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

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5 Platform Pricing and the Identification of Potential Price-Related Abuses

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5.1 Introduction

Over the past few years, the growing and evolving digital economy has become one of the main subjects of legal debates in the field of EU competition law, with online platforms as a leading theme. Despite some initial hesitation as to how competition law should apply to online platforms, the currently prominent platforms are now involved in multiple ongoing competition law investigations.[1] Although most of the focus with regard to online platforms seems to be on potential abuses of market power, their pricing practices have remained rather unaddressed in the context of art. 102 TFEU. Until now, the most prominent cases dealing with the pricing strategies of platforms dealt with the use of price parity clauses which have been addressed under art. 101 TFEU instead.[2] Recent complaints against the pricing strategies of Apple and Amazon on their platforms indicate, however, that the assessment of platform pricing strategies under Art. 102 TFEU is inevitable.[3] Although price related abuses of dominance have been addressed on multiple occasions in the framework of EU competition law, such experience may not be readily transferable to the case of online platforms due to their multisided nature.[4]

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1 E.g. in the case of Google two infringement decisions have already been issued. See Google Shopping and Android ; See *Google Search (Shopping)* (Case AT.39740) decision of 27 Jun. 2017 and *Google Android* (Case AT.40099) Commission decision of 18 Jul. 2018.

2 The case of Amazon offered a possibility to make the analysis under 102 TFEU however the case was settled via a commitment decision. See *E-book MFNs and related matters (Amazon)* (Case AT.40153), Decision dated 4 May 2017.

3 See e.g. Rochelle Toplensky, ' Brussels poised to probe Apple over Spotify's fees complaint' Financial Times (Brussels 5 May 2019) < https://www.ft.com/content/1cc16026-6da7-11e9-80c7-60ee53e6681d > Accessed 27 September 2019.

4 See e.g. Julian Wright,' One-Sided Logic in Two-Sided Markets '(2003). AEI-Brookings Joint Center Working Paper No. 03-10. Available online at: < https://ssrn.com/abstract=459362>.

The current case law of the EU courts and decision making practice of the European Commission deal with cases governed by traditional economic insights that do not always hold in the context of multisided markets.[5] For example, platforms may price their services below marginal cost on one side of the platform in order to maximize profits on the other side(s) without such practices having an anti-competitive motive. This can be observed in the case of YouTube where consumers are able to use YouTube free of charge while advertisers pay significant fees to have their ads appear on YouTube. Comparable price structures are often adopted by online platforms regardless of the services they provide and the market power they possess.[6] Nevertheless, this use of skewed price structures can be easily mistaken for being anti-competitive if perceived through the lens of previous practice that has yet to adapt to the economics and business reality of multisided platforms. Pricing below cost on one side of the platform, if assessed in isolation, can be considered as predatory while the prices charged on the other side(s) of the platform can be perceived as excessive.[7] Despite the initial resemblance to scenarios involving price related abuses, the use of skewed pricing structures by online platforms is a legitimate practice inherent to their multisided character.

The economic literature on two and multisided markets has repeatedly confirmed the use of skewed pricing structures as a common, legitimate and necessary practice, which is a result of the indirect network effects at play in such markets. Undertakings that operate in two or multisided markets, like online platforms do,[8] enable the interaction between two or more separate customer groups participating on their different sides. The demand for the platform on one of its sides is then dependent on the demand for it on its other sides. For example, the number of consumers using Expedia depends on the number of hotels offering their rooms on Expedia and vice versa. In order to get such separate, yet interdependent customer groups on board, platforms must implement pricing schemes that are appealing to all the needed customer groups while maximizing the platforms' profits.[9] The pricing scheme in this context includes the pricing level, meaning the total remuneration charged by the platform, and the pricing structure that

5 See e.g. David S. Evans 'The Antitrust Economics of Multi-Sided Platform Markets' (2003) 20(2) Yale Journal on Regulation 327.

6 See e.g. David S. Evans, ' Some Empirical Aspects of Multi-Sided Platform Industries' (2003) 2(3) Review Of network Economics 191, 194.

7 OECD Round table on two-sided markets [2009] DAF/COMP/WD(2009)69, at. 37-40.

8 Bertin Martens, 'An Economic Policy Perspective on Online Platforms', Institute for Prospective Technological Studies Digital Economy working paper 2016/05, at. 12. https://ec.europa.eu/jrc/sites/jrcsh/files/JRC101501.pdf accessed 9 Jul 2020.

9 See e.g. Marc Armstrong 'Competition in two-sided markets' (2006) 37(3) The RAND Journal of Economics 668; Jean Charles Rochet and Jean Tirole, 'Platform competition in two-sided markets' (2003) 1(4) Journal of the European Economics Association 990.

determines the division of remuneration across the platforms' customer groups.[10] The pricing structure is set in a manner that reflects the workings of the network effects on the platform, the demand of the various customer groups for the platform, their single or multi-homing patterns as well as their respective degree of price sensitivity.[11] The pricing level is equally influenced by such factors, as well as by more conventional variables such as costs, intensity of competition and switching costs. The implementation of pricing schemes (i.e. pricing structure and level) that follow these principles is necessary for platforms to overcome the coordination problem they face when trying to bring together separate customer groups in order to facilitate an interaction between them. Therefore, although the pricing schemes of online platforms may entail settings that seem unnatural from the perspective of previous practice, they are essential for platforms to compete in a viable manner.

In light of this inherent reliance on unconventional pricing structures, it is important that anti-competitive pricing strategies of online platforms are correctly distinguished from legitimate business practices. In order to do so, the price setting practices of online platforms must be assessed in light of their distinctive characteristics and multisided nature. Accordingly, future cases concerning potential price related abuses of dominance must take into account the entire pricing scheme implemented by the platforms. Analyzing such schemes entails looking at both the price level and price structure of the platform. Applying the current framework to each side of the platform in isolation, as would commonly be the approach with one-sided markets, risks ignoring the economic logic and business reality of such platforms and can easily lead to incorrect findings resulting in over or under enforcement.[12]

In light of the above, it is the aim of this chapter to answer the question of how should price related abuses of dominance be assessed under art. 102 TFEU in light of their inherent reliance on unconventional price settings resulting from their multisided nature. The abuses selected for the purpose of answering this question are: predatory pricing, excessive pricing and discriminatory pricing. The reason behind this selection is two fold. From a (theoretic) competition policy perspective, these abuses represent the three main forms in which a dominant undertaking can abuse its market power.[13] From an enforcement perspective, these abuses that are already

10 Erik Hovenkamp, 'Platform Antitrust' (2018) 44(4) The Journal of Corporation Law 721.

11 Feriha Zinngal and Frauke Becker, 'Drivers of optimal prices in two-sided markets: the state of the art' (2013) Vol. 63(12) Journal für Betriebswirtsch 87, 87- 90.

12 Julian Wright (2003) *supra* (n 4).

13 Such forms include undermining competitors, exploiting customers and distorting competition between customers.

the subject of claims in practice,[14] entail situations that exhibit, in a clear manner, how significant the impact of a comprehensive assessment of the entire pricing scheme of the platform would be for finding an abuse. In this regard the possibility of objective justifications for such abuses is not included in the scope of this article as previous practice on these abuses shows that this defense possibility is almost never addressed. In such cases the legal debate predominantly concerns the abuse criteria for which the Commission (on NCA) carries the burden of proof. The contribution of this article to practice follows from combining the economics of platforms with the legal framework of current EU competition law practice. This approach, while being straight forward, is often missing in the existing claims against platforms and is often only briefly explored in legal literature. Nevertheless, such an approach remains imperative for ensuring the sound application of existing competition policy in the case of online platforms as will be shown throughout this article.

The importance of the framework review attempted by this paper is further accentuated by the fact that the recently proposed Digital Markets Act (DMA),[15] which is specifically designed to apply to platforms, does not appear to deal with practices that mirror 'traditional' price related abuses. Admittedly the DMA would serve as a complement rather than replacement for art. 102 TFEU as its scope is limited to gatekeeper platforms,[16] which does not seamlessly overlap with the concept of dominance under art. 102 TFEU.[17] Furthermore, unlike art. 102 TFEU its purpose is essentially to prevent in an ex-ante manner the materialization of circumstances and business practices that would leads to situations which EU competition policy

14 In the case of predatory pricing, in the US a case was launched against Uber by its competitor SideCar which was allegedly pushed out of the market by Uber's pricing policy, see SC Innovations, Inc. v. Uber Techs., Case No. 18-cv-07440-JCS (N.D. Cal. May. 1, 2020); In the case of discriminatory pricing, see the case of Dutch real estate platform Funda in Decision of the District Court of Amsterdam dated 21 March 2018 concerning real estate platform Funda ECLI: NL: RBAMS:2018:1654- Rechtbank Amsterdam, 21-03-2018/C/13/528337/HA ZA 12-1257 (*Funda* decision); in the case of excessive pricing see the recent claim of Spotify against Apple for its commission fee in the App Store see Spotify 'Time to Play Fair – Frequently Asked Questions' www.timetoplayfair.com/frequently-asked-questions/ accessed 1 June 2020.

15 European Commission, Proposal for a Regulation of the European Parliament and of the Council on contestable and fair markets in the digital sector (Digital Markets Act), COM(2020) 842 final.

16 Art. 2 and 3 of the DMA.

17 The concept of dominance under art. 102 TFEU concerns a relation of relative market power between the concerned undertaking and its actual and potential competitors. A finding of dominance thus does not depend of the actual size or financial value of the respective relevant market in each case. By contrast the DMA seems to rely predominately on absolute measurements concerning the size of concerned undertaking and the corresponding market(s) it serves, which makes the finding of gatekeeper platforms in niche or narrow markets less rather unlikely. See thresholds in art. 2 and 3 of the DMA.

would commonly seek to prevent, such as abuses of dominance. Nevertheless this complementary function of the DMA, which is visible with regard to practices that resemble non-price related abuses of dominance,[18] is far more limited in the case of platform pricing. It would appear that when is comes to price related competitive concerns, the DMA only addresses the use of MFN clauses and some terms of remuneration when it comes to the access to the data generated by and on the concerned platform.[19] Consequently, until the DMA is updated in a manner that includes additional aspects of platform pricing, the undesired effects of pricing strategies adopted by platforms with significant market power will predominantly have to be dealt with under the scope of art. 102 TFEU.[20]

In order to answer the question posed by this chapter and provide a coherent and thorough inquiry capable of serving as practical guidance for ongoing and future cases, this chapter will be divided into three sections following this introduction. In the first section, the economics of pricing by platforms will be discussed. In this section the price setting logic of platforms will be explored as covered by economic literature. Accordingly, the section will look into the role played by platform pricing as well as into how platforms set their prices and which factors may impact this process. This discussion is intended to provide guidance for the competition law analysis of platform pricing by laying out the variables that determine such price settings from an economic perspective. The discussion in this section will therefore inform the legal analysis covered in the second section of the article that addresses the frameworks of predatory pricing, excessive pricing and discriminatory pricing. Each abuse will be covered in a separate sub-section where the general framework of the abuse will be addressed against the background of platform pricing as discussed in the first section of the chapter. The purpose of this exercise is to clarify the challenges faced by current practice when it comes to applying such frameworks to online platforms. Following the examination of each framework, the chapter offers some suggestions for adjustments that could be made in order to preserve the effectiveness of the current frameworks of these abuses when applying them in the context of online platforms. Finally, the third section will provide some final comments and conclusions

18 See Art. 5(c), (e), (f) and Art. 6 (b), (c), (d), (e) and (f) of the DMA. These provisions cover various practices that could potentially qualify as tying and bundling, refusal to supply, leveraging and unfair trading conditions.

19 Art. 5(b) and (g) and art. 6 (g), (i) and (j) of the DMA.

20 According to art. 10 of the DMA, the obligations imposed by it on platforms falling under its jurisdictional scope may be updated in light of new insights and/ or changed market conditions.

5.2 Online platform pricing

5.2.1 Skewed pricing structures of multisided platforms

The pricing strategies of online platforms have initially triggered the interest of antitrust scholars due to their common reliance on zero priced offers, which are often perceived as suspicious from the perspective of competition policy.[21] This seemingly unusual form of pricing has, however, been subject to extensive economic research where it has been found to be an inherent characteristic of platforms as such.[22] In this regard it should be noted that the term 'online platform' does not constitute a legal category of undertakings,[23] despite the fact that this term is often used with regard to existing businesses.[24] In practice, in the context of competition law policy, the term online platform commonly refers to an undertaking that displays some or all of the characteristics of a two-or multisided platform or market as defined by economic literature.[25] Similar to the current approach in economic and legal literature, for the purpose of this article the terms: platforms, online platforms and two-or multisided markets will be used interchangeably.

In the broader context of platform studies, the ability of platforms to set profit maximizing prices that are divided unevenly across their respective customer groups is considered one of their most important distinctive characteristics. In fact, the seminal work of Rochet and Tirole on two-sided platforms (which they refer to as two-sided markets) focused on the skewed pricing structure of platforms in order to define their very existence.[26] Other studies of two-or multisided platforms took a different approach to the definition of such platforms, focusing instead on the indirect network effects between the separate customer groups of the platform. Evans and Schemalensee, for example, focus on the value-creating role of the platform

21 See e.g. David S. Evans, 'The Antitrust Economics of Free' (2011) 7(1) Competition Policy International at 78-81; Michal S. Gal and, Daniel L. Rubinfeld, 'The Hidden Costs of Free Goods: Implications for Antitrust Enforcement' (2015) UC Berkeley Public Law Research Paper No. 2529425; NYU Law and Economics Research Paper No. 14-44. Available online at: < https://ssrn.com/abstract=2529425>.

22 OECD Round table on two-sided markets [2009] DAF/COMP/WD(2009)69, at 37-40.

23 Commission staff working document on online platforms accompanying the document Communication on online platforms and the digital single market {COM(2016) 288} , SWD(2016)172, at 1-9.

24 Ibid; this status will remain unchanged even if the Digital Markets Act enters into force as art. 3 of the act explicitly refers to the term Gatekeepers rather than platforms. See Proposal for a Regulation of the European Parliament and of the Council on contestable and fair markets in the digital sector (Digital Markets Act)COM/2020/842 final.

25 Bertin Martens, (2016) *supra* (n 8).

26 Jean-Charles Rochet and Jean Tirole 'Platform Competition in Two-Sided Markets' (2003) 1(4) Journal of the European Economic Association 990.

for separate customer groups by solving their coordination problem and reducing transaction costs.[27] The platform pricing structure is then instrumental for capturing and dividing the created value between the platform and its separate customer groups in a profitable manner.[28] A comparable approach can be observed in the case of Caillaud and Jullien that consider the use of skewed pricing structure as an important launch tactic to enter a two-sided market through a strategy they called divide-and-conquer.[29] Similarly, Armstrong's work on price competition among platforms describes the skewed pricing structure of platforms as an outcome of the indirect network effects between the customer groups of the platform.[30] Choosing the middle way between the two approaches, Filistrucchi, Geradin and van Damme use the pricing structure of the platform as a supplementary characteristic for identifying two-sided platforms in addition to the presence of indirect network effects.[31]

Although these seminal contributions, and others that followed, offer different definitions for two-or multisided platforms that utilize platform pricing in different manner,[32] all the studies share the common view that the price structure of platforms is non-neutral.[33] In other words, all the studies on platforms and their pricing strategies indicate that the demand for the products or services provided by platform depends not only on the price level of the platform but also on its price structure.[34] Accordingly, in order for a platform to enter the market and reach critical mass it must adjust the prices it charges each of its separate customer groups in a manner that reflects their demand for the platform and for the interaction with the other customer groups. By implementing a comparable pricing scheme the platform is then able to overcome the 'chicken-and-egg' coordination problem it faces when trying to bring together separate customer groups on board. As the demand of the separate groups of the platform with regard to the platform as well as each other will (almost) always vary, the price structure

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

28 Ibid, at. 410-415.

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

30 Marc Armstrong (2006) *supra* (n 9) at 668-669.

31 Lapo Filistrucchi, Damien Geradin & Eric van Damme, *Identifying Two-Sided Markets* (Tilburg Law School Research Paper, No. 008/2012, 2012) p. 10-11 <http://ssrn.com/abstract=2008661> accessed 1 March 2020.

32 Bertin Martens (2016) *supra* (n 8) at 10-18; Dirk Auer and Nicolas,Petit, 'Two-Sided Markets and the Challenge of Turning Economic Theory into Antitrust Policy ' (2015) at 13-20. Available online at:< http://ssrn.com/abstract=2552337> accessed 1 March 2020.

33 Bertin Martens (2016) *supra* (n 8) at 11-14.

34 See OECD Round table on two-sided markets [2009] DAF/COMP/WD(2009)69, at. 29-30.

of platforms will generally be skewed.[35] In extreme cases, skewness can manifest in some of the prices set by the platform being below marginal cost and yet make sense from an economic perspective in light of the entire price scheme of the platform.[36] This can be observed for example in the case of Booking.com where consumers do not pay for their use of the hotel room booking services, however, hotels are charged a commission fee for each booking made through the platform.

Therefore, the ability of a platform to charge significantly different prices from its separate customer groups for participating on the platform is more likely an indicator of legitimate business conduct than of anti-competitive pricing practices. In light of this inherent reliance on skewed pricing structures, the legal assessment of the price setting practices of platforms should include an analysis of both their price level(s) and structure. Adopting this broader scope of legal analysis in order to establish whether the pricing practices of platforms constitute potential abuses of dominance also requires looking into the variables that influence such price setting practices. Such an inquiry will assist in determining whether the pricing scheme of the concerned platform or modifications thereof make sense within the legal and economic context of each case.

5.2.2 Skewed pricing variables

The economic literature on pricing in two and multisided markets has identified multiple variables that have an important role in determining how the total price level of the platform is divided among its separate customer groups.[37] Such variables can be divided into on-platform and off-platform variables. In the context of this contribution on-platform variables concern variables that originate from the platforms' business model. Off-platform variables concern variables that originate from the market conditions and competitive pressure experienced by platforms in each case. These variables constitute essentially an inseparable part of the legal and economic context of online platforms that needs to be taken into account in a legal analysis of business practices in the context of EU competition law. Consequently, the assessment of such variables will be required in order to determine whether the pricing practices of dominant platforms constitute legitimate practices entailing competition on the merits or a manifestation of abusive pricing strategies.[38] Therefore it is important to explore such variables before moving on to revisiting the application of price-related abuses to online platforms.

35 See e.g. Richard Schmalensee and David S. Evans, 'Industrial Organization of Markets with Two-Sided Platforms' (2007) 3(1) Competition Policy International 151.

36 See OECD Round table on two-sided markets [2009] DAF/COMP/WD(2009)69, at 38-39.

37 Feriha Zingal and Frauke Becker (2013) *supra* (n 11) at 87.

38 Case C-67/13 P *Groupement des cartes bancaires v Commission* [2014] ECLI:EU:C:2014:2204, para. 53.

A. On-platform variables

The first and perhaps most important variable is network effects. The presence of network effects in the case of two-or multisided platforms is an inherent factor of their existence and one of the main characteristics that is considered to be relevant in the context of competition law analysis.[39] Network effects can be divided into direct and indirect network effects. In the case of platforms (positive) direct network effects are present when the value of the platform for one of its customer groups increases with the presence of more customers on that side of the platform. For example, the value of Facebook for private users increases as more private users sign up to Facebook. By contrast, indirect network effects occur when the value of the platform for one of its customer groups increases with the presence of more customers on the other side(s) of the platform. For example, the more private users join Facebook the more valuable Facebook becomes for advertisers. As seen through the example of Facebook, direct and indirect network effects can simultaneously be present on the same platform.

In the context of pricing, indirect network effects can be said to have a significant impact on the skewness of the platform pricing scheme. This impact results from the fact that such effects are in essence the embodiment of the coordination problem of trying to get separate customer groups 'on-board', which all platforms face and try to solve by implementing skewed pricing structures.[40] Therefore, it is precisely the presence and intensity of indirect network effects that sets two-or multisided platforms aside from one-sided entities. In practice, the manner in which indirect network effects manifest indicates how the various customer groups of the platform evaluate each other's participation on the platform. Accordingly, several possible scenarios have been studied.[41] In some cases, the indirect network effects will be mutually positive. This occurs for example in the case of Booking.com where an increase in hotel listings attracts more consumers and vice versa. By contrast, in other cases, indirect effects may be positive on one side of the platform and negative on the other. For example, an increase of private users of Facebook may attract more advertisers but having more

39 This seems to also one of the main criteria that the Commission sees as important for this purpose. See Note by the Delegation of the European Commission in OECD Roundtable on Two-sided Markets DAF/COMP/WD(2009)69 < https://ec.europa.eu/competition/international/multilateral/2009_jun_twosided.pdf> accessed 5 August 2020.

40 See e.g. Richard Schmalensee and David S. Evans (2007) *supra* (n 35) at 153-161.

41 See e.g. Jean J. Gabszewicz, Diedier Laussel, Nathalie Sonnac, 'Does advertisement lower the price of newspapers to consumers? A theoretical appraisal' (2005) 87 Economic Letters 127. The authors study the impact of indirect network effects that represent the readers' attitude towards advertisements on the price setting of newspapers. Their insight is that the nature of such effects and the proportion of readers it covers will determine the pricing outcome i.e. relatively low or high compared to other settings.

advertisers will not (likely) attract more private users. Nevertheless, in this latter scenario the views of customers on one side of the platform may not be homogeneous, which would result in positive indirect network effects on one side of the platform and positive as well as negative indirect network effects on the other side of the platform. This can occur for example when some Facebook users value the targeted advertisements displayed while others would rather block them.[42]

Generally speaking, economic literature on pricing in two-sided markets has found that the customer group that benefits the most from the participation of other customer group(s) on the platform should pay the lion's share of platforms' total price level.[43] Accordingly, when indirect network effects are mutually positive, the side of the platform which displays more pronounced indirect network effect will (at least partly) subsidize the participation of the customer group(s) on the other side(s) of the platform. Similarly, when the indirect network effects are positive on one side and negative on the other side of the platform, the customer group that benefits from the participation of the other customer group(s) on the platform will likely have to fully subsidize their participation. This can be seen in the case of Facebook that is monetized predominantly by the advertiser side of the platform, while private users participate on the platform free of any monetary charge. In some cases such subsidization may even require offering some customer groups negative prices (i.e. a compensation for participation) in order to attract them to the platform as well as the limitation of the number of participants of a customer group.[44] The same holds with regard to the situation where one side of the platform exhibits both positive and negative indirect network effects while the other side of the platform displays positive indirect network effects. The degree of subsidization in this latter scenario depends on the ratio between customers who value the participation of other customer groups on the platforms and those who do not.[45]

42 Ibid, the proportion within such mix is then important for determining the final price of the platform product or service.

43 See e.g. Marc Armstrong (2006) *supra* (n 9) Jean Charles Rochet and Jean Tirole (2003) *supra* (n 9); David S. Evans and Richard Schmalensee, *Matchmakers: the new economics of Multisided Platforms* (Harvard Business Review Press 2016) at. 91-98; Geoffrey G. Parker, Marshall W. Van Alstyne and Sangeet Paul Choudary, *Platform Revolution* (W.W. Norton & Company, 2016) at 123-127.

44 Ibid; e.g. in the case of LinkedIn trial periods for premium account are regularly given to consumers, UberEats regularly sends consumers discount codes to consumers to also share with their friends.

45 *Supra* (n. 41). In the context of the paper the advertisers are the subsidizing group of the newspaper platform.

Direct network effects can also be observed in the context of two-or multi-sided platforms and their occurrence will also have an impact on the price setting of the platform. Such effects can be either positive or negative.[46] The previously mentioned example of Facebook is one where direct network effects are positive as the value of Facebook for private users increases as more private users join Facebook. However, the increase of members of a platform customer group may also be seen as a value-reducing element for the members of such a group. For example, in the case of online market-places sellers value platforms which can reach many potential buyers (such as end consumers). However, such sellers may prefer not to be on a platform that has many other sellers. In such a scenario, sellers have perhaps access to many potential buyers but they also have to compete more intensively in order to complete transactions. In such situations, the presence of negative direct network effects may make the cross-subsidization across separate customer groups more difficult for the platform resulting in the possible sharing of costs across such groups.[47] Accordingly, in such cases a relatively less skewed pricing structure may arise unless the number of customers on the platform side where negative network effects occur is limited.[48]

Implementing these insights concerning direct and indirect network effects will depend to some extent on the ability of the platform to introduce discriminatory or differential pricing.[49] Discriminatory or differential pricing in this context entails applying different prices with regard to a customer group on one side of the platform. The more accuracy that the platform has in its ability to implement different prices to members of the same customer group the better it is able to take the nature and intensity of the network effects at play into account and maximize profits.[50] Having this ability will result in practice in more complex pricing schemes depending on whether the platform divides its customers into categories or allows customers to divide themselves into a price category based on their interests. For example, the Apple App Store has different pricing requirements for the various apps offered in the app store based on their price and business

46 Thomas Eisenmann, Geoffrey Parker and Marshall van Alstyn, 'Strategies for two-sided platforms' (2006) 84(10) Harvard Business Law Review 1, 3-6; Amrit Tiwana, 'Platform Ecosystems' (Elsevier, 2014) at 33-36.

47 See more on pricing in such settings Paul Belleflamme and Martin Peitz, 'Managing competition on a two-sided platform' (2019) 28(1) Journal of Economics & Management Strategy 5.

48 Paul Belleflamme and Eric Toulemonde,' Negative Intra-Group Externalities in Two-Sided Markets' (2009) 50(1) International Economic Review at 265-266.

49 A. Ambrus and R. Argenziano, ' Asymmetric networks in two-sided markets' (2009) 1(1) American Economic Journal 17.

50 Elias Carroni, 'Behavior-based price discrimination with cross-group externalities' (2018) 125(2) Journal of Economics 137.

model.[51] Youtube, that normally requires private users to view advertisements before being able to view any video, now has a 'premium' pricing option where private users pay to not be subject to advertisements.[52]

The presence of direct and, particularly, indirect network effects also influence the impact of the platform's own costs on its pricing structure. Such effects may mean in practice that the costs or increase thereof with respect to serving a customer group on one side of the platform may not concern that customer group alone. Accordingly, depending on the nature of the indirect network effect and their intensity, an increase in costs on one side (the subsidized side) of the platform may be transferred in part or in full to the other side(s) of the platform (the subsidizing side(s)).

Another element that will significantly impact the skewness of the pricing scheme, as well as the price level of the platform as a whole is the price sensitivity of the respective platform customer groups.[53] Unlike indirect network effects, however, the impact of this variable on the price structure is not entirely conclusive. The models that analyzed the impact of this variable adopted different assumptions with regard to the customer demand patterns, market conditions tested (monopolistic vs. competitive markets) and the presence of indirect network effects, which resulted in different outcomes.[54] Consequently, the impact of price sensitivity on the skewness of the price structure and the manner in which it is skewed (i.e. which is the subsidized or subsidizing side), while significant, will depend on the market conditions in each case.

B. Off – platform variables

In addition to the above-mentioned variables, off-platform variables that represent the competitive pressure experienced by such platforms will also impact their pricing practices. The main external variables that are capable of influencing the pricing strategies are therefore, not surprisingly, the number of (competing) platforms and the single or multi-homing patterns of platform customers.

51 See Apple's information for developers based on the business model they intend to implement in their app < https://developer.apple.com/app-store/business-models/> accessed 7 January 2021.

52 See Youtube's new premium membership services at< https://www.youtube.com/premium> accessed 7 January 2021.

53 Thomas Eisenmann, Geoffrey Parker and Marshall van Alstyn (2006) *supra* (n 46) at 6; David S. Evans and Richard Schmalensee (2016) *supra* (n 43) at 91-98; Geoffrey G. Parker, Marshall W. Van Alstyne and Sangeet Paul Choudary, (2016) *supra* (n 43) at 123-127; Richard Schmalensee and David S. Evans, (2007) *supra* (n 35) at 159-161.

54 Feriha Zingal and Frauke Becker (2013) *supra* (n 11) at 99-100.

The impact of the number of (competing) platforms on the pricing decisions of platforms has been studied based on the state of competition that was pre-defined in each economic model, i.e. monopolistic and duo-polistic markets or perfect and imperfect competition.[55] Given that platforms compete with respect to two or more customer groups, these settings may vary with respect to each side of the platform. In other words, the number of competitors that a platform has for each of its sides may not be always identical. For example, Facebook may compete with Twitter for private users as well as advertisers, while competing with Google's search engine only for advertisers. In general, it can be said that the various studies of this variable indicate that the side of the platform where competition is the least intense will likely constitute the subsidizing side of the platform.[56] The degree and intensity of competition of each side of the platform is determined, not only by the number of existing platforms, but also by the single or multi-homing patterns displayed by the platform customer groups.

Single and multi-homing patterns refer to the choices that platforms customers make with regard to using one or more platforms.[57] Accordingly, single-homing refers to a situation where the platform customers choose to use a single platform for a specific purpose. For example, some private users may choose either Instagram or TikTok to fulfill their social media needs or make a choice between Visa and Amex when choosing a credit card. Multi-homing then refers to the opposite situation, where the platform customers choose to use more than one platform for similar purposes. For example, consumers may use multiple online booking platforms such as Expedia and Booking.com when searching to book a hotel room. Such usage patterns are possible with respect to each separate platform customer group, in various settings. Accordingly, usage patterns can be: (i) Multisided single-homing. This would occur for example when both private users and recruiters choose to use LinkedIn as their only professional social media platform. (ii) Multisided multi-homing. This occurs for example in the case of online hotel room booking platforms where consumers as well as hotel owners use multiple platforms for the same purpose of offering and booking hotel rooms. (iii) Single-homing on one side and multi-homing on another side of the platform, also referred to as a (competitive) bottleneck scenario. This occurs for example in the case of credit cards where users usually opt to having one credit card while merchants tend to accept more (if not all) types of credit cards. The manifestation of such usage patterns in

55 See e.g. Yuyu Zeng Harold Houba Gerard van der Laan, 'Note on 'Competition in Two-sided Markets' (2015) Tinbergen Institute Discussion paper (TI 2015-080/II) < https://papers.tinbergen.nl/15080.pdf> accessed 7 December 2020; Suijt Chakravoti and Roberto Roson, ' Platform competition in two-sided market: the case of payment networks' (2006) 5(1) Review of Network Economics, 118; Marc Armstrong (2006) *supra* (n 9) at 668.

56 Feriha Zingal and Frauke Becker (2013) *supra* (n 11) at 104-105.

57 Amrit Tiwana, *Platform Ecosystems* (Elsevier, 2014) at 36.

practice is generally a result of the manner in which the platform customers perceive platforms (homogeneous or heterogeneous) as well as their preferences and various biases,[58] which at times are curbed by switching costs and platform governance rules.[59]

In the context of platform studies, it is often assumed that homogeneous views of platforms lead to single-homing while heterogeneous views of platforms are associated with multi-homing. In other words, where platforms are perceived to be the same or similar by their (potential) customers, such customers will often opt to using only one platform. By contrast, when customers consider platforms to be somehow different this is often associated with the existence of multi-homing.[60]

In terms of intensity of competition platforms are said to compete more fiercely for the platform customer group(s) that are prone to single homing compared to the platform customer groups that are likely to multi-home.[61]This is because getting customers one side of the platform to single-home provides, in theory, the platform with significant market power with respect to the customers on the other side(s) of the platform that multi-home. In the context of platform pricing, this degree of competition also determines the division of prices in the platform pricing structure. Accordingly, in cases where there is single-homing on one side and multi-homing on the other side(s) of the platform, the multi-homing side(s) of the platform are likely to become the subsidizing customer group(s) of the platform.[62] In cases where multisided single-homing or multisided multi-homing occurs, determining which customer group will be the subsidizing one depends

58 See e.g. Bernard Caillaud and Bruno Jullien,'Chicken & Egg: Competition among Intermediation Service Providers (2003) 34(2) The RAND Journal of Economics 309.

59 E.g. in the context of the Google Android case, Google was found to by tying the app store, the Chrome browser and the Google search app in an attempt to prevent multi-homing across app stores which would otherwise be possible given the open source character of Android OS; In the case of Apple multi-homing in the context of app stores for iOS is simply excluded; In the case of Expedia hotels that offered their rooms on competing platforms were risking being demoted in the search result ranking on Expedia.

60 Richard Schmalensee and David S. Evans (2007) *supra* (n 32) at 166; Richard Schmalensee and David S. Evans, 'Industrial Organization of Markets with Two-Sided Platforms' (2007) 3(1) Competition Policy International 166; 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, at 15-16. Available online at: < https://ssrn.com/abstract=2185373> accessed 2 Nov. 2020.

61 R. Poolsombat and G. Vernasca, 'Partial Multihoming in Two-sided Markets' (2006) Discussion Papers, Department of Economics, University of York, < https://EconPapers.repec.org/RePEc:yor:yorken:06/10 >accessed 20 December 2020.

62 Mark Armstrong and Julian Wright, ' Two-sided markets, competitive bottlenecks and exclusive contract' (2007) 32 Economic Theory 353.

on the nature and intensity of indirect network effects.[63] This is because the intensity of competition in such scenarios is considered to be similar on the various sides of the platform. As mentioned above, in such situations the customer group that benefits most from the participation of the other customer group(s) on the platform will likely (fully or partly) subsidize the participation of the latter. Therefore, when taking into account the state of competition for the purpose of determining their pricing scheme, platforms will likely take into account not only the existence of (potential) competitors but also the actual usage patterns of their various customer groups.

With the above-mentioned insights concerning the pricing setting practices of platforms in mind, the next section will look into the legal dimension of platform pricing practices and the manner in which these may be assessed under art. 102 TFEU. In this regard the following section covers the three main objections that can be raised with respect to the pricing practices of a dominant undertaking, namely its prices are too low, too high or discriminatory. Although multiple forms of abuse under art. 102 TFEU cover these concerns, the next section will focus only on predatory, excessive and discriminatory pricing that represent the main assessment frameworks for such concerns.

5.3 Abusive pricing practices under Article 102 TFEU

Abusive pricing practices constitute a large part of the art. 102 TFEU case law that covers exclusionary, exploitative and discriminatory abuses. In a way this is unsurprising, as price related abuses illustrate the most direct concerns attached to dominant undertakings that are considered to have the ability to act independently from their competitors, customers and eventually consumers.[64] Although all price related abuses can apply to online platforms just like any other kind of undertaking, an exhaustive analysis of all price related abuses exceeds the scope of this contribution. Instead, the following sections will focus on the abuses where the need for taking into account the use of skewed pricing schemes in order to maintain the soundness of their legal framework is most evident. The insights from these sections can then be transferred to other abuses that generally share a great deal of communalities when it comes to their theory of harm and factual construction.[65]

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63 R. Poolsombat and G. Vernasca (2006) *supra* (n 61).

64 Case C-85/76 *Hoffmann-La Roche v Commission* [1979] ECLI:EU:C:1979:36, para. 38; Guidance on the Commission's enforcement priorities in applying Article 82 of the EC Treaty to abusive exclusionary conduct by dominant undertakings [2009] OJ C45/7, paras. 9-11 (hereinafter Commission Guidance paper on art. 102 TFEU).

65 E.g. margin squeeze can shares a great deal of the circumstances with cases concerning predatory pricing, excessive pricing and discriminatory pricing. Similarly, rebates cases can similarly display common circumstances with predatory pricing cases.

5.3.1 Predatory pricing

Predatory pricing is the abuse where taking into account the inherent dependence of online platforms on the implementation of skewed pricing structures will have perhaps the most noticeable impact on the legal analysis of their practices. It is precisely the use of skewed pricing structures which results in price settings, such as zero priced or even negatively priced offers, which may appear suspicious when first observed. Adjusting the current framework for analyzing predatory pricing abuses in the context of online platforms requires, however, first revisiting the conceptual framework of this abuse.

Predatory pricing can be described as the implementation of price settings by a dominant undertaking that entails incurring a loss, or forfeiting a profit, with the aim of eliminating or disciplining existing competitors or deterring potential ones. Accordingly, the main concerns behind such practices are that by setting its prices significantly lower than expected based on existing market conditions, the dominant undertaking is able to: (a) drive financially weaker competitors out of the market; (b) signal to (actual and potential) competitors that price wars are going to be costly; (c) signal that market entry is not profitable.[66] In the context of EU competition law, it would appear that the main focus concerning predation relates to the exclusionary effects of such practices rather than their use for disciplining competitors.[67]

Successfully distinguishing predatory pricing practices from legitimate price competition scenarios is, however, not an easy task and requires diligence as price competition that leads to lower prices is a sought after outcome for competition policy to the benefit of consumers and thus should not be condemned erroneously. In the course of time, several conceptual tests have been developed in economic literature with the aim of correctly distinguishing between legitimate and predatory pricing practices. These tests include the no-economic-sense test and the as-efficient-competitor test, which were later complemented and to some degree replaced by the Areeda

66 See e.g. Easterbrook, Predatory Strategies and Counterstrategies (1981) 48 U. Chicago Law Rev 263, 334; Oliver E Williamson, 'Predatory Pricing: A Strategic and Welfare Analysis' (1977) 87(2) Yale Law Journal at 284 -286; P. Bolton, J. F. Brodley and M. H. Riordam, ' Predatory Pricing: Strategic Theory and Legal Policy' (2000) 88(8) Georgetown Law Journal, 2239; Gunnar Niels, Helen Jenkins and James Kavanagh, *Economics for Competition Lawyers* (2nd Ed, Oxford press publishing, 2016) at 171-178; Roger Van Den Berg, *Comparative Competition Law and Economics*, (Edward Elgar, 2017) at 331-340.

67 Commission Guidance paper on art. 102 TFEU, *supra* (n. 64) paras. 63-73.

and Turner test.[68] Such tests gradually gained the support of the antitrust community around the world including the EU where a dedicated legal test was introduced through case law.[69]

A. Predatory pricing in EU competition law

The EU legal framework for assessing predatory price settings was established by the CJEU in *AKZO v. Commission*,[70] where cost benchmarks resembling those of Areeda and Turner were introduced. Accordingly, when a dominant undertaking's prices are below AVC these are presumed to be predatory. When the pricing of products or services is above AVC but below ATC it can be considered part of a predatory strategy if there is proof of intent to eliminate competition.[71] In this regard the legal test set in *Akzo* can be said to incorporate the insights of the previously mentioned tests. Setting prices below AVC only makes economic sense for predatory reasons, while prices between AVC and ATC may still leave room for price competition by as efficient competitors, at least in the short term.[72] Requesting proof of predatory intent in the latter case is then quite reasonable, as such pricing strategies may stem from legitimate motives and follow a sound economic logic.[73] Remarkably, unlike in the case of US antitrust, the potential for recoupment does not constitute a criterion of the legal test for establishing predatory pricing under EU law.[74]

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68 Gunnar Niels, Helen Jenkins and James Kavanagh (2016) *supra* (n. 66) at 159-160; Robert O'Donghue and Jorge Padilla, *The law and Economics of Article 102 TFEU* (3rd Edition, Hart Publishing, 2020) at 289-294; Philip Areeda and Donald F. Turner, 'Predatory Pricing and Related Practices under Section 2 of the Sherman Act' (1975) 88(4) Harvard Law Review 697.

69 On the implementation of the various predation test around the world see International Competition Network, ' Report on Predatory Pricing' (2007), pp. 10 < http://old.internationalcompetitionnetwork.org/uploads/library/doc354.pdf> accessed 5 Oct. 2020.

70 Case C- 62/86 *AKZO v. Commission* [1991] ECLI:EU:C:1991:286 paras. 70-74; Case T-83/91 *Tetra Pak International SA v Commission* [1994] ECLI:EU:T:1994:246, para. 148-156; Case C-333/94P *Tetra Pak Internaional SA v Commission* [1996] ECLI:EU:C:1996:436, paras. 40-44; Case C-209/10 *Post Danmark* [2012] ECLI:EU:C:2012:172 para. 27; Case C-202/07P, *France Telecom SA v Commission* [2009] ECLI:EU:C:2009:214 paras.108-111.

71 Ibid.

72 The CJEU also seems to believe so, see Case C-209/10 *Post Danmark* [2012] ECLI:EU:C:2012:172, para. 38.

73 Ibid.

74 Case T-83/91 *Tettra Pak* [1994] ECLI:EU:T:1994:246, para 150; Case C- 333/94P *Tetra Pak International SA v Commission* [1996] ECLI:EU:C:1996:436, para. 44; Case T-340/03, *France Telecom SA v Commission* [2007] ECLI:EU:T:2007:22, paras. 226-228 confirmed later in Case C-202/07P, *France Telecom SA v Commission*, [2009] ECLI:EU:C:2009:214 paras.110-113; Gunnar Niels, Helen Jenkins and James Kavanagh (2016) *supra* (n 66) at 171-175; Roger Van Den Berg (2017) *supra* (n 66) at 347-348; Nevertheless, evidence that recoupment is unlikely or unfeasible may still carry some evidentiary weight in cases where the intent of the dominant undertaking cannot be presumed to be anti-competitive, see Case C-202/07P, *France Telecom SA v Commission* [2009] ECLI:EU:C:2009:214 para. 111.

Although *Akzo* is often addressed as the seminal case for predatory pricing abuses, it does not go so far as to require that the AVC and ATC cost benchmarks are applied in all predatory pricing cases. The European Commission notes in its Guidance paper, that it may deviate from the cost benchmarks applied in *Akzo* as other benchmarks may sometimes be more suitable for capturing the logic behind the judgment.[75] Therefore, substantiating a finding of predatory pricing requires sufficient evidence to show either (i) that the financial sacrifice willingly incurred by the dominant undertaking through its price setting is unlikely to be explained by any other reason than eliminating competition; or (ii) that such sacrifice is capable of excluding as efficient competitors in the long term *and* is part of a plan to eliminate a competitor. The manner in which the standard of proof for this test may be met should, however, be form free as each case may involve diverging circumstances that impact the reliability of the evidence and economic cost price test used.[76]

Applying the logic of the test established in the *Akzo* case to the pricing practices of online platforms, therefore, requires taking into account the special characteristics of such undertakings and the nature of competition in the markets they compete in. Doing so requires not only adjusting the mode of application of the Akzo test but also relying on other cost benchmarks that are better suited for assessing the commercial reality of such entities.

B. Applying the legal test of predatory pricing to online platforms

The most important aspect that needs to be taken into account when dealing with the pricing practices of online platforms is that the price charged by the platform for its (matchmaking) services is divided among two or more separate customer groups. It is therefore critical that the entire pricing **structure** and **level** of the (matchmaking) service are taken into account rather than just the side that exhibits a suspiciously low price.[77] As previously discussed, skewed pricing structures are needed for optimizing the balance between the demands of the various customer groups of the (matchmaking) service in a manner that maximizes profit. Where this results in a price setting of zero for a customer group, it means that the cost for the matchmaking services are retrieved from the other customer group(s) of the service.[78] Such circumstances should not be seen as an indication that the

75 Commission Guidance paper on art. 102 TFEU, *supra* (n 64) paras. 62-67.

76 See overview of critique on these tests in Robert O'Donghue and Jorge Padilla (2020) *supra* (n 68) at 279-293.

77 Julian Wright (2003) *supra* (n 4); David S. Evans and Richard Schmalensee (2013) *supra* (n 60) at 33-35; Amelia Fletcher,' Predatory pricing in two-sided markets: a brief comment', (2007) 3(1) Competition Policy International 1.

78 David S. Evans and Richard Schmalensee (2013) *supra* (n 60) at 33-35; Fletcher (2007) *supra* (n 77) at 4-5.

concerned platform is pricing its service in a predatory manner with regard to the zero priced customer group. Finding an indication of abuse in such a situation would entail a flawed interpretation of the logic of the *Akzo* case since providing zero priced access to one customer group does not mean that the platform is providing its services at a loss.

Instead, the *Akzo* test should be applied to the entire pricing level of the matchmaking interaction or functionality provided by the online platform.[79] Accordingly, if the *Akzo* test were to be applied literally, one could speak of predatory pricing if the sum of the compensation, coming in from all the sides of the functionality, is below the AVC of the online platform for providing this service.[80] Making this adjustment to the analysis of predatory pricing will make it better suited for the business reality of platforms and the manner in which they create their profits. It is only when a certain interaction or functionality does not generate sufficient revenue to cover the costs incurred by the platform for enabling such interaction that one can say that a platform is incurring a loss it could otherwise avoid; meaning that such practices will fail the no economic sense test. The manner in which this adjustment to the application of the *Akzo* logic is performed depends, however, on how the relevant market for such interaction or functionality has been defined. In the case of Uber who has been confronted with claims of predatory pricing, this matter is not all too problematic, as Uber only facilitates one matchmaking interaction, namely allowing consumers to book chauffeurs. Therefore, the relevant market would only have to be defined with regard to this interaction and the cost-price analysis will only involve the incurred costs and generated revenue from this functionality. In practice, however, many platforms may facilitate more than one (matchmaking) interaction or functionality such as in the case of Booking.com, which allows consumers to book hotel rooms, attractions and rental cars. Accordingly, if Booking.com were to face a predatory pricing claim from other hotel booking platforms for charging far too low commission fees from hotel owners, the legal analysis of such a claim will have to firstly address the manner in which the relevant market for such service is defined.

The first option is that each of the interactions facilitated by Booking.com is considered part of a separate (related) market. In such a case the cost-price analysis will be performed for each of the separate services offered by Booking.com provided that dominance can be established with regard

79 Stefaan Behringer and Lapo Filistrucchi, Areeda-Turner in two-sided markets' Tilec Discussion paper No.2014-024 < https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2454392> accessed 22 Sep. 2020. The authors also show the consequences of not following this approach based on previous cases on newspapers. The author make their findings with regard to newspaper markets which are two-sided, these can however be applied by analogy to online platforms which are often multi-sided.

80 Fletcher (2007) *supra* (n 77) at 4-5.

to one of them. When dominance is established in a different market than the one where the alleged predatory practices take place, an element of leveraging and / or cross-subsidization should be provided.[81] The second option would be to define the relevant market for Booking.com's services as a package, the market than being that of online hotel portals.[82] In this second scenario, the cost-price analysis would assess the profitability of all the offered services and dominance would have to be established with regard to the hotel portal market. Although the application of the predation threshold, namely offering a service at a cost bellow AVC, is the same in both scenarios, the intervention moment may differ, as establishing dominance will require different market conditions. Furthermore the predation analysis will also differ significantly as the second approach allows undertakings to pile together the costs and profits of their various services.[83] This second approach should therefore be applied with caution and in market conditions that display signs of competition on packages of services or functionalities. Otherwise, undertakings that only provide comparable services on a standalone basis may be unduly disadvantaged as they may not be able to viably sustain similar price levels.[84] In situations where the market has not clearly shifted to competition among bundles it is advisable to apply the cost price test to each of the services and /or products offered by the platform individually as well as collectively across two or more services and/or products.[85] This approach is particularly relevant in the case of platforms that offer multiple products or services that share a significant amount of common costs, as it otherwise enables these platforms to allocate their costs in manner that allows them to avoid legal scrutiny.[86]

In addition to adjusting the mode of application of the predation test to include the various sides of the platform and / or some of its services, the cost measurements used for assessing predation may also require adjustment and the extension of the *Akzo* predation presumption to other cost

81 Gunnar Niels, Helen Jenkins and James Kavanagh (2016) *supra* (n 66) at 180-181.

82 See in this regard the market definition in Bundeskartellamt Prohibition decision 20 Dec. 2013 in the case of HRS, B9-66/10; Bundeskartellamt Prohibition decision, 22 Dec. 2015, in the case of Booking.com B.V, B9-121/13; Competition Commission COMCO prohibition decision, 19 Oct. 2015, Online-booking Platforms for Hotels.

83 In practice this is a common strategy. For example supermarkets often offer known value-items such as eggs, bread and milk at a loss to draw in more customers and cover these costs with other high margin items in the store.

84 Cyril Ritter, 'Does the Law of Predatory Pricing and Cross-Subsidisation Need a Radical Rethink?' (2004) 27(4) World Competition, at 622-626; Robert O'Donghue and Jorge Padilla, *The law and Economics of Article 102 TFEU* (2nd Edition, Hart Publishing, 2013) at 319-320.

85 See Willieam J. Baumol, 'Predation and the logic of the Average Variable Cost Test' (1996) 39(1) The Journal of Law & Economics, 49. Although Baumol advocates in favor of a different cost test in his paper, the AVC test is the logical basis of his arguments.

86 Ibid, at 60-61; Robert O'Donghue and Jorge Padilla (2013) *supra* (n 84) at 319-320; Cyril Ritter (2004) *supra* (n 84) at 622-626.

benchmarks. The need for adjustments stems from the fact that online platforms will often display low variable costs and multiproduct offers.[87] These two characteristics are considered to be the main drawbacks behind the AVC benchmark used in *Akzo* when assessing predation.[88]

Creating a platform may involve some significant fixed costs,[89] however, once the platform is created the variable costs of offering certain (matchmaking) services online may be negligible.[90] For example, in the case of Booking.com listing additional hotels in its existing data base and reservation system may entail little to no extra cost. By contrast, adding apps to an app store may involve higher variable costs as quality control and review mechanisms need to expand together with the number of apps.[91] Sticking to the cost measurements in *Akzo* in all cases would mean that pricing practices by platforms are likely to escape the presumption of predation since prices can easily be set above AVC.[92] Consequently, finding predation in such cases would often require proof of intent in line with the findings in *Akzo*.[93] Furthermore, when multiple services are offered through on the same platform the concerned platform would be able to allocate the common costs of such services in a manner that may circumvent legal scrutiny.[94]

In order to deal with such situations economic literature has indicated that average avoidable cost (AAC) and long run incremental cost (LRAIC) would be better measurements for assessing predation.[95] The Commission appears to share these views as it indicated that it might deviate from the AVC cost benchmark in favor of AAC and LRAIC when these are better

87 See e.g. Bruno Jullien, 'Two-sided markets and Electronic Intermediaries' (2005) 51(2-3) CESifo Economic Studies 233; Néstor Duch-Brown, 'The Competitive landscape of Online Platforms, JRC technical reports, Digital Economy working paper 2017-04, at 4- 10< https://ec.europa.eu/jrc/sites/jrcsh/files/jrc106299.pdf> accessed 23 September 2020.

88 Robert O'Donghue and Jorge Padilla (2013) *supra* (n 84) at 319-320; Cyril Ritter (2004) *supra* (n 84) at 622-626.

89 E.g. software and system development, purchasing IT hardware and/or virtual computing power, renting or buying office space. See e.g. Anastasia Kompaniets, ' How much does it cost (and the cost structure) to build an app like UberEats' (Uptech) < https://uptech.team/blog/how-much-to-build-app-like-ubereats> accessed 2 Oct. 2020.

90 This is a common characteristic of high technology and network markets. See e.g. Temple Lang, 'European Community Antitrust Law: innovation markets and high technology industries' (1996) 20(3) Fordham International Law Journal 717.

91 See e.g. the review policy in the case of the Apple App Store where Apple reviews all apps and app updates approved for commerce in the App Store < https://developer.apple.com/app-store/review/> accessed 7 Oct. 2020.

92 Robert O'Donghue and Jorge Padilla (2013) *supra* (n 84) at 328-329.

93 Case C- 62/86 *AKZO v. Commission* [1991] ECLI:EU:C:1991:286, paras. 70-71.

94 Robert O'Donghue and Jorge Padilla (2020) *supra* (n 66) at 388-400.

95 Cyril Ritter (2004) *supra* (n 84) at 613; Willieam J. Baumol (1996) *supra* (n 85) at 49; Gunnar Niels, Helen Jenkins and James Kavanagh (2016) *supra* (n 66) at 165-171.

suited for assessing predation.[96] In *Deutsche Post* and *Telefónica* the Commission chose to rely on the LRAIC and explained the logic of choosing this alternative benchmark.[97] The current case law of the EU courts also confirms the possibility of relying on different cost measurements.[98] Accordingly, based on current practice is can be assumed that deviating from the *Akzo* cost benchmarks in the case of online platforms in a manner which captures their economic reality is possible within the existing legal framework. It is unclear, however, whether current practice on the use of alternative cost price benchmarks also implies extending the indication of predation from *Akzo* to such benchmarks, which will be higher than AVC.[99] Extending the scope of the *Akzo* indication by the EU courts to an alternative cost benchmark would require showing that pricing bellow such benchmark can serve no other purpose than predation.[100]

According to the Commission, this assumption can be made in most cases with regard to prices bellow AAC,[101] which indicate that the concerned undertaking would be better off not producing anything than perusing such pricing policies.[102] In the specific case of sectors that involve very high fixed costs and near zero variable cost, the Commission indicated that it may opt for using LRAIC and the benchmark for predation instead.[103] Which of the two benchmarks is best suited to be applied will then depend on the ratio between fixed and variable costs in each case. It remains to be seen whether the EU courts share these views, as not extending the indication

96 Commission Guidance paper on art. 102 TFEU, *supra* (n 64) para. 26; European Commission, 'Discussion paper on the application of Article 82 of the Treaty to exclusionary abuses (2005), at section 6 < https://ec.europa.eu/competition/antitrust/others/discpaper2005.pdf > accessed 6 Oct. 2020; European Commission, 'Notice on the application of competition rules to access agreements in the telecommunication sector – framework, relevant markets and principles [1998] OJ C265, 114-115.

97 *Deutsche Post Ag*, (Case COMP/35.141) Commission decision of 20 Mar. 2001 paras. 35-48; *Wanadoo España v Telefónica* (Case COMP/38.784) Commission decision of 4 Jul. 2007, paras. 319-325.

98 Case C-209/10 *Post Danmark* [2012] ECLI:EU:C:2012:172 paras. 31-44; Case T-340/03, *France Telecom SA v Commission* [2007] ECLI:EU:T:2007:22, paras. 131-154.

99 Both the AAC and the LRAIC benchmarks include the all variable costs and part of the fixed costs involved in offering the product or service subject to the predation investigation.

100 Case C- 62/86 *AKZO v. Commission* [1991]ECLI:EU:C:1991:286, para. 71. The wording of the CJEU clearly states that a dominant undertaking will have no interest in pricing its products or services under AVC except for purpose of eliminating competitors. This was later repeated in Case C-202/07P, France Telecom SA v Commission [2009] ECLI:EU:C:2009:214 para. 109.

101 Commission Guidance paper on art. 102 TFEU, *supra* (n 64) paras. 64-65.

102 Gunnar Niels, Helen Jenkins and James Kavanagh (2016) *supra* (n 66) at 166.

103 European Commission, 'Discussion paper on the application of Article 82 of the Treaty to exclusionary abuses (2005) *supra* (n 96) at section 6, para. 127; this is also the suggested solution in academic literature. See e.g. P Bolton, JF Breadly and MH Riordan, ' Predatory Pricing: Strategic Theory and Legal Policy' (2000) 88(8) Georgetown law Journal 2239.

of predation to other cost benchmarks may entail in the case of platforms that proof of intent will often, if not always, be required. Such an outcome is undesirable since it would make the finding of predatory practices more difficult and de facto create a category of undertakings that enjoy more legal protection due to a higher standard of proof for predation. Finally, on the matter of assessing intent, to the extent that such evidence may be required, it is also important that such evidence is assessed in a manner that takes into account the two or multisided nature of the concerned platform.[104]

Similar to pricing, the anti-competitive intent with respect to one side of the platform may be materialized through predatory or exclusionary behavior on other sides of the platform. For example, in the context of mobile app stores, eliminating the option of third party app stores for Android or iOS allows the incumbents in these markets to obtain (quasi) monopoly power with respect to users and app developers. Such an outcome can, however, be achieved via predatory practices on either side of the app store platform such as: reduced transaction fees for app developers, payments to device producers to ensure pre-installation or credits and discounts for users.[105] Accordingly, when dealing with evidence of alleged anti-competitive intent, the impact of the pursued practices should be analyzed within the context of the multisided business model of the concerned platform. In this regard, the Commission indicates that when looking to establish an anticompetitive intent it will take into account both direct and indirect evidence of predatory strategy.[106]

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104 Stefaan Behringer and Lapo Filistrucchi *supra* (n 79) at 5, 19-20. The authors indicate that predation does not have to entail two- sided below cost pricing practices but may also involve other two-sided predatory strategies. On this see also Fletcher (2007) *supra* (n. 77), discussing predatory price structures rather than levels. This can occur for example when a switch is made to zero pricing that did not exist during the early days of the platform launch, adopting such zero pricing strategy can create barriers to entry in some cases and raise such barriers in other cases. Zero priced services goods can also constitute a barrier of entry to the market as well as tool to overcome other barriers of entry. See John M. Newman,' Antitrust in Zero-Price Markets: Foundations' (2014) 164 University of Pennsylvania Law Review 149; Michal S. Gal and Daniel L. Rubinfeld 'The Hidden Costs of Free Goods: Implications for Antitrust Enforcement' (January 2015). UC Berkeley Public Law Research Paper No. 2529425; NYU Law and Economics Research Paper No. 14-44. Available online at: < https://ssrn.com/abstract=2529425> accessed 10 Nov. 2020.

105 Discounts to app developers would facilitate switching to the incumbent app store that in turn will lead to a similar switch pattern by users. Credit or discounts to users would enable the reversed situation where the user switch triggers a switch by app developers. Finally payments to device producers (in the case of Android) can facilitate the pre-installation of the incumbent app store and prevent the pre-installation of third party app stores. All three practices would lead to the same outcome, namely the foreclosure of third party app stores.

106 Commission Guidance paper on art. 102 TFEU, *supra* (n 64) para. 66; European Commission, ' Discussion paper on the application of Article 82 of the Treaty to exclusionary abuses (2005) *supra* (n 96) at section 6, paras. 113-123.

Direct evidence of a predatory strategy will of course be difficult to find, particularly now that companies have learned to avoid the use of incriminating language.[107] Accordingly, indirect evidence of intent is more likely to play a role in future predatory pricing cases. Such evidence should ideally indicate whether the pricing strategy makes sense commercially given the circumstance on the market. In the context of platforms, evaluating whether setting low prices makes sense commercially would require looking at the competitive relation between such actors, which is indicated by the participation patterns described earlier. Accordingly, prices bellow ATC may make sense in situations where multisided single homing patterns are identified since these are often an indication of highly competitive markets.[108] By contrast, pricing bellow ATC in multisided multi-homing or competitive bottleneck scenarios would be at the very least suspicious since such market conditions are associated with relaxed competition and relatively higher prices.[109]

In cases where such assessment leads to inconclusive outcomes further evidence concerning the likelihood of foreclosure will be required.[110] In the context of platforms, such additional evidence should indicate the likelihood that equally efficient competitors can reach and / or maintain critical mass when confronted with the potentially predatory pricing strategy[111]. The inability to reach or maintain critical mass indicates the competing platform cannot viably co-exist with the dominant platform. Similarly to the different kinds of evidence discussed above, such additional evidence should always take into account the multi-sided nature of the concerned platform.

5.3.2 Excessive pricing

Excessive pricing can be said to be the most controversial forms of undesirable practices in the context of competition policy. When viewed through the lens of (EU) competition policy, excessive prices can be considered a

107 See e.g. Adrianne Jeffries,' To Head Off Regulators, Google Makes Certain Words Taboo' (The Markup, August 7 2020) < https://themarkup.org/google-the-giant/2020/08/07/google-documents-show-taboo-words-antitrust> accessed 8 Oct. 2020.

108 See e.g. R. Poolsombat and G. Vernasca (2006) *supra* (n 61).

109 Ibid.

110 Commission Guidance paper on art. 102 TFEU, *supra* (n 64) para. 66; European Commission, ' Discussion paper on the application of Article 82 of the Treaty to exclusionary abuses (2005), at section 6, paras. 117-123.

111 This suggestion is based on the assumption that the affected markets in such a case are markets where only platforms are active. In cases where the markets involved entail a mix of platform and non platform entities the assessment of foreclosure should combine a mixed approach that covers the foreclosure of both platform and non-platform entities in in light of their respective legal and economic context. For an extensive discussion on the definition of the relevant market in the case of online platforms see

textbook example of an outcome that such policy would commonly aim to prevent.[112] Nevertheless, the intervention in excessive pricing scenarios by competition law authorities and national courts is problematic since it gives the impression that these actors are better than (free) markets at keeping prices below monopoly levels.[113] According to experts, there are numerous practical and substantive reasons for competition authorities and courts to stay away from excessive pricing cases.[114] The main arguments against enforcement are (i) the prohibition of excessive pricing and their enforcement may reduce firms' incentives to invest and innovate;[115] (ii) identifying the excessiveness of prices in practice is difficult to achieve and prone to enforcements errors;[116] (iii) excessive prices are countered and corrected by new market entries triggered by such high prices.[117] Although these arguments appear to represent the prevailing sentiment in academia, they are not undisputed. It has been argued that excessive prices do not trigger entry as such and therefore the self-correcting potential of markets should not be overestimated.[118] The practical difficulties associated with identifying excessive pricing were found to overlap greatly with exclusionary pricing abuses such as predatory pricing. Furthermore, the weight of the claim that enforcement intervenes with the incentives investments and innovation has been called into question.[119] This difficult debate on enforcement priorities led to the development of multiple additional tests that would

112 For an extensive discussion about the intentions behind the formulation of art. 102 TFEU see Pinar Akman, 'Searching for the Long-Lost Soul of Article 82 EC' (2009) 29(2) Oxford Journal of Legal Studies 267. According to Akman the primary goal of the drafter of art. 82 EC (now 102 TFEU) was to tackle exploitative practices.

113 Thomas Ackermann, 'Excessive pricing and the goals of competition law' (2012) in Daniel Zimmer (ed.) *The Goals of Competition Law* (Cheltenham, UK, Edward Elgar Publishing) at 349.

114 See e.g. Ariel Ezrachi and David Gilo, 'Excessive Pricing, Entry, and Investment: Lessons from the Mittal Litigation' (2010) 76(3) Antitrust Law Journal 873; Liyang Hou, 'Excessive Prices within EU competition Law' (2011) 7(1) European Competition Journal, 47.

115 See e.g. M. Motta and A. de Streel, Exploitative and exclusionary pricing in EU law in Claus-Dieter Ehlermann and Isabela Atanasiu (eds), *European Competition Law Annual 2003, What Is an Abuse of a Dominant Position?* (Oxford, Hart, 2006).

116 See e.g. David S. Evans and A. Jorge Padilla, 'Excessive Prices: Using economics to Define Administrable Legal Rules' (2005) 1(1) Journal of Competition Law and Economics 97.

117 See e.g. A. Fletcher and A. Jardine, 'Towards an Appropriate Policy for Excessive Pricing' in Claus-Dieter EHLERMANN and Isabela ATANASIU (eds), European Competition Law Annual 2007: A reformed approach to Article 82 EC (Oxford, Hart Publishing, 2008) 534.

118 Ariel Ezrachi and David Gilo, Are Excessive Pricing Really Self-Correcting?' (2009) 5(2) Journal of Competition law and Economics 249.

119 See Ariel Ezrachi and David Gilo (2010) *supra* (n.111) at 894-896. According to these authors, not prohibiting excessive pricing due to this reason would translate into creating an investment and innovation defense argument. Since such an argument would not hold with respect to exclusionary practices, there is no reason why it should be accepted for excessive pricing.

help minimize undesired enforcement outcomes.[120] While the tests vary in their strictness, they share some core criteria such as the presence of high (and lasting) barriers to entry,[121] very significant market power,[122] and the absence of sector regulation.[123] Despite their merit, these tests did not become part of practice.[124] However, the reluctance and caution towards intervening in excessive pricing cases, which they seem to echo, represents to a great extent the ruling sentiment in both practice and academia.

A. Excessive Pricing in the EU

The enforcement of excessive pricing at the EU level has not been given the priority one would expect from an abuse that can be said to be explicitly mentioned in art. 102 TFEU. This is particularly true with regard to exploitative excessive pricing,[125] which seem to fall outside the priority scope of the European Commission.[126] Nevertheless, case law on this topic can be found on the EU as well as at the Member State level.

The first case to deal with excessive pricing before the EU courts was General Motors where the Court introduced the possibility that a dominant undertaking may abuse its position of power when it imposes a price '*which is excessive in relation to the economic value of the service provided*'.[127]

120 See some of the main ones in David S. Evans and A. Jorge Padilla, 'Excessive Prices: Using economics to Define Administrable Legal Rules'(2005) 1(1) Journal of Competition Law and Economics 97; L.H Roller, 'Exploitative Abuses' in Claus-Dieter Ehlermann and Isabela Atanasiu (eds), *European Competition Law Annual 2007: A reformed approach to Article 82 EC* (Oxford, Hart Publishing, 2008), 525; E. Paulis, 'Article 82 and Exploitative Conduct' in Claus-Dieter Ehlermann and Isabela Atanasiu (eds), *European Competition Law Annual 2007: A reformed approach to Article 82 EC* (Oxford, Hart Publishing, 2008), 515; M. Motta and A. de Streel, 'Excessive Pricing in Competition Law: Never Say Never?' in Swedish Competition Authority (ed.), *The Pros and Cons of High Prices* (Stockholm, Konkurrensverkt, 2007).

121 Common to all tests.

122 M. Motta and A. de Streel (2007) require super dominance; Evans and Padilla (2005) require near monopoly power; Paulis (2007) does not include this as a requirement but assumes super dominance is evident in such cases.

123 Shared by M. Motta and A. de Streel (2007), Evans and Padilla (2005) and L.H Roller (2007). On this see also Thomas Ackermann (2012) n. 121 which uses this criteria to indicate the logic behind the different approaches to excessive pricing in the EU and US.

124 OECD report on Excessive pricing of 7 Feb. 2012 DAF/COMP(2011)18 at 53.

125 Margin squeeze can also be considered an excessive pricing abuse with the aim of excluding the competitor of the dominant undertaking in related markets. Due to its exclusionary nature it has been considered as one of the enforcement priorities of the EU commission; See Commission Guidance paper on art. 102 TFEU, n. 61, para. 75-90. Nevertheless, case law on this practice also remains limited.

126 See Commission Guidance paper on art. 102 TFEU *supra* (n 64) paras. 1-8. The Commission limited its guidance paper to exclusionary abuses that is also specifically mentioned in the title of the guidance paper itself.

127 Case 26/75, *General Motors Company v Commission* [1975] ECLI:EU:C:1975:150, para 12.

This qualification was repeated in *United Brands*,[128] which is considered the guiding case for dealing with excessive pricing abuses under art. 102 TFEU. The notion of economic value in this context represents a legal qualification encompassing an accumulation of elements that varies from case to case.[129] In order to establish whether the price imposed by the concerned undertaking meets this description, the Court in *United Brands* introduced a two-stage test.

The first stage of the test, further referred to as the excessiveness stage, requires assessing the profit margin of the concerned undertaking is excessive when looking at the difference between the production cost of a product (or the provision of a service) and its selling price.[130] If the profit margin can be considered excessive, the second stage of the test, further referred to as the fairness stage, requires assessing whether the price is unfair in itself or in comparison with the prices of competitors.[131] The two stages of the test are cumulative,[132] however, the fairness stage does not require undertaking both comparison methods.[133]

Adducing sufficient evidence for the *United Brands* test in practice entails relaying on a combination of measurements and comparators all pointing in the same direction. According to the Court in *United Brands*, there is no specific form requirement for the evidence type used in each case.[134] Broadly speaking, however, the case law of the EU and national courts as well as the enforcement practice of the Commission and national competition authorities across the EU exhibit a tendency to rely on the combination of two methods: (i) Price -cost comparisons; and (ii) price comparators. Both methods have been utilized in order to help construct a benchmark price, which would be expected to be charged in a competitive market, against which the price of the dominant undertaking can be measured.

128 Case 27/76, *United Brands Company v. Commission* [1979]ECLI:EU:C:1978:22,, para. 250.

129 See e.g. ATTHERRACES Ltd & Anr v. The British Horse Racing Board & Anr, [2007] EWCA Civ 38.

130 Case 27/76, *United Brands Company v. Commission* [1978]ECLI:EU:C:1978:22, para. 251.

131 Ibid, para. 252.

132 *Scandlines Sverige AB v Port of Helsinborg* (Case COMP/ A.36.568/D3) Commission decision of 23 July 2004, paras. 147-149 and *Sundbusserne v Port of Helsinborg* (Case COMP/ A.36.568/D3) para. 85.

133 Case C-159/08 P *Isabella Scippacercola and Ioannis Trezakis v Commission* [2009] ECLI:EU:C:2009:188, para. 47. Nevertheless, both comparison methods may need to be considered where the concerned undertaking adduces evidence in it favor based on different method than the one used to establish the infringement. See e.g. Flynn Pharma Limited v. Competition and Market Authority and Pfizer Inc. v. Competition and Markets Authority, Nos. 1275-1276/1/12/17, [2018] CAT 11, paras. 265-268.

134 Case 27/76, *United Brands Company v. Commission* [1978] ECLI:EU:C:1978:22, para. 253.

The price-cost comparison was introduced in *United Brands* and later applied in multiple cases.[135] Although utilizing this comparison is not formally obligatory,[136] not engaging in a price-cost analysis at all may be fatal for a case when the possibility to use this method exists.[137] The application of this method in practice can be, however, very challenging. The definition of cost has no predefined meaning in the case law and there is no agreement as to what constitutes a reasonable or conversely an excessive profit margin.[138] Therefore, when attempting to construct a price-cost comparison in practice, the first choice to be made is selecting the correct measurement of costs.[139] Due to the differences in cost structures and business models across sectors the relevance of measurements benchmarks will vary across cases.[140] In the absence of clear requirements, the best approach would entail combining multiple methods with the hope that their results point in one direction.[141] Like in the case of predatory pricing, the choice of the cost benchmark also requires deciding what to do about fixed and sunk costs as well as common costs,[142] leading to a similar recommenda-

135 See e.g. Case 298/83, *CICCE v Commission* [1985] ECLI:EU:C:1985:150; Joint Cases 110/88, 241/88, 242/88, *Lucazeau v SACEM* [1989] ECLI:EU:C:1989:326 and others.

136 Case 27/76, *United Brands Company v. Commission* [1978] ECLI:EU:C:1978:22, para. 253.

137 Ibid, paras. 254-267. The Court pointed out that the Commission could and should have attempted at least to provide such a price cost analysis. By failing to do so and relying only on territorial comparators the CJEU found that the Commission did not have sufficient evidence to find an abuse.

138 Alla Pozdnakova, 'Excesive Pricing and the Prohibition of the Abuse of Dominant Position under Article 82 EC' (2010) 33(1) World Competition, at 124-126; It is only in the exceptional situation of cases involving sector specific regulations that legal guidelines for cost calculations may be found in a more concrete form. See e.g. Case 66/86, *Ahmed Saeed Flugreisen and Silver line Reisburo GmbH v Zentrale zur Bekampfung unlauteren Wettberbs e. V*. [1989] ECLI:EU:C:1989:140, para. 43.

139 In *United Brands* the Court considered that to be the total cost of production is a suitable benchmark when the undertaking produces a single product, see Case 27/76, *United Brands Company v. Commission* [1978] ECLI:EU:C:1978:22, para. 254-255.

140 See e.g. *Albion Water Limited v Water Services Regulation Authority* [2009] CAT 31. In this case the CAT assed the evidentiary value of several cost benchmarks including: Average accounting Cost plus, Local Accounting Costs and Long-Run Incremental Costs. The latter was considered to be unsuitable due to facts and circumstances of the case.

141 Robert O'Donghue and Jorge Padilla (2020) *supra* (n 68), pp. 931-932, 947-948.

142 See e.g. *Scandlines Sverige AB v Port of Helsinborg* (Case COMP/ A.36.568/D3) Commission decision of 23 July 2004 paras. 115-121 where the Commission had to make a full allocation of HHAB's common costs; a method also criticized in the context of predatory pricing for lacking accuracy.

tion to use LRAIC as a suitable benchmark.[143] Once the choice is made, the next step is establishing what profit margins are required in order to qualify a price as excessive under the first step of the *United Brands* test.[144] For the profit margin to be abusive it needs to be sufficiently significant and persistent in context of the market(s) under investigation.[145] Only then can it be said that such prices are likely to be a result of opportunities arising by virtue of the position of dominance possessed by the concerned undertaking.[146] It is interesting to note in this regard that in situations where the cost-price analysis is not possible due to the circumstances of the case, the CJEU in *SABAM* would appear to be willing to accept the abusive nature of pricing practices based on the methodology used to set prices by the concerned undertaking.[147]

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143 OECD report on Excessive pricing of 7 Feb. 2012 DAF/COMP(2011)18, pp. 67-69; In practice see e.g. The Competition Appeal Court of South Africa, Case No. 70/CAC/Apr07 in the matter of Mittal SA, paras. 48-49. The CAC applied the LRAIC benchmark as a floor price of an efficient firm above which the suspicion of excessiveness may arise, however, no guidance was given as to how much should this floor be exceed in order for its to be abusive. Despite the case being for non-EU jurisdiction the legislative similarities between EU and South African competition law allow to draw parallels on this matter. For a more extensive discussion see Claudio Calcagno and Mike Walker, 'Excessive Pricing: Towards Clarity and Economic Coherence' (2010) 6(4) Journal of Competition law & Economics, 891.

144 On this see also *Albion Water Limited v Water Services Regulation Authority* [2009] CAT 31, para. 263.

145 Case C-177/16, *Latvian Copyright*, [2017] EU:C:2017:689, paras. 55-56; See also the opinion of AG Wahl in this case on this matter in Case C-177/16, *Latvian Copyright,* [2017] EU:C:2017:286, para. 107; Robert O'Donghue and Jorge Padilla (2020) *supra* (n 68) at 929; To help with the challenge of producing such evidence in practice complementary evidence concerning rates of return of capital as well as return of sales have also been used to establish the excessiveness of profits (with varying success). See OECD report on Excessive pricing of 7 Feb. 2012 DAF/COMP(2011)18, pp. 63-66 and in practice e.g. *Deutsche Post Ag – Interception of cross border mail* (Case COMP/C-1/36.915) Comission decision of 25 Jul. 2001, paras. 159-165; *Albion Water Limited v Water Services Regulation Authority* [2009] CAT 31, pp. 76-79. ; Flynn Pharma Limited v. Competition and Market Authority and Pfizer Inc. v. Competition and Markets Authority, Nos. 1275-1276/1/12/17, [2018] CAT 11, para. 311; *Scandlines Sverige AB v Port of Helsinborg* (Case COMP/ A.36.568/D3) Commission decision of 23 July 2004, para. 152.

146 See Case 27/76, *United Brands Company v. Commission* [1978] ECLI:EU:C:1978:22, para. 249. The fact that an undertakings' revenues exceed the costs of one or more of its products or services does not suffice to find an abuse as a reasonable profit should be acceptable in any sector. See e.g. *Scandlines Sverige AB v Port of Helsinborg* (Case COMP/A.36.568/D3) Commission decision of 23 July 2004, para. 142.

147 Case C-372/19, *Belgische Vereniging van Auteurs, Componisten en Uitgevers CVBA (SABAM) v Weareone.World BVBA and Wecandance NV* [2020] ECLI:EU:C:2020:959. If the methodology has little or no rational links to the economic value of the product or service provided by the dominant undertaking such pricing practices my still be considered unfair for the purpose. Accordingly, the prices from such methodology are considered by the CJEU to fulfill both prongs of the United Brands test.

In addition to the cost- price assessment method, price comparators have also played an important role in the assessment of excessive prices. Generally speaking,[148] these comparators entail: (i) comparisons across competitors;[149] (ii) geographic price comparisons;[150] and (iii) comparisons over time.[151] These comparison methods can be used for both stages of the United Brands test.[152] The comparisons can be made with respect to products or services that are either in or out of the relevant market defined for the product or service subject to the abuse analysis.[153] In terms of reliability, the former are more valuable than the latter, however, in both cases any use of comparisons needs to be done on a consistent basis.[154] The selection of comparison elements needs to be done based on objective, appropriate and verifiable criteria.[155]

148 OECD report on Excessive pricing of 7 Feb. 2012 DAF/COMP(2011)18 at 62-63, 70-71.

149 This method of comparison concerns offers made by competitors of the dominant undertaking that is particularly relevant for the second stage of the United Brands test. However, since markets with dominant undertakings inherently display a limited number of competitors, the data needed for this comparison often misses in practice.

150 This form of comparison concerns an assessment of the prices set by concerned undertaking across various geographic areas, see e.g. Case 27/76, *United Brands Company v. Commission* [1978] ECLI:EU:C:1978:22, paras. 238-239. The selection of areas must be done on a consistent basis and must take account of the objective dissimilarities between the compared territories of the concerned Member States, see Joint cases 110/88, 241/88 and 242/88 *Francois Lucazeu and Others v SACEM* [1989] ECLI:EU:C:1989:326, para. 25; Case 395/87, *Ministeire Public v Tournier* [1989] ECLI:EU:C:1989:319, paras. 38-46; Case C-177/16, *Latvien Copyright*, [2017] EU:C:2017:689, paras. 38-51. During such comparisons the difficulty always arises of selecting the correct territory as the one displaying the competitive benchmark price. In United Brands the Commission chose UBC's prices for Ireland, which were the lowest in the EU, as benchmark price. This selection that was not supported by the Court because it was not well motivated. See Case 27/76, *United Brands Company v. Commission* [1978] ECLI:EU:C:1978:22, paras. 260-265.

151 Such comparisons require looking at price increases introduced by the concerned undertaking over time. Depending on the circumstances such increases can be found to be either justified or evidence of abusive conduct. See e.g. Case COMP/D3/38469 Complaint relating to charges levied by AIA SA and the Olympic Fuel Company SA, Commission decision of 02 May 2005, para. 71-76; Case 226/84 *British Leyland Public Limited Company v Commission* [1987] ECLI:EU:C:1986:421, para. 28. Such a comparison can be extended to interchangeable products or services offered by the concerned undertaking, see e.g. Case 27/76, *United Brands Company v. Commission* [1978] ECLI:EU:C:1978:22, para. 240-245 and Case 226/84 *British Leyland Public Limited Company v Commission* [1986] ECLI:EU:C:1986:421, para. 28 or products or services in related markets that share a great deal of common costs see e.g. *Deutsche Post Ag – Interception of cross border mail* (Case COMP/C-1/36.915) (2001/892/EC) Commission decision of 25 Jul 2004, paras. 159-165. Due to a lack of other data, the Commission estimated DP costs for cross boarder post-delivery based on its cost for domestic post-delivery.

152 Peter Davis and Vivek Mani,'The Law and Economics of Excessive and Unfair Pricing: A Review and a Proposal' (2018) 64(4) The Antitrust Bulletin at 414, 423.

153 Liyang Houn (2011) *supra* (n 114) at 63.

154 Case C-177/16, *Latvien Copyright*, [2017] EU:C:2017:689, para. 44.

155 Ibid, para. 51.

Finally, it is important to recall that the purpose of applying all these methods is to prove that the prices charged by the dominant undertaking exceed the economic value of the product and/ or service it offers.[156] It is against his final benchmark that the evidence produced based on the above-mentioned methods needs to be assessed.[157] In this regard it is important to keep in mind that the concept of economic value encompasses more than the accumulation of costs incurred by the dominant undertaking in order for it to offer the product or service under investigation. According to the Commission, the economic value of a product or service may also include non-cost related factors such as the demand for the product or service.[158] Therefore, when reaching the final ruling with regard to the permissibility of the investigated prices, competition authorities have quite some discretion when accounting for the specific characteristics of the respective products or services offered by the dominant undertaking.[159]

B. Applying the EU prohibition on excessive pricing to online platforms

The application of current practice on excessive pricing to online platforms will entail a cumbersome process due to the skewed pricing schemes that are inherent to them and make the United Brands test inapplicable in its current form. The respective practical and conceptual challenges must, however, be overcome as the dynamics of the markets in which platforms operate are often prone to concentration and high barriers to entry that constitute the primary grounds for enforcing the prohibition of excessive prices. Ensuring that the United Brands test and the case law on excessive pricing remains operational requires translating the rationale behind such test and case law to the characteristics of online platforms and the dynamics of the markets in which they operate.

The first step in adapting the United Brands test to online platforms is acknowledging that their reliance on skewed pricing schemes means that the prices set by the platforms for each of their customer groups do not necessarily represent the costs of serving such customers. This is due to the fact that such pricing schemes are used to solve the coordination problem involved in attracting multiple customer groups to the platform in order earn a profit on their participation. Since platforms can only derive a profit from their service if they successfully match members from two or more customer groups, their price scheme is set in a manner that increases the

156 Case 27/76, *United Brands Company v. Commission* [1978] ECLI:EU:C:1978:22, para. 250.
157 OECD report on Excessive pricing of 7 Feb. 2012 DAF/COMP(2011)18 at 56; Alla Pozdnakova (2010) *supra* (n 138) at 119-120.
158 *Scandlines Sverige AB v Port of Helsinborg* (Case COMP/ A.36.568/D3) Commission decision of 23 July 2004, paras. 209-212, 226- 228.
159 Ibid, para. 228.

number of members of each group.[160] In this context, it is not important that each customer group covers its own cost as long as the platform generates a profit from each (matchmaking) functionality as a whole. As previously mentioned, this means that in practice some customer groups pay little to nothing for their use of the platform as the costs involved in serving these customers are covered by members of other platform customer groups.

Under these circumstances it quickly becomes clear that applying the United Brands test to each customer group in isolation could lead to misleading results. This is particularly evident with the first prong of the United Brands test. The subsidizing customer groups that are charged for their participation will always be found to be subject to prices that (significantly) exceed the cost involved in serving them the respective platform service. Such an outcome may, however, be solely the result of the costs division across the customer groups of the platform and not a manifestation of abusive use of market power by the platform. Applying the test in isolation to such parties would make it impossible to distinguish the pricing practices that truly deserve to be caught by the prohibition of excessive pricing and those that simply reflect a legitimate business practice in the commercial context of platforms. Furthermore, following such an approach would lead to an opposite result for the subsidized customer group that is not charged for using the platform. Such a group would never be able to claim that it is subject to excessive pricing since the cost of serving such a group is always more than zero. This result may appear sensible at first sight; however, it excludes the possibility that such customer groups could be harmed by the exploitative pricing practices of a platform, which is not always true as will be discussed.

The intuitive solution for these complications would be to look at the total price charged by the platform for each of its functionalities as a whole in a similar fashion to the case of predatory pricing. Such an approach may, however, be incorrect because it would ignore the difference between the natures of the harm to be prevented by these two abuse grounds. Predatory pricing strategies aim at undermining the ability of undertakings to compete with the dominant undertaking.[161] When assessing the potentially abusive nature and anti-competitive effects of such practices it is then

160 Such increases will however be done in a controlled manner so as to optimally make use of the direct and indirect network effects between the respective customer groups of the platform. Accordingly, platforms would avoid facilitating a disproportional increase of members of a subsidizing customer group where negative direct network effects are present in such a group because it would limit the cross subsidizing of cost between the *subsidized* and *subsidizing* customer group(s). See e.g. Jean J. Gabszewicz, Diedier Laussel, Nathalie Sonnac (2005) *supra* (n 41).

161 By implementing loss making pricing dominant undertakings are able to fend off any competitors which do not have access to similar funds or are not able to significantly cut down on costs.

sensible to look at the entire pricing level of a (matchmaking) service provided by the concerned platform to (some of) its customer groups. In this context it is more important to understand whether the implemented pricing level is commercially viable rather than how such price level is divided across the platforms' customer groups. If the total level of prices is not viable competitors will not be able to enter or remain on the market regardless of the dominant platforms' pricing structure.

The prohibition of excessive prices concerns preventing an entirely different kind of harm, namely the exploitation of the dominant undertakings' customers. Assessing the harm caused by such practices requires looking at the commercial relation between the dominant undertaking and such customers. In the case of platforms, this may entail several separate customer groups that make use of the matchmaking functionalities offered by the platform. For example, on Youtube, the platform customer groups consist of consumers, content creators and advertisers. Since each customer group is subject to a separate set of governance rules and pricing levels, they can all be subject to excessive prices separate from each other. Accordingly, the assessment of the pricing levels applied to each of these customer groups needs to be done individually while taking into account the greater context of the respective functionality. After all, the prohibition on excessive pricing intends to protect all of the dominant undertakings' customers equally. Thus such an abuse should be possible establish (at least in theory) with respect to only one or some of the customer groups the use a specific platform functionality.

Performing the assessment with regard to the pricing level for each matchmaking functionality or platform as a whole, would mean that an abuse needs to be found with regard to all the customer groups included in the assessment simultaneously. Finding an abuse based on such a broad approach would mean instead that the dominant undertaking prices its match-making functionality higher than its economic value to all the customer groups interconnected by such functionality. In the case of Booking.com such an approach would mean that the commission levied from hotels could be considered excessive only if it exceeds the economic value of Booking.com's room reservation functionality for both hotels and consumers. A comparable approach would therefore be undesirable as it excludes the possibility that a platform can abuse its market power with respect to only one or some of its customer groups. This would increase the standard of proof needed for finding excessive pricing significantly and ignore the commercial reality of online platforms in which their market power and ability to abuse it may vary across their various customer groups.[162]

162 See e.g. David S. Evans and Richard Schmalensee (2014) *supra* (n 27).

In light of the above it is evident that applying the United Brands test to the customer groups of the platform in isolation from each other or in a collective manner leads to undesired outcomes. The suggested solution to this legal challenge lies, as will be discussed below, entails in essence a combination of the two approaches so as to allow for the individual assessment of each customer group in the greater context of platform pricing schemes.

a) The relevant calculations for the first prong of the United Brands test

Adapting the United Brands test to the reality of online platforms would require applying it to each of the customer groups individually while taking into account their interrelations. In practice, such an adaption would mean inserting another assessment step in the first prong of the United Brands test. Under such a suggested modification, the first part of the assessment would, as previously, indicate whether the price charged by the platform from one of its customer groups exceeds the costs of serving such group with the matchmaking functionality. In the case of the Booking.com for example, this would mean assessing whether the commission fee charged from hotels exceeds the costs involved in serving them the hotel room booking service. In the case of the subsidizing customer groups,[163] this would inevitably be the case. However, in the context of platforms such a practice would represent the rule rather than the exception and thus does not suffice to indicate that such prices are potentially excessive. Therefore, such a conclusion should preferably only be drawn after a second step is taken within the first prong of the United Brands test. This second step focuses on costs of the customer group that is subsidized by such prices and its relation to the subsidizing customer group. In the case of Booking.com this second step would entail looking at costs involved in offering the hotel booking functionality to consumers and assess the commercial relation between hotels and consumers.

If the relationship between the subsidizing customer group and subsidized customer group displays (significant) positive indirect network effects, it is reasonable to assume that the former group is willing to cover costs of the latter group for using the platform functionality. This is because such a relation indicates that the subsidizing customer group is interested in an increase in the usage of the platform functionality by the subsidized customer group. In the case of Booking.com, it is evident that hotels are interested in having consumers use the platform and benefit from an increase in such usage as it translates into more bookings for their hotel

163 These are for example hotels on hotel booking platforms (e.g. Booking.com), travel agents and air travel providers on search engines for plane tickets (e.g. Skyscanner.com), professional content providers on video platforms (e.g. YouTube , Vimeo), sellers on online market places (e.g. Amazon or Aliexpress), merchants on payment platforms (e.g. PayPal) app developers on app store (e.g. Apple App Store or google Play Store).

rooms. Consequently, it is commercially sensible to expect that such hotels are willing to cover some or all of the costs involved in providing consumers with the room booking functionality for free, which would attract more consumers to the platform. The ratio of costs that the subsidizing customer group(s) can be expected to cover on behalf of the subsidized customer group will vary per sector and business model.[164] The remaining margin, between the price paid by the subsidizing customer group and the costs expected to be covered by such group,[165] will be subject of assessment in the second prong of the United Brands test.

If, however, an assessment of a platforms' pricing scheme shows that the subsidizing customer group covers the costs of one or more additional customer group on the platform that it may not be interested in financing, the situation will be different. In such situations, the commercial relation between the subsidizing customer group and one or more subsidized customer group will not display (mutually) positive indirect network effects. Accordingly, it means that the subsidizing group does not benefit from the participation of such subsidized group(s) on the platform and thus such group cannot be considered to willingly cover such additional costs partly or in full. This could be the case if, for example, the commission fees of hotels on Booking.com would not only cover the platform participation costs of consumers but also of car rental agencies active on the platform. In such a scenario, the participation costs of such 'undesired' subsidization would also form part of profit margin assessed in the context of the second prong of the United Brands test. This is because such subsidization may go against the commercial interests of the subsidizing customer group and is in essence the result of the market power wielded by the concerned platform in its own best interest.

Similarly, when part of the members of the subsidizing customer group are required to subsidize members of their own group, which do not cover their own costs such additional costs should be treated in the same manner as when negative direct network effects exist between members of such a group. In such a scenario, the paying members of the subsidizing customer group are in fact required to subsidize their (potential) competitors, which is evidently contrary to their commercial interest. This can be said to exist in the context of app stores, where only some of the app developers are subject

164 Peer-to-peer platforms and Business-to-Consumer platforms will often have very different business models and cost-price divisions. For example, on hotel room booking platform like Booking.com and Expedia hotels fully subsidize the platform usage costs of consumers whereas on Airbnb such costs are split between the property owners and consumers.

165 I.e. the costs involved in providing the subsidizing customer group the platforms' matchmaking functionality as well as part or all of the costs involved in serving one or more additional customer groups that the former group can be expected to be willing to subsidize.

to the full fee scale of the app store while other contribute little to nothing at all for their usage of the app store platform. While such pricing schemes are hugely profitable for the app stores to maintain, they display a clear misalignment of interests that is made possible thanks to the bottleneck role app stores play in app distribution markets. In this regard it can be said that Apple's App Store (as well as Google's Playstore) pricing structure may pass the first stage of the United Brands test with respect to app developers that are subject to the 15-30% commission fees, as these actors are paying fees that go beyond what can be expected from them to pay even in the context of platform pricing structures.[166]

Although price-related complaints will evidently stem from the subsidizing customer group(s) of the platform, the subsidized customer group(s) of a platform may sometimes also be confronted with similar issues. The theory behind the use of skewed pricing structures by platforms for the purpose of coordination and profit growth often presumes that there will be little to no passing over of costs between the subsidizing and subsidized customer groups of the platform.[167] In practice, however, this assumption may not hold under all market conditions. In situations where there is multi- homing by both subsidizing and subsidized customer groups of the platform the passing on of costs may be possible due to the reduced degree of competition associated with such settings. This can be seen, for example, in the case of hotel room booking platforms like Booking.com and meal delivery platforms like Uber eats. In these sectors it is quite common for hotels and restaurants (the subsidizing customer group) to pass on their platform usage costs to consumers (the subsidized customer group) by charging a higher price for their hotel room or meal via the platform than via their own sales channel.[168] This is despite the fact that the pricing rules of these platforms would give the impression that hotels and restaurants constitute the subsidizing customer groups of the platform and consumers constitute

166 For an extensive discussion on platform pricing in the case of App Stores see F. Bostoen and D. Mandrescu, 'Assessing Abuse of Dominance in the Platform Economy: A Case Study of App Stores' (2020) 16 (2-3) European Competition Journal 431.

167 See e.g. Jean Charles Rochet and Jean Tirole (2003) *supra* (n 9). The authors consider this characteristic to be imported for the qualification of a two-sided market / platform.

168 In the case of hotel booking platforms, such passing-on practices were limited in the past by the price parity clauses that hotel owners had to live up to when using a hotel-booking platform. However, since such clauses were often found to be anti-competitive in various Member States and other regions of the world, they were removed from the contracts between platforms and hotel owners. In the case of credit cards, Amex prohibited merchants that agreed to accept the Amex credit cards to impose surcharges on consumers due to the higher processing costs of Amex credit cards. In the EU this surcharge prohibition has made its way into secondary legislation in the context of the Directive (EU) 2015/2366 of the European Parliament and the of the Council of 25 November 2015 on payment services in the internal market, amending Directives 2002/65/EC, 2009/110/EC and 2013/36/EU and Regulation (EU) No 1093/2010, and repealing Directive 2007/64/EC, OJ L377/35.

the subsidized customer groups on both platforms. According to these rules, it is the hotels and restaurants that are subject to the commission fees of the platform, not the consumers. In practice, however, this subsidizing -subsidized role division and corresponding fees may nevertheless be circumvented. This would occur when the customer group(s) subject to the platform pricing rules have the ability to pass on their fees (in part or in full) to the other customer groups of the platform that are formally not subject to any platform service fees; commonly the consumers. Similar outcomes can also be observed in situations where subsidizing and subsidized customer groups are locked-in a single-homing setting that neither can easily avoid due to high switching costs or legal and technical barriers. This can be seen for example in the case of app stores where the app store transaction fees imposed on app developers are often passed on to consumers.[169] In the US this practice has even led to a claim against Apple, which is claimed to facilitate inflated app prices with its pricing scheme and the lock-in it imposes on consumers and app developers that buy into the iOS ecosystem.[170]

Therefore, when comparable settings are present it is possible that the (formally) subsidized customer group of the platform, which is typically brought to the platform with a zero priced offer, may nevertheless be subject to excessive pricing practices. In instances where such an abuse is investigated, the selection of the relevant costs for the first prong of the United Brands test should be done in the same manner as described previously with respect to the subsidizing group(s) of the platform. In this context, it is worth noting that despite the fact that such scenarios are quite realistic in practical terms, the exploitation of the subsidized customer groups of platforms through excessive pricing is often covered in the literature with respect to excessive **data** charges.[171] This latter possibility has been left out of the analysis in this section for three reasons.

First, an approach to excessive pricing based on data 'charges' further strengthens the erroneous view that zero priced offers always remain zero priced since the possibility of pass-on is rarely or never discussed. Second, exploitation through data 'over-charges' in the EU will often be covered by art. 6 the GDPR and thus does not truly require an additional legal enforcement route via competition policy.[172] Thirdly, addressing (excessive)

169 See e.g. the case of Spotify, which priced its annual membership fee for the premium service for iOS users in the App Store in a way that covers Apple's transaction fee of 30%.

170 Apple, Inc. v. Pepper, 587 U.S. ___ (2019); for an extensive discussion on the case see S. Konstantinos, '*Apple v Pepper*: the unintended fallout in Europe' (2019) 7(3) Journal of Antitrust Enforcement 457.

171 See e.g. Aleksandra Gebicka, Andreas Heinemann, 'Social Media & Competition Law' (2014) 37(2) World Competition 149.

172 By contrast, data related abuses concerning exclusionary effects are suitable for enforcement through competition law mechanisms as the distortion of competition by (dominant) undertakings is not part of the objectives of the GDPR.

data sharing requirements under the scope of an excessive pricing abuse entails significant practical difficulties due to the lack of established tools that would allow quantifying data in a similar manner as monetary transaction.[173] This is in turn problematic for both stages of the United Brands test. Furthermore, even if such tools existed, benchmarking data sharing requirements against the economic value of the platform service would be far from straight forward. How can one evaluate whether 'too much data is charged' in cases when those who must pay with their data do not care so much about the volume of data gathered but rather about the kind of data and the purpose for such data is gathered and used. For this reason data overcharges seem to be more to be appropriate to deal with under the scope of unfair trading conditions instead.[174] This type of abuse entails a more flexible framework for dealing with exploitative behavior that does not involve a clearly defined test making it more suitable for unconventional forms of exploitation such as data overcharges.[175] Ideally however, such matters are best to be addressed under the scope of other legal frameworks, which unlike competition law specifically target the interests of data subjects.

When dealing with the selection of the relevant cost benchmark for the first prong of the United Brands test, it is imperative to take into account the common attributes of platform cost structures. As discussed in the context of predatory pricing, platforms often display low variable costs and rather high fixed and sunk costs. Accordingly, when applying the first prong of the United Brands test, it is important that the cost-price test includes more costs than the mere average variable costs of providing the matchmaking functionality to the customer group(s) affected by the platforms' pricing practices. Similarly to the case of predatory pricing, it would appear that the recommendation for cost-price comparisons in comparable circumstances is to use the LRAIC benchmark for assessing the profits made by the dominant undertaking with the pricing practices under investigation.[176] Whether the use of such cost benchmark is sufficient or requires additional evidence concerning the profitability of a specific platform will vary from case to case. What remains true to all cases however, is that the assessment

173 For an overview of potential measurement methods see OECD (2013-04-02), 'Exploring the Economics of Personal Data: A Survey of Methodologies for Measuring Monetary Value', OECD Digital Economy Papers, No. 220 http://dx.doi.org/10.1787/5k486qtxldmq-en accessed 3 Jul. 2021; On the difficulties with the United Brands test for data see also Viktoria H.S.E. Robertson, 'Excessive data collection: Privacy considerations and abuse of dominance in the era of big data' (2020) 57(1) Common Market Law Review, 161.

174 Marco Botta and Klaus Wiedemann,'Exploitative Conducts in Digital Markets: Time for a Discussion after the Facebook Decision' (2019) 10(8) Journal of European Competition Law & Practice 465, 465-472.

175 On the rather undefined character of framework of unfair trading conditions abuses see Robert O'Donghue and Jorge Padilla (2020) *supra* (n 68) at 1033-1045.

176 Ibid, at 927-922.

of profitability in the first prong of the United Brands test must take into account the commercial reality of many platform businesses in terms of cost structures,[177] profit margins and market dynamics.[178] Accordingly, high profit margins as such will not necessarily always be sufficient for the excessiveness stage of the United Brands test as these may be reasonable in cases concerning platforms that require high risks and significant upfront investments.

Once the relevant costs and prices have been identified and weighed against each other, the assessment can move on to the second prong of the United Brands test which also requires adapting to the realities of online platforms.

b) The second prong of the United Brands test – the use of comparators

The second prong of the United Brands test can be said to rely greatly on a series of comparison exercises concerning the commercial practices of the dominant undertaking itself as well as that of its (potential) competitors. Although there is no reason why such assessment should be any different in the case of online platforms, the manner in which the various comparators are used in such cases does require some guidance.

The temporal comparison where the pricing practices of the dominant undertaking are studied over a specific period of time needs to take into account the commercial stage in which the platform was during such period. In the launch phase of the platform it can be expected that the pricing of the platform is relatively low as it must attract as many members as it can on its two or more sides; sometimes with the help of loss making prices. Such strategies may persist until the platform has sufficient members to reach a critical mass and thus eventually become viable.[179] As the platform becomes viable and continues to grow its pricing will change as well. Such changes will be driven by the constant need for coordination, increase in costs and pursuit of higher profits (that at times are needed to recover past losses). When assessing such temporal comparison it is important that the time between the launch of the platform up until critical mass can be said to have been reached is not taken as a strict reference point for **fair** pricing. This period is likely to display rather unprofitable commercial practices that were adopted to facilitate fast growth.

177 E.g. high fixed cost and low variable costs.

178 The cost structure combined with high profit market that are often observed in the case of platforms may given a distorted impression that prices are relatively very high. However, when put in the context of markets with high risks and barriers to entry which also characterize platforms, such high profit margin may seem commercially reasonable in light of the effort and risk involved in creating certain platforms.

179 David S. Evans and Richard Schmalensee (2016) *supra* (n. 43) at 91-98; Geoffrey G. Parker, Marshall W. Van Alstyne and Sangeet Paul Choudary (2016) *supra* (n 43) at 123-127; Thomas Eisenmann, Geoffrey Parker and Marshall van Alstyne (2006) *supra* (n 46) at 3-6.

Past this period it is important that price raises are studied in parallel with a potential growth in the volume of members in the various platform customer groups. Given the direct and indirect network effects at play between the various customer groups of the platform, a growth in the size of their members will have an effect on the value that such platform offers them. In this regard, price increases that are not implemented in parallel to any increase in value to the respective platform customer group(s) may be considered potentially unfair. By contrast, price increases adopted while the dominant platform was growing in volume or technical sophistication may be indicative of perfectly legitimate practices. In other words it is important that the historical records of price changes are evaluated against the (growing) ability to capture network externalities. On this last point, there is one caveat that needs to be addressed. From a theoretical perspective platforms can indeed constantly increase their quality and volume and therefore also raise their prices, as they would provide their customers a potentially higher economic value. Even when such evolvements are proportionate to the increase in prices, if they are perused systematically for a long period of time, such practices may also indicate the possibility that the dominant undertaking is 'extracting' an unfair amount of funds from its customers to finance its own investment plans. Although the economic value of the platform service for customers may rise in such instances, the practice as such, may entail a situation wherein a dominant undertaking makes use of an opportunity that its would not be able to obtain in a competitive market, which is the core rationale behind the prohibition of excessive pricing in EU competition policy.[180] Finally, a second caveat on price raises is worth mentioning. While price changes may often trigger initial suspicion, unchanged prices or transaction fees should not be perceived as per se fair. This is particularly true when the growth of the respective platform results in significant increases in the profitability of the platform. Accordingly, a fixed transaction fee can overtime become excessive and unfair in light of changing market conditions and circumstances. Therefore, the fact that Apple did not change the transaction fees for its App Store since its launch does not necessarily mean it can never be found to be excessive under art. 102 TFEU as the market affected by and related to the App Store have undergone significant changes since its introduction.

The use of territorial comparators, as done in the past, will likely be more limited due to the extensive territorial scope covered by platforms in general, which is in most cases covered by one set of governance rules and pricing schemes. Territorial comparison with (potential) competitors can similarly be expected to have a rather limited scope of application because the markets in which online platforms are active are prone to concentration. Accordingly, in markets that have a limited number of competitors,

180 Case 27/76, *United Brands Company v. Commission* [1978] ECLI:EU:C:1978:22, para. 249.

it can be expected that the prices of the dominant platform and those of its competitors be at similar levels, especially when they rely on similar business models. Nevertheless, when making such comparison between the dominant platform and its (potential) competitors, it is important that comparisons are made solely with other platform entities that have a similar or identical business models. Non-platform entities may at times compete with platforms, however, the absence of a two or multi-sided character makes any price comparison irrelevant. Furthermore, when making this selection it is important that the nature and intensity of the direct and indirect network effects on such platforms are also observed as different settings may justify different price settings.[181] Similarly, the single and/ or multi-homing patterns of platform customers must also be accounted for in any territorial comparison. Differences in such settings indicate a difference in the intensity of competition among platforms that was found to lead to relative differences in the pricing levels of platforms.[182]

Finally, when attempting comparisons with comparable services offered either by the dominant platform or other undertakings, it is important that all the previously mentioned aspects are also similar or identical in the context of such comparable services. Failing to follow such steps would prevent such comparisons from being consistent as indicated by EU case law on excessive pricing.[183] In this regard, the many examples used in the debate of Apple's App Store pricing are not equally valuable for the purpose of finding an abuse of excessive pricing. Not all other app stores can be compared with the Apple App Stores in a meaningful way as they may concern very different legal and economic contexts.[184] The mere fact the all app stores rely on a rather similar business model does not make them directly suitable for use as a comparator in the context of the United Brands test as the price setting of platforms is, as previously discussed, affected by a myriad of factors.

c) Economic value in context

Once the first and second prongs of the United Brands test are performed, the last reality check concerns the question of the economic value provided by the dominant undertaking in return for its price. At this stage, according to the Commission, there is room to look beyond the mere cost-price and

181 See *supra* (n 41).

182 See *supra* (n 61); Richard Schmalensee and David S. Evans (2007) *supra* (n 60) at 173-175.

183 Case C-177/16, *Latvien Copyright*, [2017] EU:C:2017:689, para. 44.

184 See e.g. Sven B. Völcker & Daniel Baker, 'Why there is no antitrust case against Apple's App Store: a response to Geradin & Katsifix' (2020) at 65-71 <https://ssrn.com/abstract=3660896> accessed 21 Jul. 2021. The authors appear to compare Apple's Apps Store fees to those of all existing app stores regard less of their respective characteristics and economic context.

profitability comparisons.[185] In the context of platforms, it is important that discussions about the economic value of the service offered by the platform take into consideration the manner in which value is created as well as increased by platforms. At their core, the value offered by all online platforms is some form of matchmaking functionality between two or more separate customer groups. Therefore the better such functionality works, the more value the platform can be said to offer its respective customer groups. The most evident kind of improvements that can be made by platforms is reducing the search and transaction costs of its customer groups.[186]

Platforms that provide more of these efficiencies and other benefits can be expected to be able to capture more network externalities by becoming more popular among customers that may also be willing to pay a higher price for using the platform. Of course such improvements will inevitably involve constant investments that entail additional costs for the platform. Comparable improvements can also lead to another type of value increase that the platform can facilitate, which is to increase the number of members of its various customer groups. Increased participation on the platform can in turn also increase the potential volume of successful matchmaking interactions on the platform that can lead to higher profits for both the platform and its customer groups.[187] Accordingly, when assessing the pricing practices of a dominant platform it is important that their evaluation includes an analysis that covers such platform qualities as they represent a great deal of the economic value that platform customers receive. In other words, it is important that the relationships between the network externalities created and captured by platforms are studied in tandem with their price setting practices. This is particularly important in the context of the second prong of the United Brands test that relies greatly on the use of comparators. Any comparison effort should also take into account changes in the economic value provided by the platform to its customer groups over time, in various regions as well as compared to other platform undertakings. For example, while all marketplaces provide the same core service, the quality and thus value of such service for the consumers and merchants may change over time and differ across actors. This is because some platforms may be better than others at capturing network externalities and by doing so deliver more value to their respective customer groups which in turn would allow them to charge higher fees. Taking into account such capability in practice would entail looking at the efficiencies, cost reductions and commercial oppor-

185 *Scandlines Sverige AB v Port of Helsinborg* (Case COMP/ A.36.568/D3) Commission decision of 23 July 2004, paras. 209-212, 226- 228.

186 Andrei Hagiu, 'Multi-sided platforms: From micro foundations to design and expansion strategies' (2007) Harvard Business School Strategy Unit Working Paper (09-115), pp. 3-7. <https://ssrn.com/abstract=955584> accessed 14 Aug. 2020.

187 Examples of successful matchmaking interaction are: more clicks on ads, more bookings of hotel rooms, more purchases of products, more orders order of food, more payments made etc.

tunities facilitated by the concerned platform for its respective customer groups. The more of these the platform can deliver (overtime) the more it can be expected to charge its customers as it delivers more value to them. This remains true even in the event that the costs of the platform do not necessarily increase in similar proportions. Accordingly, an innovative platform that finds a 'cheap' way to create significantly more value for its customer groups should not be expected to price its services similar to its competitors that cannot deliver such value even if these offer the same core matchmaking service. As long as the differences in fees between the concerned undertaking and its competitors correspond with a comparable difference in value created for their respective customer groups, it cannot be said that the dominant undertaking is pursing abusive strategies; better products and services should be able to deliver better returns even in the case of dominant undertakings.

In terms of measurement, such achievements can be assessed based on a combination of data that represents the platform service value. Such data can include for example evidence of service improvements, the cost saving value of such improvements for the platform customers, changes in the volume of customers (depending on the nature of network effects in each case), the volume of successful and profitable interactions on the platform per customer (i.e. conversion rates), customer loyalty data, and (when transactions are enabled on the platform) the returns generated per platform customer. The specific combination of such value indicating data parameters and their relevance will vary across business models depending on the nature of the service they seek to provide.[188] Failing to take into account the aspects that determine the value of the matchmaking functionality for the platform customers would entail treating the matchmaking functionalities provided by platforms, including dominant ones, as both homogenous and static, which is contradictory to their commercial reality that demands constant innovation and differentiation to survive.[189]

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188 E.g. for a discussion on value perception by platform customers, with specific emphasis on C2C platforms see Clauß, Thomas & Peter Harengel, Marianne Hock-Döpgen, (2019)'The perception of value of platform-based business models in the sharing economy: Determining the drivers of user loyalty' (2019) 13(3) Review of Managerial Science; See also See 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 for the parameters of price on quality which determine competition for consumers and commercial customers between players in this sector. The parameters of competition determine in essence a great part of the (economic) value such platform can deliver to their respective customer groups.

189 See e.g. Andrei Hagiu (2007) supra (n 186); Thomas Eisenmann, Geoffrey Parker and Marshall van Alstyne, 'Platform Envelopment' (2011) 32(12) Strategic management Journal 1270; Alina S Staykova & Jan Damsgaard, Platform Expansion Design as Strategic Choice: The Case of WeChat and Kakaotalk (2016). Research Papers 78 <https://aisel.aisnet.org/ecis2016_rp/78 >accessed 5 Sept. 2020.

5.3.3 Discriminatory pricing

Price discrimination commonly refers to the situation where an undertaking is selling identical goods or offering identical services to different customers for varying prices for reasons unrelated to costs.[190] Generally speaking, from a competition policy perspective, price discrimination concerns two main categories: competitor discrimination and (non-competing) trading party discrimination. Trading party discrimination entails discriminatory (pricing) practices adopted by an undertaking towards its commercial trading parties in one or more markets where it is not active. Competitor discrimination entails a similar setting, however, in this latter setting (some of) the undertakings' trading parties are also its competitors in a vertically related market. From a competition policy perspective the two types of price discrimination scenarios bring about different concerns. In the case of trading party discrimination, the (potential) adverse effects on competition resulting from such practice occur in a relevant market where the dominant undertaking is not active. The monopolist or dominant undertaking in such cases essentially interferes with competition between its respective trading parties. In the case of competitor discrimination, the discriminatory pricing of the monopolist or dominant undertaking results in (potentially) adverse effects on competition in a (vertically related) relevant market where it is active. Although the outcomes of both types of discriminatory practices are undesirable form a competition policy perspective these two types of practices are not addressed with the same degree of gravity and suspicion; for good reason. A monopolist or dominant undertaking has an evident incentive to discriminate against its competitors when these are its customers since it will often benefit from their downfall. By contrast, the incentives for a dominant undertaking to discriminate against its trading parties with which it does not compete are far less evident. In the absence of exceptional circumstances it is hard to see how an undertaking would benefit from having one or more of its trading parties struggling to compete in a market the concerned undertaking itself is not active on.[191]

The ability of implementing discriminatory pricing strategies requires, however, more than simply being in a position to offer goods or services to competitors and other trading parties. From an economic perspective implementing discriminatory pricing requires that the concerned under-

190 See e.g. OECD Roundtable on Price Discrimination – Background note from the Secretariat DAF/COMP(2016)15 at 6-7 < https://one.oecd.org/document/DAF/COMP(2016)15/en/pdf> accessed 10 Dec 2020.

191 When confronted with such a scenario, the CJEU also cast doubt on the rationale of such a practice from the perspective of the dominant undertaking. See Case C-525/16 *MEO — Serviços de Comunicações e Multimédia SA v. Autoridade da Concorrência* [2018] ECLI:EU:C:2018:270, para. 35.

taking has market power,[192] is able to sort its customers based on their valuation for the good or service offered and it is able to prevent arbitrage through re-trades between its customers.[193] When considering the criteria discussed in economic literature, it is evident that online platforms often have the ability to implement discriminatory pricing strategies. For example both Google's Play Store and Apple's App store provide various kinds of pricing for various categories of apps despite providing them with essentially the same platform service.[194] Similarly, hotel booking platforms implement various pricing options depending on the property type listed and its desired ranking in the search results.[195] The question is off course when will such practices, which are commonly adopted by platforms, be abusive since the use of price discrimination as such is not per se prohibited under art. 102 TFEU. In order to answer this question it is important to first revisit the current legal framework for dealing with discriminatory pricing under this provision.

192 Damien Geradin and Nicolas Petit,' Price Discrimination under EC Competition Law: The Need for a case-by-case Approach' GCLC Working Paper 07/05, pp. 4 < file:///Users/danielmandrescu/Downloads/gclc_wp_07-05.pdf> accessed 10 Dec. 2020; OECD Roundtable on Price Discrimination, Background note by the Secretariat DAF/COMP(2016)15, pp. 9 < https://one.oecd.org/document/DAF/COMP(2016)15/en/pdf> accessed 10 Dec. 2020. The exact degree of market power needed for this task is however unsettled, see e.g. Michael E. Levine, ' Price Discrimination Without Market Power' (2002) 19(1) Yale Journal on Regulation, 2. The author argues that the ability to discriminate is not an indication of monopoly market power necessarily.

193 Gunnar Niels, Helen Jenkins and James Kavanagh (2016) *supra* (n 66) at 181.

194 See Apple's information for developers based on the business model they intend to implement in their app < https://developer.apple.com/app-store/business-models/> accessed 7 January 2021; see Google's pricing guidelines for app here < https://support.google.com/googleplay/android-developer/answer/6334373?hl=en> accessed 7 January 2021. The respective market power of the currently prominent app stores is discussed in F. Bostoen and D. Mandrescu (2020) *supra* (n 166).

195 See Booking.com's pricing information for property owners here < https://partner.booking.com/en-us/help/commission-invoices-tax/how-much-commission-do-i-pay> accessed 7 January 2021. The market power of such players was considered sufficient to dictate price in the past in the context of the decisions against hotel room booking platforms for the use of MFN clauses that showed their ability to dictate prices without necessarily always being labeled as dominant, see e.g. Bundeskartellamt Prohibition decision of 20.12.2013 in the case of HRS, B9-66/10 and Bundeskartellamt Prohibition decision of 22 December 2015 in the case of Booking.com B.V, B9-121/13.

A. *Discriminatory pricing in EU competition law*

In the context of EU competition law, the implementation of discriminatory pricing by dominant undertakings is covered by art. 102(c) TEFU.[196] According to this provision dominant undertakings are prohibited from '*applying dissimilar conditions to equivalent transactions that places their trading parties at a competitive disadvantage*'. Unlike many abuses under art. 102 TFEU the formulation of art. 102(c) TFEU describes quite accurately the legal elements that need to be addressed in the context of each case. Accordingly, a private claimant or competition authority seeking to establish an abuse on this ground must show the existence of: (i) an equivalent transaction to two or more trading parties; (ii) subject to dissimilar conditions; (iii) that creates a competitive disadvantage to such trading parties.[197]

Finding the existence of equivalent transactions requires firstly that the traded goods or services share a great deal of similarity from a physical and/or functional perspective. The most evident case where such a conclusion can be made is when the goods or services offered are identical. This was the situation in *United Brands* where it was noted that all the bananas sold by UBC under the brand 'Chiquita' to traders across multiple Member States were of the same origin, same kind and (almost) the same quality.[198] Similarly, in *British Airways* it was found that the different rebates given to travel agents based on their relative performance meant different terms were applied for equivalent transactions.[199] In *Clearstream* the Commission and EU Courts extended the notion of equivalence also to a situation where the trading parties received a similar offer in a similar commercial context despite the fact that such services were not identical.[200] Nevertheless, where

196 Nevertheless, the discriminatory pricing practices by dominant undertakings has been considered problematic on various occasions in the past and addressed via other specific types of abuses or combinations thereof, e.g. selective discounts combined with tying in Case T-51/89 *Tetra Pak Rausing SA v Commission of the European Communities* [1990] ECLI:EU:T:1990:41 and Case T-30/89 Hilti AG v Commission [1991] ECLI:EU:T:1991:70; the partitioning of the internal market in Case 27/76, *United Brands Company v. Commission* [1978] ECLI:EU:C:1978:22; the implementation of loyalty rebates in Case C-95/04 P *British Airways plc v Commission* [2007] ECLI:EU:C:2007:166.

197 Of course like with any abuse, the option of objective justification also remains to be considered as well, see Case C-95/04 P *British Airways v Commission* ECLI:EU:C:2007:166, para. 86.

198 Case 27/76, *United Brands Company v. Commission* ECLI:EU:C:1978:22, para. 204.

199 Case T-219/99 *British Airways v Commission* [2003] ECLI:EU:T:2003:343, paras. 234-240; Case C-95/04 P *British Airways v Commission* [2007] ECLI:EU:C:2007:166, paras. 136 -141.

200 In this case it was found that Clearstream's primary clearing and settlement services provided to central security depositors and international central securities depositors entailed equivalent transactions. See *Clearstream (Clearing and Settlement)* (Case COMP/38.096) Commission decision of 2 Jun. 2004, paras. 306-313; In the appeal the GC also agreed with the Commission on this matter Case T-301/04, *Clearstream Banking AG and Clearstream International SA v Commission* [2009] ECLI:EU:T:2009:317, paras. 169-179.

the differences between the offered services were evident the Commission did not shy away from pointing it out and questioning the respective claims of discrimination.[201] Accordingly, a finding of equivalent transactions does not require goods or services to be identical, however, their core functionality and characteristics as well the entire commercial and legal context in which they are offered must show sufficient similarity in order to make them commercially comparable.[202] Once equivalent transactions are found, the identification of dissimilar conditions comes down to a factual assessment of the prices charged by the dominant undertaking with respect to its trading parties. This criterion is fulfilled once price disparities can be traced with regard to the transactions that are considered equivalent.

Where a dominant undertaking does indeed apply different prices to equivalent transactions, finding an abuse ultimately depends on whether such difference placed one or more of its trading parties at a competitive disadvantage. Based on the recent case of *MEO*, reaching such a conclusion requires first that the disadvantaged and privileged trading parties of the dominant undertaking be indeed in competition with each other.[203] Finding a relation of competition would at the very least require such trading parties be in the same relevant market.[204] This relevant market can be, depending on the circumstances of the case, one of two: (i) the output market for which the purchased goods and / or services from the dominant undertaking are used or (ii) the input market for goods and / or services sold to the dominant undertaking.[205] When it comes to the competitive disadvantage in such cases the CJEU in MEO stated that there is not de minimis threshold for finding an abuse, however, not every economic disadvantage resulting from price disparities will lead to a competitive disadvantage.[206] According to the CJEU the ratio between the (higher) price charged by the dominant undertaking from the disadvantaged parties and the total costs of the trading party should be sufficient to impact its interests compared with its

201 See e.g. *Scandlines Sverige AB v Port of Helsinborg* (Case COMP/ A.36.568/D3) Commission decision of 23 July 2004, paras. 252 -254.

202 This is line with AG Wahl's latest opinion in Case C-525/*16 MEO — Serviços de Comunicações e Multimédia SA v. Autoridade da Concorrência* [2017] ECLI:EU:C:2017:1020, Opinion of AG Wahl, para. 57.

203 Case C-525/16 *MEO — Serviços de Comunicações e Multimédia SA v. Autoridade da Concorrência* [2018] ECLI:EU:C:2018:270, paras. 26-31; See also Case C-525/*16 MEO — Serviços de Comunicações e Multimédia SA v. Autoridade da Concorrência* [2017] ECLI:EU:C:2017:1020, Opinion of AG Wahl, para. 67.

204 Case C-52/07 *Kanal 5 Ltd and TV 4 AB v Föreningen Svenska Tonsättares Internationella Musikbyrå (STIM) upa* [2008] ECLI:EU:C:2008:703, para. 46.

205 Case C-525/16 *MEO — Serviços de Comunicações e Multimédia SA v. Autoridade da Concorrência* [2018] ECLI:EU:C:2018:270, para. 24.

206 Ibid, paras. 26-27.

competitors.[207] The CJEU did not go into the specificities of a threshold ratio that would be indicative of a prima facie abuse, however, that is in itself not surprising as such ratios and their significance will vary across sectors making it hard to set a single standard for all.

Based on the above it can be said that the current framework provides dominant undertakings with a great degree of flexibility when it comes to discriminatory pricing strategies. Although this is certainly positive in the case of platforms, which relay greatly on skewed pricing structures, the criteria set by this framework can easily lead to erroneous findings when applied to them. Platforms can easily be perceived as providing one or two core services to the members of their various customer groups, which may often view themselves as competitors, at significantly different price points. This overly simplified view is currently in the context of app store due to the differenced pricing applied by both Apple and Google with respect to app developers.[208] The commercial reality of platforms is, however, more intricate and correctly establishing the existence of abusive discriminatory pricing requires translating the criteria of the current legal framework for this abuse to such reality.

B. Applying the EU prohibition on discriminatory pricing to online platforms

Applying the current practice on art.102(c) TFEU to online platforms requires translating the essence behind the criteria of 'equivalent transactions' and 'competitive disadvantage' that constitute the principal criteria of this provision to the commercial reality of these actors.

a) Equivalent transactions for platform users

In the context of online platforms, the criterion of equivalent transactions will in essence concern the commercial relation between the concerned platform and its customer groups that consist of commercial trading parties.[209] The utilization of the platform by these commercial parties can

207 Ibid, para. 30. This position follows to a great extent the position of AG Whal who noted that in order to establish that a competitive disadvantage was caused by discriminatory pricing requires looking into how much the input sold by the dominant undertaking costs in relation to the total costs of the disadvantaged party. See AG Wahl's latest opinion in in Case C-525/16 *MEO — Serviços de Comunicações e Multimédia SA v. Autoridade da Concorrência* [2017] ECLI:EU:C:2017:1020, para. 105-110.

208 See e.g. Spotify's claim on this matter that describes this price differentiation as objectionable and discriminatory < https://www.timetoplayfair.com/facts/> accessed on 25 Jul. 2021.

209 The customer group(s) of the platform consisting of end consumers will be excluded from such analysis as art. 102(c) TFEU only concerns commercial trading parties.

generally be divided into three categories: (i) as a sales channel;[210] (ii) as an advertisement channel;[211] and (iii) as a data acquisition source.[212] These three forms of utilization can be identified with the most prominent platforms these days, at times even simultaneously. Relaying on a platform as a sales channel is perhaps the most common practice in the context of the e-commerce sector where such services are provided by platforms that enable monetary transactions between consumers and various types of commercial parties.[213] Prominent platforms serving this purpose include Amazon Marketplace, Booking.com, Expedia, UberEats, Google Play Store and many other players. Using platforms as advertisement tools can be observed when platforms enable commercial parties to present their services or goods to consumers without the possibility to directly complete a monetary transaction with regard to such services or goods. This is for example the case with price comparison websites and vertical search engines such as Google or Bing Shopping search, Skyscanner, Trivago and others. Finally using platforms as a source of data acquisition can be seen throughout the entire digital economy where access to most if not all webpages requires accepting the installation of cookies on ones device.

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210 Such use is associated with the category of platforms coined by other authors as 'transaction platforms', where the various customer groups of the platform could conduct monetary transactions via the platform. See Lapo Filistrucchi, Damien Geradin, Eric van Damme & Pauline Affeldt, 'Market Definition in Two-Sided Markets: Theory and Practice' (2014) J. Competition L. & Econ. 293–339 and Bundeskartellamt, Working Paper – Market Power of Platforms and Networks B6-113/15 (2016) at 18-30.

211 Such use is associated with platforms coined by other authors as 'non-transaction platforms', audience providing platforms. See Supra note Lapo Filistrucchi, Damien Geradin, Eric van Damme & Pauline Affeldt (2014) and Bundeskartellamt (2016). In the context of the Google Shopping case it would appear that the Commission also makes that distinction between sales channels platforms and advertisement channel platforms based on whether the concerned platform enables its customer groups to conduct a financial transaction, see *Google Search (Shopping)* (Case AT.39740) Commission decision of 27 Jun. 2017, paras. 191-250. It worth noting, however, that coining platforms with a specific label for its 'type' has limited value in practice as platform business models are often a result of mixed strategies that do not follow such strict division lines. Any categorization made in their case should be done with respect to the specific practice under investigation and the specific platform functionalities involved in each case. For more on this see Daniel Mandrescu, 'Applying (EU) Competition Law to Online Platforms: Reflections on the Definition of the Relevant Market(s)' (2018) 41(3) World Competition 453.

212 See e.g. the UK Data and Marketing Association guidelines for data collection and usage (subject to the current GDPR framework) < https://dma.org.uk/uploads/misc/third-party-data-guide-1.0.pdf> accessed on 27 Dec. 2020.

213 See 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. In the E-commerce sector the two main utilizations for platforms appear to be advertisement via platform that allow consumers to make price comparisons and platforms that allow consumer to buy various goods from different sellers. In the context of (online) sales, the use of marketplace platforms represent one of the only two avenues merchants have to sell their goods. The other possibility is to sell directly through one's own online web-shop.

The so called 'marketing cookies' collect data on behalf of the respective webpage as well as on behalf of other commercial parties that wish to gain various insights from the activity on the respective website. Of course these three kinds of utilization are not mutually exclusive and often combined. Youtube for example allows commercial parties to place advertisements, sell premium content while collecting various types of cookies as well.[214]

In the context of identifying equivalent transactions between the dominant platform and its trading parties, the equivalence of transactions will predominantly occur within one the three utilization forms rather than across. Although it may be evident that data acquisition is completely different from the other two utilization forms, the distinction between the utilization of platforms as advertisement or as sales channels is far less evident and has been subject to extensive debate. In the *Google Shopping* case that is now pending appeal, the substitutability between the Google Shopping service (an search advertisement tool) and online market places such as Amazon (a sales channel) was at the heart of the market definition debate.[215] At the end the Commission found these two types of platform utilization as non-substitutable from the perspective of both commercial users and consumers.[216] Similar conclusions can also be found in the context the MFN clauses cases against various hotel room booking platforms.[217] Therefore to the extent that the conclusions on the definition on the relevant market for such platform utilization forms are not overturned, these should not be treated as equivalent under the scope of art. 102(c) TFEU. Accordingly, platforms that offer functionalities for these two types of utilization may be able to price them differently without having to worry about infringing art. 102 (c) TFEU.

214 See more on Youtube's policies in this respect at < https://support.google.com/youtube/answer/7636690?hl=en> accessed 12 Jan 2021. In the case of third party cookies that were often used by third parties on the platform in order to gather information on the platform users it would appear that a change of sector strategy is on the rise as the main internet browsers (Monzilla, Safari, Chrome) will by default block third party cookies. The acquisition of comparable users information will not however be eliminated as such but rather facilitated through other technologies. For more see Dieter Bohn, Google to phase out third party cookies in Chrome, but not for two years' (The verge, 14 Jan. 2020) < https://www.theverge.com/2020/1/14/21064698/google-third-party-cookies-chrome-two-years-privacy-safari-firefox> accessed 12 Jan 2021.

215 *Google Search (Shopping)* (Case AT.39740) Commission decision of 27 Jun. 2017, paras. 191-250.

216 Ibid, paras. 216-227.

217 See in this regard the market definition in Bundeskartellamt Prohibition decision 20 Dec. 2013 in the case of HRS, B9-66/10; Bundeskartellamt Prohibition decision, 22 Dec. 2015, in the case of Booking.com B.V, B9-121/13; Competition Commission COMCO prohibition decision, 19 Oct. 2015, Online-booking Platforms for Hotels.

When zooming into one specific type of platform utilization it is important to keep in mind that many platforms may often offer various service packages to their commercial customers. This is most visible in the case of platforms that serve as sales and/ or advertisement channels. In such cases the pricing menu for the trading parties of the platform often includes a number of options that specify different variations of the core service sought after by the platform's trading parties. The most common variation or upgrade to the core services offered these days platforms that serve as sales and/or advertisement channels is the placement or ranking of goods or services placed on the platform.[218] Other common service upgrades may also include product fulfillment service, transaction management and digital payment solutions as well as search engine optimization. When comparing transactions it is imperative that such additional options are accounted for. Trading parties that are charged extra because they chose to make use of such options and have indeed been provided with such options cannot claim to have been discriminated when compared to trading parties that have no made use of such options. This is due to the fact that 'upgraded' services and 'basic' services cannot be considered equivalent.[219] Claims of discrimination in such instances can only arise when the trading parties that chose for the 'default' service were charged the same or more than the trading parties that chose for the 'upgraded' service.[220] Beyond such circumstances it is important to note that such forms of price differentiation will not fall under the scope of art. 102(c) TFEU, as it does not concern a situation of discrimination in the sense of this provision.[221]

Finally, in cases where the commercial trading parties of the platform are utilizing the platform in the same way and have chosen the same kind of service, they may still be considered to be subject to non-equivalent transactions. This can occur for example when the economic benefit that such parties can (potentially) derive from the platform differs, for example because they have different revenue models. This was indicated by the

218 See e.g. Tripadvisor's service page specifically dedicated to ranking and placement results upgrade on the Tripadvisor booking platform at < https://www.tripadvisor.com/business/sponsored-placements> accessed on 17 January 2021.

219 This type of pricing scales / menus is commonly referred to as second degree discrimination in economic literature, however, this kind of pricing practices may not be considered discriminatory from a legal perspective as the provided good or service for each pricing category will have different traits (quality, size, volume, etc.). See e.g. Gunnar Niels, Helen Jenkins and James Kavanagh (2016) *supra* (n 63) at 181-182; OECD Roundtable on Price Discrimination (2016) supra (n 192) at 7.

220 This occurred for example in The Netherlands in the case of Funda, a real estate advertisement platform, where one of two groups of real estate agents (VBO) were charged a higher platform membership fee than a second group of real agents (NVM) that were also systematically given a better ranking in the search result in on Funda. See Funda Decision *supra* (n 14).

221 Robert O'Donghue and Jorge Padilla (2020) *supra* (n 68) at 962.

CJEU and AG in *Kanal 5*.[222] In the case of platforms this can be seen, for example, with ad-based and membership based apps offered in the Apple and Google app stores. If the platform input (matchmaking functionality) is being capitalized in various proportions across different trading parties it is reasonable for the platform to price its services differently at times.[223] Therefore, in the case of app stores, if various competing app developers obtain a different value from the app store by virtue of their own business model it would not be unreasonable to calculate their fees in a different manner as long as the difference in the total fees paid by such parties does not put some of them at a competitive disadvantage. Problems may arise, however, in situations where the business models of the platforms' trading parties are different but their capitalization of the platform service is similar, e.g. producers and retailers, which may chose to sell goods via an online marketplace. In such a scenario it would difficult to argue that these two types of trading parties are subject to non-equivalent transactions since both parties are likely to obtain a similar commercial benefit from using the platform as a sales channel. In practice, many of the difficulties associated with making the above mentioned distinction will be alleviated by the competitive disadvantage criterion which requires that the compared customers of the dominant undertaking are indeed competitors.

b) Competitive disadvantage and dissimilar conditions

The requirement that the favored and disfavored customers (consisting of commercial trading parties) of the dominant undertaking are competitors will play a significant role in filtering out misinterpreted cases of discriminatory pricing. In their role as intermediaries, online platforms seek to attract various groups of customers to use the platform. The customer groups formed by commercial trading parties can consist of either homogeneous or heterogeneous members. In the case of UberEats, for example, the customer group formed by commercial trading parties is quite homogenous as it consists of restaurants that offer food suitable for home delivery. By contrast, in the case of app stores the commercial customer group is very

222 Case C-52/07 *Kanal 5 Ltd and TV 4 AB v Föreningen Svenska Tonsättares Internationella Musikbyrå (STIM) upa* [2008] ECLI:EU:C:2008:703, para. 45; Case C-52/07 *Kanal 5 Ltd and TV 4 AB v Föreningen Svenska Tonsättares Internationella Musikbyrå (STIM) upa* [2008] ECLI:EU:C:2008:491 Opinion of AG Trestenjak para. 101. Where the customers of the dominant undertaking monetize the input (or service) they acquire from it differently it can be said they derive different economic values from this commercial relationship which may mean they may be subject to dissimilar conditions it they are subject to the same fees.

223 E.g. membership based apps gain access to a user pool that may provide that app enterprise with a steady revenue stream whereas ad based apps can expect far more variable revenues from their apps as such revenue depends on the interaction of their users with the ads presented in the app. For more info on business model oriented pricing in app stores see Apple's pricing guidelines in this regard at:< https://developer.apple.com/app-store/review/guidelines/> accessed 14 January 2021.

heterogeneous as it consists of app developers that operate in numerous different markets. In cases where the platform attracts heterogeneous commercial parties, these can be at times divided into multiple homogenous groups by the platform each being divided into a separate matchmaking functionality. This can be seen in the case of online booking platforms in the tourism sector such as Booking.com or Expedia, that serve as a sales channel for airlines, hotel owners, taxi companies and rental companies, which can offer their services in the section of the platform specifically dedicated to their type of service.

The differentiation in the commercial sphere in which the commercial customer groups of the platform operate often means that their demand for the platform and the respective benefit they can derive from it will vary across such groups. Therefore, in terms of pricing, platforms are very likely to set their pricing for such groups in a manner that gets as many of their members on board as possible. As previously discussed, this form of coordination by the platform results in a skewed pricing structure.[224] This skewedness will generally occur, however, across homogenous customer groups rather than within such groups as members of such groups are expected to have a similar demand for the platform and benefit similarly from using it. This in turn, would often imply that getting the members of each homogenous customer group on board would be possible with similar value propositions by the platform. Offering similar value propositions does not mean all members will pay the same fees but rather that they will be subject to similar fee calculation methods. For example, the restaurants on UberEats are subject to the same commission fee structure, which includes different percentages based on whether or not they make use of the delivery service facilitated by the platform.[225] Where the commercial customer group consists of one group of heterogeneous members, like in the case of app stores, price differences are likely to occur within such a customer group due to the differences of demand for the platform by such members and the benefit that they can derive from using it.

In the case of platforms that have chosen to divide their commercial customers into multiple homogenous groups, it can generally be said that such customer groups will not compete with each other. Accordingly, price differences identified across such groups fall outside the scope of art. 102(c)

224 Marc Armstrong (2006) *supra* (n 9); Jean Charles Rochet and Jean Tirole (2003) *supra* (n 9); Richard Schmalensee and David S. Evans (2007) *supra* (n 35); Thomas Eisenmann, Geoffrey Parker and Marshall van Alstyn (2006) *supra* (n 46).

225 See UberEats' pricing policies for restaurants at< https://restaurants.ubereats.com/us/en/pricing/> accessed 15 January 2021. Similarly see Tripadvisor's pricing details for hotel room bookings which offer two routes for all hotels that offer their rooms via the Tripadvisor booking platform < https://www.tripadvisor.com/InstantBooking> accessed 15 January 2012.

TFEU. Similarly, when the commercial customers of the platforms consists of one heterogeneous group of members, price differences amongst such members will often fall outside of art. 102(c) TFEU because such members will often not compete with each other. For example, the differences in pricing indicated in the case of app stores are based primarily on the business model of the concerned app. This differentiation criterion for pricing, however, also entails often an important characteristic for competition among such parties. Parties that rely on fundamentally different business models, even when active in the same sector, may at times not be considered direct competitors in which case such practices will fall outside the scope of art. 102(c) TFEU. This possibility is visible in the current practice of the Commission and NCA's in the case of platforms, which appears to give significant weight to the business model of undertakings when defining the relevant market in which they operate.[226] Nevertheless, there is no guarantee this will always be the case, nor is it possible to exclude that competition among business models may develop overtime.[227]

In light of the above, when going back to the example of app stores, the objections made by Spotify against Apple's pricing should be addressed with caution, as these may not be entirely founded if brought under art. 102(c) TFEU. The fact that companies that offer physical goods or services outside of the app, such as Uber, Booking.com and Zalando, do not pay (almost) any fees for their respective iOS compatible apps cannot serve as evidence of discrimination against Spotify in the sense of art. 102(c) TFEU since these parties are not its competitors.[228] As mentioned previously, this aspect of Apple's pricing is best addressed under the scope of excessive pricing.[229] By contrast, if pricing differences were to be established amongst

226 E.g. a hotel room booking app of a hotel network like Hilton would not be in the same relevant market as a hotel room booking app like Booking.com based on the findings in Bundeskartellamt Prohibition decision 20 Dec. 2013 in the case of HRS, B9-66/10; Bundeskartellamt Prohibition decision, 22 Dec. 2015, in the case of Booking.com B.V, B9-121/13; a marketplace app like amazon marketplace will not compete with Google's Shopping app based on Case AT.40099 Google Android Commission decision of 17 July 2018.

227 See e.g *Universal Music Group/ EMI Music* (Case No COMP/M.6458) Commission decision of 21 Sep. 2012, para. 139. The Commission considers that the present segmentation between music downloading and music streaming, despite their many difference will change in the course of time; Similarly the changes in the trends in consumer retails goods has also been observed by the commission when it comes to the substitutability of online and offline retailers in *OTTO/ PRIMONDO ASSETS* (Case No COMP/M.5721) Commission decision of 16 Feb 2010, paras. 16-30.

228 As would is required by the CJEU for the purpose of applying this provision, see Case C-52/07 *Kanal 5 Ltd and TV 4 AB v Föreningen Svenska Tonsättares Internationella Musikbyrå (STIM) upa* [2008] ECLI:EU:C:2008:703 , para. 46.

229 For more in this regard see For an extensive discussion on platform pricing in the case of App Stores see F. Bostoen and D. Mandrescu (2020) supra (n 166).

various music streaming apps in the App Store (including Apple's own native app), this could, at least, prima facie fall under the scope of this provision.

Accordingly, platforms that deal with an undivided group of heterogeneous commercial customers should constantly review and adjust their pricing rules and structures so as to function in tandem with the relation of (potential) competition between their commercial customers. If the differentiation criteria applied by platforms with respect to such a group of heterogeneous commercial customers do not exclude the possibility of competition between such members, the pricing practices of these platforms may fall under the scope of art. 102(c) TFEU. A final finding of infringement will of course depend on whether such difference is sufficiently significant to create a competitive disadvantage.

In the case of homogenous commercial platform customers, offering different prices to such members is more likely to fall under the scope of art. 102(c) TFEU since such members are expected to operate in the same sector and rely on similar business models. In such situations the pricing practices of the platform may nevertheless fall outside the scope of this provision when such pricing difference corresponds with the different sub-segments of the market where its customers are active in.[230] In other instances, the adoption of different prices for such customers should be considered at the very least to be suspicious, especially when such pricing strategies include criteria that are external to the trade relation between the platform and its customers. This would occur, for example, if a platform would offer lower prices to its single homing commercial customers compared to its multi-homing customers.[231] Although this would be rational from an economic perspective because single-homing customers are considered more valuable than multi-homing ones, this would be the equivalent of exclusivity rebates from a competition policy perspective.

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230 E.g. see *AHOLD/ FLEVO* (Case No COMP/M.6543) Commission Decision of 7 May 2012, paras. 10-16. The Commission found that the market for sales of books to final consumers can be sub-dived based on sales channel and book category; in *SONY/ MUBADALA DEVELOPMENT/ EMI MUSIC PUBLISHING* (Case No COMP/M.6459) Commission decision of 19 Apr. 2012, paras. 27-43. In this later decision the Commission found the market for online exploitation of rights can be sub-divided based on: retail model, genera's and access device.

231 A similar practice have been observed in the case of Expedia that was claimed to be demoting the placement of properties offered on its platform if the same properties were also listed on other platforms for lower prices. In such a scenario competing property owners would be subject to the same fees but get less for their money due to their choice to multi-home. Such a construction is in essence a work around the prohibition imposed on booking platforms to use MFN clauses while attempting to achieve the same effect.

Following the identification of competing commercial trading parties that are subject to dissimilar pricing imposed by the concerned dominant platform, the effect of such prices on competition remains to be assessed like in any other case. The manner in which such effect should be assessed may differ, however, based on the way in which these commercial customers utilized the platform. Where the platform commercial customers use the platform as a sales channel, the competitive disadvantage of dissimilar pricing should be assessed with respect to the competitive relation among such parties **on** the platform. This in line with the requirement of current practice that the competitive disadvantage of the disfavored customer(s) should be assessed in the market where the input of the dominant undertaking is used to compete.[232] Although the impact on competition as such may at times be rather limited,[233] such an approach would be in line with the current case law on art. 102 TFEU, which excludes the possibility of a de minimis threshold.[234] When the dominant platform is used by its commercial customers as an advertisement channel or a source of data acquisition, the competitive disadvantage should be assessed with respect to the market(s) where these are active on outside of the platform. Accordingly, such markets would be those for the advertised product or service, or the market(s) of the product or service for which the data was acquired. In practice this may also mean that platforms will have a varying degree of maneuvering space when it comes to price discrimination depending of the functionalities they offer and their corresponding form of monetization.[235]

5.4 Conclusion and final remarks

This discussion and analysis in this chapter addressed the fourth subquestion of this research, namely: *How can abusive pricing practices by online platforms be assessed under art. 102 TFEU in light of their inherent reliance on unconventional price settings resulting from their multisided nature?*

The discussion covered in this chapter depicts the complex nature of platform price settings when being assessed as potential price-related abuses under art. 102 TFEU. It was shown that ensuring effective enforcement

232 Case C-525/16 *MEO — Serviços de Comunicações e Multimédia SA v. Autoridade da Concorrência* [2018] ECLI:EU:C:2018:270, para. 24.

233 E.g. when the sales via the dominant platform may represent a very small part of the total sales of certain customers.

234 Case C-525/16 *MEO — Serviços de Comunicações e Multimédia SA v. Autoridade da Concorrência* [2018] ECLI:EU:C:2018:270, paras. 29; Case C-23/14 *Post Danmark* [2015] ECLI:EU:C:2015:651, paras. 70-73; Case C-85/76 *Hoffmann-La Roche v Commission* [1979] ECLI:EU:C:1979:36, para. 123.

235 For example a 5% difference in transaction fees charged by platforms that facilitate monetary transactions may have a greater impact on competition on the platform than a 5% price difference on pay-per-click ads on competition outside the platform.

of such abuses in practice, although possible, requires that the multisided character of online platforms be taken into account in the scope of the legal and economic analysis of their price settings. This entails at times adjusting the legal tests to the commercial reality of online platforms. Accordingly, such adjustments may require relying on price assessment benchmarks that are better suited for the cost and price structures of online platforms and extending the price analysis to more than one customer group at a time. Such adjustments, despite being quite significant at times, can be accommodated to a great extent within the current frameworks for price related abuses discussed in this chapter. Therefore, applying this provision to platforms when dealing with price-related abuses does not necessarily require any modification to its wording.

In practice, the manner in which the respective platform characteristics are taken into account for the legal analysis under art. 102 TFEU will vary per type of abuse and corresponding legal tests depending on the theories of harm these intend to tackle.

The prohibition of predatory pricing under art. 102 TFEU aims at preventing exclusionary loss-making pricing strategies. Accordingly, applying this form of abuse to online platforms means assessing whether the prices set by the platform for (each of) its various matchmaking functionalities is loss-making. Doing so in practice will require establishing whether such matchmaking functionalities constitute one or more separate services offered by the platform. Where the platform is considered to provide a single service, the loss making assessment will be made with respect to all the platform costs. By contrast, where the various matchmaking functionalities are considered to constitute separate stand alone services, the assessment of loss- making will be made with respect to each of these functionalities separately as well as for the platform as a whole in order to also identify eventual cross-subsidization. This latter option that is possible under art. 102 TFEU in principle requires overriding the current discussion on the relevant market with regard to platforms, which commonly considers platforms to offer a single (matchmaking) service. Furthermore, the assessment of loss-making prices should rely on price – cost benchmarks that are suitable for the cost structure of platforms, which often involves significant fixed costs, relatively low variable costs and common costs.

In the case of excessive pricing the needed adjustments for the current framework to apply to online platforms are more significant. The prohibition of excessive prices under art. 102(a) TFEU is aimed at preventing the dominant undertaking from exploiting its customers by extracting supra-competitive prices from them. In the context of online platforms such exploitation can occur with respect to their various customer groups, including consumers. The assessment of excessiveness and unfairness of the platform prices, as required by the cases law on excessive prices, would

therefore have to be applied with respect to each of its customer groups. In order to so adequately, however, an expansion of the legal test introduced it in *United Brands* would be recommended. Such an expansion would entail looking at the network effects and their respective homing patterns in order to assess the economic value their receive from the platforms' matchmaking functionality. This additional step could then help filter out the noise created by the skewed pricing structures of platforms, which give the impression that the commercial customer group(s) of the platform always pay an excessive price. This is because such parties typically also cover the costs involved in serving the respective platform functionalities to consumers. The additional step helps reduce the scope of the excessiveness of the price paid by such parties. By doing so, the adjusted test prevents the over-enforcement of excessive pricing abuses with respect to such customers. At the same time the framework of this abuse needs to account for the possibility that some of the platform supra competitive fees may be passed-on (in part or in full) between the various customer groups. By doing so, the adjusted framework could help prevent under-enforcement in the case of customers that are attracted to the platform with very low or even zero priced offers, and are commonly not considered to be potential victims of excessive pricing. When making the excessiveness and unfairness assessment, similar to the case of predatory pricing, the price-cost benchmarks used need to be suitable for the cost structure of platforms.

Finally, in the case of discriminatory pricing practices, the aim of art. 102 (c) TFEU is to prevent the distortion of competition between the commercial customers of the dominant undertaking. Adapting the current framework of this abuse to online platforms is easier than in the case of the predatory or excessive pricing and primarily requires translating of the legal test for this abuse to the (commercial) setting of platforms and their commercial customers. This entails acknowledging that the intermediary role played by platforms which means that they can serve multiple separate customer groups with more than one matchmaking functionality at a time. Accordingly, it requires at times assessing whether the various matchmaking functionalities offered by the platform to its commercial customer groups constitute equivalent transactions. Where equivalence is established it is then important that the competitive relation between the respective platform commercial customers is identified, so as to assess whether the different fees that may have been charged by the platform from them could indeed put some at a competitive disadvantage. The manner in which this disadvantage is assessed and measured (i.e. on the platform of outside of it) depends in turn on the way the commercial customers of the platform utilized the platform functionalities.

In light of the above it would appear that the current framework of art. 102 TFEU is to a great extent capable of dealing with future claims concerning price related abuses. This is a (very) positive outcome given that fact that

such practices do not appear to be covered by the recent proposal of the DMA. Accordingly, the pricing practices of platforms with significant market power will remain for the time being to be addressed in an ex-post manner under art. 102 TFEU. Therefore, as showed and explained, the enforcement of price-related abuses in practice will require a dynamic approach to the current legal tests of such abuses that would allow for their adaption to the characteristics of online platforms.