with non-search display advertisements or data aggregators.⁵⁵ 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.

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 the said platform is multi-sided.⁵⁶ For example, if LinkedIn, a multi-sided platform, were to be accused of excessive pricing with regard to 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 effect may vary greatly between the separate customer groups on LinkedIn or any other online platform.⁵⁷ 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.⁵⁸ 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

⁵⁵ A possibility that could be made plausible if personal data aggregated by the platform is then sold to third parties or that such parties are allowed to aggregate or analyse such data via the platform. 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, pp. 182-185.

⁵⁶ 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.

⁵⁷ 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.

⁵⁸ See e.g. Case AT.39740 Google Search (Shopping) decision of 27 June 2017.

of the platform.⁵⁹ 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 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 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.⁶⁰ In practice, however, determining the focus of the value proposition may be more complex and

⁵⁹ See e.g. Marc Rysman, 'The Economics of Two-sided Markets' [2009] *Journal of Economic Perspectives*, Vol. 23 No. 3, pp. 125-149; OECD Round table on two-sided market, (2009), DAF/COMP/WD(2009)69, pp. 8. Available online at: <http://ec.europa.eu/competition/international/multilateral/2009_jun_twosided.pdf>.

⁶⁰ 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' COM(2017) 229 final, pp. 50. The most important aspects for consumers with regard to price comparison engines are: the availability of the latest product models, the scope of available products and user friendliness. Consequently it is expected that the value proposition will equally be focused on these aspects more than on the number of sellers which appears to be less important. 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, pp. 176-177.

more nuanced, 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 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 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.⁶¹ 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.⁶² 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

⁶¹ 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] n. 24, pp. 293-339. A starting point with regard to the manner in which indispensability should be evaluated can be seen in Bundeskartellamt, 'Market Power of Platforms and Networks' [2016] Working Paper B6-113/15, pp.27-32.

⁶² 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.

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 involved.⁶³ 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.

III. 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 interaction. Such matching interactions form the core of many platforms such as marketplaces, booking gateways, price comparison engines, vacancies-posting websites, crowdfunding platforms, e-learning platforms, collaborative 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, 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.

⁶³ For example, generic online marketplaces are an efficient way for consumers and sellers to interact and eventually transact. For sellers that are not renown and cannot afford their own retail web shop, the intermediation aspect of the marketplace may be essential for meeting its demand, namely being able to sell its merchandise. However, in the case of consumers, the intermediary matching function of the marketplace is perhaps convenient but often not indispensable, namely being able to purchase goods.

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.⁶⁴ 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.⁶⁵

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.⁶⁶ In order to participate on online platforms, such participants will be required to pay some kind of remuneration.⁶⁷ Unlike in the case of end consumers, online platforms will usually not use zero-pricing with these platform participants.⁶⁸ Defining the relevant market with regard to 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.⁶⁹ Such distinct form of

⁶⁴ 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.

⁶⁵ 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 as will be discussed further in this section.

⁶⁶ Where a transaction functionality is provided to such participants, the online platform will serve as a sales channel while in other instances it will be considered primarily as an advertisement tool. See Commission COM(2017) 229 final, pp. 164-165.

⁶⁷ Ibid, pp. 37-40, 190.

⁶⁸ Ibid.

⁶⁹ See e.g. Andrei Hagiu and Julian Wright, ‘Enabling Versus Controlling’ [2015] Harvard Business School Working Paper, No. 16-002.

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.⁷⁰ 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.⁷¹ 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.⁷² 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 online platform in the form of a fixed membership fee, a percentage of the transactions value or a combination of the two.⁷³ 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.⁷⁴ 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.⁷⁵ 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.⁷⁶ 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.⁷⁷ Similarly, when the online platform is facilitating an interaction between service providers and their potential customers, the non-platform alternatives include wholesalers,

⁷⁰ Known examples of platforms that offer such services are for example Amazon.com, Booking.com and Kickstarter.com.

⁷¹ See supra note n. 68; Andrei Hagiu and Julian Wright, 'Marketplace or reseller?' [2015] *Management Science* Vol.61 No.1 pp. 184-203.

⁷² Ibid.

⁷³ See Commission COM(2017) 229 final, pp. 37-40, 190.

⁷⁴ Ibid.

⁷⁵ 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, *Official Journal of the European Union*, L102/1.

⁷⁶ 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. The trade-off between the two is also observable in the profit margins where direct sales to the consumers may allow producers to generate larger profit margins compared to bulk sales to retailers which also need to allow for profit margin for the retailers.

⁷⁷ 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 that normally only acts as a buyer with regard to producers.

retailers and in some cases even employers, which present a completely different form of conducting business.⁷⁸ 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.⁷⁹ 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 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.⁸⁰

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.⁸¹ 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.⁸² 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.⁸³ 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 sometimes part of different relevant

⁷⁸ See for instance the example of Deliveroo, UberEats or UberRush where the non-platform alternative for the freelance delivery cyclists would be an employer that caters to multiple restaurants or companies that require delivery services of small items such as Foodora or Quiqup.

⁷⁹ Unlike traditional fundraising channels such as venture capital, crowdfunding platforms like Kickstarter allow entrepreneurs to raise capital for their startup without necessarily losing any equity but rather by allowing them to offer product or service discounts in return.

⁸⁰ A good example of such a difference can be observed between business-to-business (B2B) wholesale or retail marketplaces and business-to-consumer (B2C) marketplace platforms. In both cases, producers can sell their products, however, such platforms evidently operate on a different level in the supply or distribution chain from the perspective of such producers. 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.

⁸¹ Commission Notice on the definition of the relevant market for the purposes of Community competition law [1997] Official Journal C 372/5 par. 33.

⁸² See Commission Guidelines on the assessment of non-horizontal mergers under the Council Regulation on the control of concentrations between undertakings [2008] Official Journal C 265/6 and Commission Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings [2004] Official Journal C 31/5.

⁸³ Commission notice on the definition of the relevant market for the purposes of Community competition law [1997] Official Journal C 372/5, para. 17-18; 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] Official Journal C 45/7, para. 75-90.

product markets.⁸⁴ 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.⁸⁵ 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.⁸⁶ These findings result from the fact that such sales channels differ in their position in the distribution chain,⁸⁷ as well as provide different functionalities and market exposure.⁸⁸ 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 were confirmed by the COMCO in their investigation concerning the use of MFN clauses in the case of online booking platforms.⁸⁹ 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 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.⁹⁰

⁸⁴ Case Comp/M. 4523 Commission decision of 21 August 2007; Bundeskartellamt Prohibition decision of 20.12.2013 in the case of HRS, B9-66/10; Bundeskartellamt Prohibition decision of 22 December 2015 in the case of Booking.com B.V., B9-121/13; Competition Commission COMCO prohibition decision of 19 October 2015, Online-booking Platforms for Hotels.

⁸⁵ Bundeskartellamt Prohibition decision of 20.12.2013 in the case of HRS, B9-66/10; Bundeskartellamt Prohibition decision of 22 December 2015 in the case of Booking.com B.V., B9-121/13. Despite the great detail of the decisions it is important to note that the analysis mixes at times the perspective of potential consumers and that of hotels with respect to substitution possibilities for hotel portals, which should be considered in a more separate manner.

⁸⁶ Bundeskartellamt Prohibition decision of 20.12.2013 in the case of HRS, B9-66/10, para. 73.

⁸⁷ Bundeskartellamt Prohibition decision of 20.12.2013 in the case of HRS, B9-66/10, para. 91, 93, 96, 100.

⁸⁸ Bundeskartellamt Prohibition decision of 20.12.2013 in the case of HRS, B9-66/10, para. 92, 93, 94, 97.

⁸⁹ Competition Commission COMCO prohibition decision of 19 October 2015, Online-booking Platforms for Hotels, 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.

⁹⁰ Case Comp/M. 4523 Commission decision of 21 August 2007, para. 24-33; Bundeskartellamt Prohibition decision of 20.12.2013 in the case of HRS, B9-66/10, para. 73, 97-101; Competition Commission COMCO prohibition decision of 19 October 2015, Online-booking Platforms for Hotels, para. 232- 247; Commission COM(2017) 229 final, pp.164-165. Additionally, the importance of the transaction functionality with respect to substitution among platforms with a bi-or multilateral matching functionality can also be observed in the manner in which the MFN clauses in the online travel booking cases were formulated. In all cases, the MFN clauses included solely other platforms with mutual matching and transaction functionalities that concerned the same customer groups, namely hotels and consumers. Other platform and non-platform alternatives were not included with the exception of the hotel's own website. Accordingly, also from the perspective of the platforms other alternatives appear not to be considered direct competitors that may freeride on their success.

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.⁹¹ 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.⁹² 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.⁹³ 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.⁹⁴ 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.⁹⁵ This has been confirmed multiple times by the Commission including in the Google Shopping decision.⁹⁶ 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.⁹⁷ 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.⁹⁸ 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),

⁹¹ See Case AT.39740 Google Search (Shopping) decision of 27 June 2017, para. 216-246. It is important to note that these findings may not be generally applicable to all matters of substitutability between platforms that offer matching and transaction functionalities as the findings of the Commission were a result of factual rather than theoretical consideration.

⁹² Ibid; Commission COM(2017) 229 final, pp.164-165.

⁹³ See e.g. David S. Evans, 'The Economics of the Online Advertising Industry' [2008] Review of Network Economics, Vol. 7, No. 3. Available online at: <<https://ssrn.com/abstract=1086473>>.

⁹⁴ Case AT.39740 Google Search (Shopping) decision of 27 June 2017, para.192-247.

⁹⁵ Case IV/JV.1 – Telia/Telenor/Schibstedt, 27 May 1998, par. ; Case IV/M.1439 – Telia/Telenor, 3 October 1999, par. 107; Case IV/M.0048 – Vodafone/Vivendi/Canal Plus, 20 July 2000, para. 42-44.

⁹⁶ Case AT.39740 Google Search (Shopping), para. 247-250; Case COMP/M.4731 *Google/Double Click*, decision of 11 March 2008, para. 45-46; News Corp/BSkyB (Case COMP/M.5932), Commission decision of December 21, 2010, para. 262; Case No COMP/M.7288 - VIACOM/ CHANNEL 5 BROADCASTING, 9 September 2014, para. 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.

⁹⁷ Case C-434/15 Asociación Profesional Élite Taxi V Uber Systems Spain SL ECLI:EU:C:2017:981.

⁹⁸ Although EU Courts did not explicitly say that Uber is to be considered an employer AG Sazpunar did note that Uber relationship with its drivers resembles that of an employer's relationship with its employees, see Case C-434/15, AG Opinion para.52-54. In contrast, national courts were far less hesitant in this regard and found that Uber was indeed an employer and not a intermediary platform, see e.g. UK Employment Tribunal Appeal No. UKEAT/0056/17/DA- Uber BV v. Mr. Y Salam and Other; Case No. 11-46739 EK - Decision of the Labor Commissioner of the State of California; A.L. J Case No. 016-23858 Decision of the Unemployment Appeal Board of New York.

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.⁹⁹ 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.

B. Consumers

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

⁹⁹ 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.

product or service in question entailed a difference in an integral characteristic of the product or service concerned.¹⁰⁰ 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.¹⁰¹ 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 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.¹⁰² 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

¹⁰⁰ Case No COMP/M.6314 Telefónica UK/Vodafone UK/ Everything Everywhere/ JV, decision of 4 September 2012, par. 127-139; Case No COMP/M.6956 TELEFONICA/ CAIXABANK/ BANCO SANTANDER / JV, decision of 14 August 2013, par. 34-41 ; Case No COMP/M.5996 THOMAS COOK/ TRAVEL BUSINESS OF CO-OPERATIVE GROUP/ TRAVEL BUSINESS OF MIDLANDS COOPERATIVE SOCIETY, decision of 6 January 2011 , par. 27-28; Case No COMP/M.6163, AXA/ PERMIRA/ OPODO/ GO VOYAGES/ EDREAMS, decision of 30 May 2011, par. 23; Case IV/M.1439 Telia/Telenor, 3 October 1999 , par. 107; Case IV/M.0048 Vodafone/Vivendi/Canal Plus, 20 July 2000, par. 42-44; Case COMP/M.4731 Google/Double Click, decision of 11 March 2008, par. 45-46; Case COMP/M.5932 News Corp/ BSKyB, decision of 12 October 2010, para. par. 262; Case No COMP/M.7288 VIACOM/ CHANNEL 5 BROADCASTING, decision of 9 September 2014 , par. 34-35; Case No COMP/M.2050 VIVENDI / CANAL+ / SEAGRAM, decision of 13 October 2000, par. 26-28; Case No COMP/M.3333 Sony/BMG, decision of 19 July 2004, par. 21-29; Case No COMP/M.5272 SONY / SONYBMG, decision of 15 September 2008, par. 13-28; Case No COMP/M.6458 Universal Music Group/EMI Music, decision of 21 September 2012 , par. 116-128; Case No COMP/M.6884 ACCESS/ PLG, decision of 14 May 2013, par. 12-19; Case M.7978 - VODAFONE / LIBERTY GLOBAL / DUTCH JV, decision of 3 August 2016, para. 59-62.

¹⁰¹ Case No COMP/M.5932 – News Corp/ BSKyB, decision of 12 October 2010, para. 102-105; Case No COMP/M.6990 - VODAFONE/ KABEL DEUTSCHLAND, decision of 20 September 2013, para. 49-51; ; M.7000 - LIBERTY GLOBAL / ZIGGO, decision of 10 October 2014, para. 105, 111-113; Case No COMP/M.7282 - LIBERTY GLOBAL / DISCOVERY / ALL3MEDIA, decision of 16/09/2014, para. 114, 125,126; Case No COMP/M.7360 - 21st CENTURY FOX/ APOLLO/ JV, decision of 9 October 2014, para. 28; CASE M.7194-LIBERTY GLOBAL/ CORELIO/ W&W/ DE VIJVER MEDIA, decision of 24 February 2015, para. 96,97, 125,126; Case M.7978 - VODAFONE / LIBERTY GLOBAL / DUTCH JV, decision of 3 August 2016, para. 170,178,179; Case M.8465 - VIVENDI / TELECOM ITALIA, decision of 30 May 2017, para. 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 with the exception of COMP/M.6990 - VODAFONE/ KABEL DEUTSCHLAND, decision of 20 September 2013, para. 37-39,63-65; Case COMP/M.4611 - Egmont/Bonnier, decision of 15 October 2007, para. 13 and 19; Case No COMP/M.6543 - AHOLD/ FLEVO, decision of 7 May 2012, para. 13-16; Case No COMP/M.5721 - OTTO/ PRIMONDO ASSETS decision of 16 February 2010, par. 24-30; Case No COMP/M.6163, para. 24-28; Case M.8046 - TUI/ TRANSAT FRANCE, decision of 20 October 2016, para. 24-26 .

¹⁰² See Commission COM(2017) 229 final, pp. 46-50. According to the results of the sector inquiry in 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.

perceptions.¹⁰³ 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.¹⁰⁴ 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.¹⁰⁵ 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.¹⁰⁶ 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,¹⁰⁷ as well as content or content creators.¹⁰⁸ 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 consumer groups by meeting the demands of each customer 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.¹⁰⁹ 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.¹¹⁰ 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.¹¹¹

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

¹⁰³ Commission COM(2016) 288, pp. 11-13; Oxera, 'Benefits of online platforms', 2015, pp. 30. Available online at: <[https://www.oxera.com/getmedia/84df70f3-8fe0-4ad1-b4ba-d235ee50cb30/The-benefits-of-online-platforms-main-findings-\(October-2015\).pdf.aspx?ext=.pdf](https://www.oxera.com/getmedia/84df70f3-8fe0-4ad1-b4ba-d235ee50cb30/The-benefits-of-online-platforms-main-findings-(October-2015).pdf.aspx?ext=.pdf)>.

¹⁰⁴ 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] *Journal of European Competition Law & Practice*, Vol. 8, Issue 1, pp. 30-35; Case AT.39740 Google Search (Shopping) decision of 27 June 2017, para.251-263.

¹⁰⁵ Case No IV/M.1221 - Rewe/Meinl, decision of 3 February 1999, para. 10-16; Case No COMP/M.3464 - KESKO / ICA / JV, decision of 15 November 2004, para. 11-13; Case No COMP/M.3905 - TESCO / CARREFOUR (Czech Republic and Slovakia), decision of 22 December 2005, para. 10,11; Case No COMP/M.5112 - REWE/ PLUS DISCOUNT, decision of 3 July 2008, para. 14-17; Case No COMP/M.6847 - TRITON/ SUOMEN LÄHIKAUPPA, decision of 22 February 2013, para. 10-12.

¹⁰⁶ Case No COMP/M.3905 - TESCO / CARREFOUR (Czech Republic and Slovakia), decision of 22 December 2005, para. 17. A different range of products appear not to be sufficient to exclude substitutability when the difference is not substantial.

¹⁰⁷ E.g. a comparison between the variety of job offers or contact with recruiters between LinkedIn and a website of a recruitment agency.

¹⁰⁸ E.g. the content aggregated by YouTube or Coursera is highly unlikely to ever be reproduced by a single creator from both diversity as well as volume perspective.

¹⁰⁹ 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.

¹¹⁰ This is observable in e-commerce when comparing online marketplaces and online or offline retailers as well as in the case of online hotel booking platforms when compared to online travel agents.

¹¹¹ Commission COM(2016) 288, pp. 11-13; Oxera, 'Benefits of online platforms' [2015] pp. 21, 32, 33. Available online at: <[https://www.oxera.com/getmedia/84df70f3-8fe0-4ad1-b4ba-d235ee50cb30/The-benefits-of-online-platforms-main-findings-\(October-2015\).pdf.aspx?ext=.pdf](https://www.oxera.com/getmedia/84df70f3-8fe0-4ad1-b4ba-d235ee50cb30/The-benefits-of-online-platforms-main-findings-(October-2015).pdf.aspx?ext=.pdf)>.

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 competitors. 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 functionality may require defining separate relevant markets for the consumers and merchants interconnected by such functionality. 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 multisided 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,¹¹² 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.¹¹³ 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,¹¹⁴ 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 rather limited given the lack of substitutability with offline platform alternatives and quite restricted substitutability among various kinds of online platforms.¹¹⁵

Conclusion

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

¹¹² 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.

¹¹³ 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.

¹¹⁴ An example of such an alternative would be for example the Dutch consumer association (www.consumentednbond.nl), which tests and reviews products and services accompanied with a variation of information on price and availability. A comparable US undertaking is Consumer Reports (www.consumerreports.org). Access to such information is subject to periodical membership fees paid by consumers interested in such information.

¹¹⁵ Case AT.39740 Google Search (Shopping) decision of 27 June 2017, para.192-227.

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 alternatives 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.