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ABUSING DATA DOMINANCE IN THE DIGITAL MARKET. THE APPLICATION OF MERGER CONTROL AND ARTICLE 102 TFEU TO DATA-RELATED CONDUCTS.

Presentata da: Federica Ferrari

Coordinatore Dottorato

Marina Timoteo

Supervisore

Pietro Manzini

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Table of contents

Abstract

The internet and digital technologies revolutionized the economy. Regulating the digital market has quickly become a priority for several legal orders, among which the one of the European Union. While promoting innovation and development, EU institutions need to assure that the digital market maintains a competitive structure.

Among the numerous features characterizing the digital sector, the centrality of users' information is of particular importance. Digital services, in fact, are centered around the collection and processing of people's data. The accumulation of users' information, however, contributes to the accumulation of market power by a few large operators. As a result, in the past few years, the European Commission took action to prevent the elimination of competition from the digital market. Accordingly, the enforcement of merger control and article 102 TFEU increased consistently. Given the strong link between market power and users' information, data-driven mergers and data-related abuses gained a central role for the purposes of antitrust enforcement.

In light of these considerations, this work aims at exploring the link between information and market power, with particular reference to digital undertakings offering core platform services. The object of the analysis is to assess whether EU competition law is well-suited to address data-driven mergers and data-related abuses of dominance. These conducts are of crucial importance to the maintenance of competition in the digital sector, insofar as the accumulation of users' data constitutes a fundamental competitive advantage.

Part 1 addresses the specific features of the digital market, as well as their impact on the definition of the relevant market and the assessment of dominance by antitrust authorities. Part 2 analyzes the Commission's case law on data-driven mergers in order to verify if EU merger control is well-suited to address these concentrations. Part 3 discusses abuses of dominance in the phase of data collection and the possible legal frameworks applicable to similar conducts. Part 4 is dedicated to the issue of access to "essential" datasets and to the indirect effects of abuses of dominance on rivals' ability to access users' information. Finally, Part 5 discusses differential pricing practices based on users' data, collected and analyzed online.

As it will be assessed, the combination of an efficient competition law enforcement and the auspicial adoption of a specific regulation seems to be the best solution to face the challenges raised by “data-related dominance”.

Introduction

The internet and digital technologies transformed numerous sectors and revolutionized the economy. Regulating the digital market became a priority for several legal orders, among which the one of the European Union[1]. While promoting innovation and the development of information technologies, EU institutions also need to assure that the digital market maintains a competitive structure.

In light of the specific characteristics of this sector, this objective is at the center of a wide discussion. As a matter of fact, due to strong network and lock-in effects, as well as high entry barriers, the digital market tends to favor the accumulation of market power by a few large operators. As a result, large ecosystems emerged, comprised of a variety of different services and businesses owned by a single incumbent. In light of these circumstances, the enforcement of article 102 of the Treaty on the Functioning of the

[1] The European Commission launched numerous proposals, see among others: 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, Brussels, 15 December 2020; European Commission, *Proposal for a regulation of the European Parliament and of the Council on a single market for digital services* (Digital services act), COM(2020) 825 final, Brussels, 15 December 2020; European Commission, *Proposal for a regulation of the European parliament and of the council laying down harmonised rules on artificial intelligence* (Artificial intelligence act) *and amending certain union legislative acts*, COM(2021) 206 final, Brussels, 21 April 2021; European Commission, *Proposal for a regulation of the European parliament and of the council on European data governance* (Data governance act), COM(2020) 767 final, Brussels, 25 November 2020.

On this, see among others: G. CAGGIANO, *Sul trasferimento internazionale dei dati personali degli utenti del mercato unico digitale all'indomani della sentenza Schrems II della Corte di giustizia*, in Studi sull'integrazione europea, 2020, p. 563 ff.; P. MANZINI, *Il Digital market act decodificato*, in P. Manzini and M. Vellano, *Unione Europea 2020. I dodici mesi che hanno segnato l'integrazione europea*, CEDAM - Kluwer, 2021, p. 317 ff.; F. ROSSI DAL POZZO, *Qualche considerazione d'insieme sul mercato unico dei dati e la loro tutela nell'Unione europea*, in *Mercato unico digitale, dati personali e diritti fondamentali* (a cura di) F. ROSSI DAL POZZO, Eurojus, 2020, p. 7 ff.; B. NASCIMBENE, *Il Mercato unico digitale quale nuova frontiera dell'integrazione europea considerazioni introduttive*, in *Mercato unico digitale, dati personali e diritti fondamentali* (a cura di) F. ROSSI DAL POZZO, Eurojus, 2020, p. 11 ff.; G. CAGGIANO, *La proposta di Digital service act per la regolazione dei servizi e delle piattaforme online nel diritto dell'Unione europea*, I Post di AISDUE, Focus "Servizi e piattaforme digitali", n. 1, 2021; P. MANZINI, *Equità e contendibilità nei mercati digitali: la proposta di Digital market act*, I Post di AISDUE, Focus "Servizi e piattaforme digitali", n. 2, 2021; L. LIONELLO, *La creazione del mercato europeo dei dati: sfide e prospettive,* Diritto del commercio internazionale, n. 3, 2021, pp.675 ff.; M. EIFERT ET AL., *Taming the giants: the dma/dsa package*, Common market law review, vol. 58, 2021, at p. 987 ff.; P. BONGARTZ ET AL., *The Digital markets act: moving from competition law to regulation for large gatekeepers*, Journal of European consumer and market law, vol. 10, n. 2, 2021, p.60 ff.

European Union[2] ("TFEU") and merger control are particularly important. While article 102 TFEU prohibits dominant undertakings from abusing their position, merger control aims at preventing the creation or strengthening of dominant positions in the market as a result of an acquisition or a merger.

While some authors invoke the adoption of an interventionist approach by antitrust authorities in order to protect competition in the digital market, others believe that a similar policy would hinder innovation. The latter approach, however, is losing its appeal as ongoing calls for a stronger enforcement of antitrust and for breaking up big technological firms have been voiced in several legal orders[3]. Besides the role of competition law in the digital sector, the suitability of its existing tools and rules has been called into question. In particular, it is debated whether competition enforcement can properly address the challenges raised by the digital market or if specific legislative interventions are in order.

The digital market is centered around users' data. Information has always been an important asset for economic operators in any market, providing a valuable insight into customers' demand and competitive conditions. In the digital sector, however, data are even more fundamental. Online services, in particular, are highly personalized based on each individual's preferences. For instance, social networks show each user contents that reflect his/her tastes and target advertisements based on his/her interests and interactions. As a result, in order for users to access most online services, they are required to surrender some data and/or allow at least a basic tracing of their activities. The collected information allows algorithms operating platforms and smart devices to learn and improve their predictions and reactions. Therefore, online operators aim at gathering as many data on users as possible.

Practices concerning users' information are relevant for several policies, among which privacy and consumer protection. Nonetheless, competition law also applies to data-related conducts when they violate the relevant provisions. In particular, data-related

[2] Treaty on the Functioning of the European Union (OJ C 202, 7.6.2016, p. 47).

[3] See, among others: M. USMAN, *Breaking up big tech: lessons from AT&T*, University of Pennsylvania law review, vol. 170, 2021; G. SITARAMAN, *The national security case for breaking up big tech*, Knight first amendment institute at Columbia, 2020, Vanderbilt Law research paper n. 20-18, 2020; L. FRANK, *Boundedly rational users and the fable of break-ups: why breaking-up big tech companies probably will not promote competition from behavioural economics perspective*, World competition, vol. 43, issue 3, 2020, p. 373 ff.; L.M. KHAN, *The separation of platforms and commerce*, Columbia law review, vol. 119, n. 4, 2019, p. 973 ff.

practices may foster market concentration. Due to its importance, in fact, information has a strong impact on the competitive strength of online operators. As a result, an increasing number of data-drive acquisition and abusive practices emerged both at the EU and national level, aiming at directly or indirectly collecting and employing users' data in order to gain a competitive advantage. On the one hand, a vast number of mergers driven by the economic and competitive value of the target company's dataset took place in the past decade. These operations often involved well known undertakings, like Google, Facebook, Apple, Microsoft and so on. These mergers are extremely relevant for the digital market and risk to both go undetected and reinforce undertakings' dominant position. On the other hand, abusive data-related practices are also proving to be problematic for competition. The examples are numerous, going from Amazon's use of sellers' data in order to favor its own retail business[4], to Facebook's data-combining and third party tracking practices[5], and Google's self-favoring abuse that deviated traffic away from its rivals, indirectly depriving them of users' information[6].

In light of these premises, this work will explore the link between information and market power, with particular reference to digital undertakings offering core platform services. The object of the analysis will be to assess whether EU competition law is well-suited to address data-driven mergers and data-related abuses of dominance. These conducts are of crucial importance to the maintenance of competition in the digital sector, insofar as the accumulation of users' data constitutes a fundamental competitive advantage. Therefore, an efficient antitrust enforcement seems to be necessary to face the challenges raised by "data-related dominance".

To begin with, Part 1 of this work will provide a preliminary analysis of the main characteristics of the digital market and the issues they raise with respect to two stages of antitrust analysis, namely the definition of the relevant market and the assessment of dominance. In order to identify the aspects of the digital market that impact its

[4] European Commission, press release, *Antitrust: Commission sends Statement of Objections to Amazon for the use of non-public independent seller data and opens second investigation into its e-commerce business practices*, 10 November 2020.

[5] Bundeskartellamt, *Facebook, Exploitative business terms pursuant to Section 19(1) GWB for inadequate data processing*, case summary, 15 February 2019. See also: AGCM, *WhatsApp fined for 3 million euro for having forced its users to share their personal data with Facebook*, press release, 12 May 2017. The Italian authority framed the conduct as a consumer protection violation.

[6] Court of Justice, T-612/17, *Google LLC and Alphabet Inc v. European Commission*, ECLI:EU:T:2021:763, 10 November 2021.

competitive structure, it is necessary to discuss some of the features characterizing providers of online platforms and their services. Although a general definition for these platforms does not exist for the purposes of competition law, some common characteristics can be identified, among which the centrality of data, the presence of several sides and of network effects, and the absence of a monetary price. These aspects have a strong impact on the definition of the relevant market. Antitrust authorities will have to determine how to adapt their analysis to multi-sided platforms and free-to-use services. Furthermore, antitrust analysis should assess whether the definition of specific markets for digital ecosystems and users' data is necessary. Some specificities also emerge in the assessment of dominance. In particular, the traditional criterion of market shares does not accurately reflect the structure of the digital sector, especially in relation to core platform services. Moreover, several characteristics of the market will have to factor into the analysis, among which network effects, entry barriers, lock-in effects, and so on.

Given these premises, Part 2 will focus on data-driven mergers. These operations are the object of a lively debate, in particular in relation to the capability of EU merger control to address them. In light of the importance of users' data, these mergers have the potential of creating or reinforcing dominant positions in the market. Although the competitive advantage linked to the possession of vast datasets has been widely recognized, data-driven mergers often went undetected. Moreover, one of the main issues raised by data-driven acquisitions relates to the relevance of privacy and users' choice as competitive parameters. By examining the Commission's case law, Part 2 aims at assessing whether EU approach to data-driven mergers provides a comprehensive analysis of all the relevant sides of the services involved. In particular, it will be discussed whether the important competitive parameters of data protection and users' choice are taken into sufficient consideration.

Part 3 of this work will begin the analysis of data-related abuses, starting from the conducts that tap into data collection. As it emerged from ongoing investigations and procedures, both at the EU and national level, digital operators may engage in anticompetitive conducts aiming at acquiring more data[7]. In particular, these practices

[7] See: European Commission, press release, *Antitrust: Commission sends Statement of Objections to Amazon for the use of non-public independent seller data and opens second investigation into its e-commerce business practices*, cited *supra*; *Bundesgerichtshof bestätigt vorläufig den Vorwurf der*

can be directed against business users as well as end users, respectively amounting to exclusionary and exploitative abuses. By analyzing the case law of the European Commission and the Court of Justice, the possibility to address these practices under well-established legal frameworks will be discussed.

Part 4 will focus on practices aiming at restricting or reducing rivals' data. The first issue raised by these conducts relates to the applicability of the essential facility doctrine to dominant operators' datasets. In particular, the possibility to impose a duty to share information in light of competition law and privacy protection will be discussed. Mandating operators to provide competitors with access to their datasets, in fact, may be particularly complex in light of data protection legislations. Moreover, a similar obligation may hamper incentives to invest and innovate. Second of all, the indirect implications of data-related abuses of dominance on rivals' access to users' information will be explored. Although some practices do not aim directly at reducing rivals' data, the importance of their consequences on competitors' ability to collect this input cannot be overstated. These outcomes, however, differ greatly based on the anticompetitive conduct implemented by the incumbent, hence their analysis has to be carried out on a case by case basis. This work will analyze two specific cases, namely Google's self-favoring conduct in relation to its Shopping unit and Apple's exclusionary practice concerning its AppStore, in order to assess their impact on rivals' ability to access users' data.

Finally, Part 5 will analyze the potential use of information to price discriminate over the internet. As core platform services are becoming highly personalized to users' tastes and preferences, some authors wondered if operators could personalize prices as well. By processing users' data, algorithms may be able to identify the highest price consumers are willing to pay for any given product or service. Moreover, the employment of big data could open up new possibilities to engage in behavioral discrimination, which entails the "manipulation" of consumers based on the information collected. While price discrimination is not a new phenomenon, new technologies allow for a more precise personalization, raising a debate over it effects and the opportunity of antitrust enforcement. Furthermore, it is unclear which framework could be applied to this

missbräuchlichen Ausnutzung einer marktbeherrschenden Stellung durch Facebook, pressemitteilungen, nr. 080/2020, 23 juni 2020.

practice. By analyzing the European case law on article 102 TFEU, this work will address the possible legal frameworks that could be applied to differential pricing online.

As it will be assessed, the possession of large datasets is strictly linked to market power in the digital sector. As a result, an effective control of data-driven mergers and the enforcement of article 102 TFEU in the case of data-related abuses of dominance are fundamental to increase the contestability of the digital market. While antitrust law is well-suited to address these conducts, its combination with a specific regulation directed at protecting market contestability, while increasing the degree of legal certainty for digital operators, will likely prove to be the most efficient solution.

The present work will focus on data-related abuses and mergers and the main issues that they raise to competition enforcement. The analysis carried out does not aim at being exhaustive and will be centered on the most important practices linked to the input of users data, in order to explore the connection existing between market power in the digital sector and information[8]. In doing so, the EU Commission's proposal for the adoption of the digital market act will be recalled when necessary, however, it will not be the object of specific analysis. Moreover, even though data-related conducts are relevant for a variety of policies, first of which privacy protection, this work will address them from the perspective of competition law. Other fields of law will be examined only for the purposes of their relevance to antitrust analysis as competitive parameters.

[8] In addressing merger control, the issue of killer acquisitions will not be discussed. Furthermore, the solution proposed by some authors to beak-up big technological firms will not be addressed for the purposes of this work.

PART 1

1.1 Introducing the digital market.

The digital market[1] is increasingly important for the economy worldwide and many initiatives have been launched at a European level to regulate and promote digitalization[2]. The challenges raised by the digital market concern numerous areas of the European legal system, among which competition law. In particular, it was observed that the digital market is characterized by a accumulation of market power in the hands of a few large providers with highly integrated businesses. Throughout the past few decades, European competition authorities addressed several anticompetitive behaviors adopted by online operators, giving rise to a consistent and wide debate on the scope of competition law and the best line of action in these fast-changing, highly innovative markets. Numerous scholars questioned whether traditional competition tools are well suited to address concerns raised by that data-centric digital markets. Following studies, market inquiries and an ever-growing case

[1] For the purposes of this work, the term 'digital market' will be used as a synonym for the digital sector, as the entirety of various digital markets that could and have been singled out in antitrust cases, e.g. the market for search engines, social networks, marketplaces, etcetera.

[2] The European Commission has launched numerous proposals, among others: 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, Brussels, 15 December 2020; European Commission, *Proposal for a regulation of the European Parliament and of the Council on a single market for digital services* (Digital services act), COM(2020) 825 final, Brussels, 15 December 2020 (it should be noticed that in March 2022, the European Parliament and EU Member States reached a political agreement on the proposal for the digital services act by the EU Commission, concerning its adoption, see: European Commission, press release, *Digital Services Act: Commission welcomes political agreement on rules ensuring a safe and accountable online environment*, Brussels, 23 April 2022); European Commission, *Proposal for a regulation of the European parliament and of the council laying down harmonised rules on artificial intelligence* (artificial intelligence act) *and amending certain union legislative acts*, COM(2021) 206 final, Brussels, 21 April 2021; European Commission, *regulation of the European parliament and of the council on European data governance* (Data Governance Act), COM(2020) 767 final, Brussels, 25 November 2020; European Commission, *Communication to the European parliament, the council, the European economic and social committee and the committee of the regions - 2030 digital compass: the European way for the digital decade*, COM(2021) 118 final, Brussels, 9 March 2021.

law, in 2020 the European Commission proposed the adoption of the Digital Market Act, aiming at addressing several concerns relating to the contestability of the digital market. In an attempt to avoid anticompetitive consequences of some, specific behaviors – thereby safeguarding the contestability and fairness of the market – the proposal of the Commission would likely provide a higher degree of legal certainty. The objective of the proposal is to complement the intervention of antitrust law, which would still play a substantial role in the safeguarding of competition in the digital market[3]. Nonetheless, until the adoption of the Digital Market Act, the protection of the competitive structure of the digital sector concerns solely antitrust policy.

In order to fully understand the issues surrounding the enforcement of competition law in the digital sector, it is necessary to conduct a preliminary analysis of its characteristics, and in particular the features of online platforms. Most online providers, in fact, offer their services through these platforms, which are structured around algorithms elaborating immense quantities of information. Online platforms are central in the digital sector and their specificities have relevant implications on the enforcement of competition law. First of all, they are centered around data, the foundational element of the digital market. Secondly, the services offered through online platforms are often free to use for end users, who in exchange surrender varying amounts of information to providers. Thirdly, these platforms are often multi-sided, they connect different groups of consumers who derive utility from the platform based on the identity and quantity of users on the other sides, giving rise to substantial network effects. As it will be seen below, the importance of these elements cannot be overstated, given their implication for the competitive structure of the market as well as for antitrust enforcement.

The present chapter will provide an overview of the digital market and its main elements, as well as the challenges that arise in relation to antitrust analysis. In particular, the first section will be devoted to a preliminary examination of the most

[3] The Digital Market Act, in fact, is thought to complement rather than substitute competition law, see: 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), cited *supra*, p. 3

relevant features of the digital market and its functioning. Firstly, the common elements of online platforms will be defined (see *infra* 1.1.1). Secondly, the crucial role of data and its economic value in the digital sector will be discussed (see *infra* 1.1.2). Thirdly, the vastly popular – albeit not universal – multi-sided structure adopted by most providers will be examined (see *infra* 1.1.3). Finally, an overview of the most significant network effects characterizing the functioning of online platforms will be drawn (see *infra* 1.1.4). Against this background, the second section of this chapter will discuss the issues raised by the digital market for the definition of the relevant market. In particular, the multi-sided structure of online platforms has important implications on this step of antitrust analysis (see *infra* 1.2.1). Ulterior complications derive from the absence of a price for numerous digital services (see *infra* 1.2.2) and from the presence of digital conglomerates "dominating" the market (see *infra* 1.2.3). Finally, it has been debated whether a data-specific market should be defined, in order to better understand the dynamic structure of the digital sector (see *infra* 1.2.4). Finally, the third section of this chapter will be devoted to the several challenges that the digital sector poses to the assessment of market power and dominance. As a matter of fact, the most popular indicator of market power – i.e. market shares – used by antitrust authorities is not necessarily informative in the case of online platforms and requires an adaptation (see *infra* 1.3.1). Moreover, antitrust analysis cannot forego to consider entry barriers linked to network and lock-in effects (see *infra* 1.3.2) as well as those connected to data (see *infra* 1.3.3). Finally, the dynamics of digital ecosystems require authorities to consider the entire conglomerate for the purpose of the assessment of market power (see *infra* 1.3.4).

As it will be observed, due to their elasticity, European competition rules prove themselves well-suited to maintain a competitive structure in the digital sector. The definition of market power can be carried out by employing numerous tools, both qualitative and quantitative. As for the assessment of dominance, the Commission has at its disposal a variety of indicators that can very well be employed in the digital market. In some cases, i.e. market shares, some minor adjustments are needed,

however, the toolkit provided by the Commission's Notices and the case law appears to be sufficient.

1.1.1 What are online platforms?

The digital market is characterized by the offering and purchasing of goods and/or services through digital technology, which uses binary codes to collect, elaborate and transmit information[4]. Within this market, online platforms[5] provide the necessary infrastructure for the exchange and use of goods and services, embodying the structure of market operators in the digital sector[6]. Given the central position that online platforms hold in the digital sector, these entities and their characteristics have been the object of several studies.

Online platforms may present diverse characteristics in relation to their structure, the services they provide as well as the technical features they present[7]. To begin with, whereas some platforms cater to more than one group of different consumers, whose interests in the service are interconnected, – this is the case of so-called multi sided platforms, such as marketplaces, whose service consists in connecting sellers to buyers and vice versa – others only serve one category of users – an example is provided by messaging applications, which usually only target one group of consumers, i.e. individuals wishing to communicate with each other –. In addition, platforms can be distinguished on the basis of the services they offer. For example, advertising intermediary platforms provide advertising spaces. Marketplaces, on the other hand, provide a space where sellers and buyers can meet. Social networks offer a service for people to connect to other individuals, sharing their thoughts, pictures, posts, videos and so on. Thirdly, platforms may be sorted based on their technical functionalities:

[4] R. NAZZINI, *Online platforms and antitrust: where do we go from here?*, Italian antitrust review, n. 1, 2018, at p. 6.

[5] To the purposes of this work, the term "online platform" will be used to indicate both the infrastructure used to provide online service, as well as the operators of these services.

[6] R. NAZZINI, *Online platforms and antitrust: where do we go from here?*, cited *supra*, at p. 6.

[7] J. CRÉMER, Y.A. DE MONTJOYE, H SCHWEITZER, *Competition policy for the digital era*, final report, European Commission, Luxembourg: publications office of the European Union, 2019, p. 30.

some platforms offer services designed to facilitate economic transactions, others may only match individuals among groups or mediate interactions[8]. Although these categories may be useful for analytical purposes, numerous online platforms often present transversal characteristics which prevent them to fit into a single classification. Google, for instance, is a multisided platform offering a generic search engine service to connect websites to users, but it also provides advertising services to publishers within its engine. Another example is provided by Facebook, which offers a social media service as well as an advertising one. The variety of typologies of online platforms prevented the emergence of a unified definition of such infrastructures[9]. Therefore, when dealing with providers operating through an online platform it is preferable to adopt a case-by-case approach, especially in antitrust analysis.

Given the lack of a unified general definition of online platforms, in its proposal for the adoption of a digital market act[10], the Commission relied on the concepts of 'core platform service' and 'gatekeeper'. As for the former, core platform services have been identified by the Commission as those services presenting features – such as a high degree of concentration, the presence of a few large platforms acting as gateways between business users and end users and a misuse of gatekeeper power – that contributed to hindering the contestability of the market[11]. As for the latter concept, gatekeepers are the large platforms acting as gateways between business users and end users, enjoying an entrenched and durable position on the market[12].

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[8] Competition law 4.0, *A new competition framework for the digital economy*, Federal Ministry for Economic Affairs and Energy (BMWi), September 2019, p. 17.

[9] Organisation for Economic Co-operation and Developmen ("OECD"), *An introduction to online platforms and their role in the digital transformation*, 3 May 2019, OECD Publishing, Paris, https://doi.org/10.1787/53e5f593-en, p. 20.

[10] European Commission, *Proposal for a Regulation of the European Parliament and of the Council on fair and contestable markets in the digital sector* (Digital markets act), cited *supra*, 2020.

[11] Ibid, at article 2, the Commission provided a list of core platform services, namely (a) online intermediation services, (b) online search engine, (c) online social networking services, (d) video-sharing platform services, (e) number-independent interpersonal communication services, (f) operating systems, (g) cloud computing service, (h) advertising services, included any advertising networks, advertising exchanges and any other advertising intermediation services, provided by a provide of any of the core platform services from (a) to (g).

[12] Ibid, at p. 1, the Commission highlighted that in the digital market "*A few large platforms increasingly act as gateways or gatekeepers between business users and end users and enjoy an entrenched and durable position, often as a result of the creation of conglomerate ecosystems around*

Although there is no unified definition of online platforms, at least three common features can be identified that characterize these entities, namely: the presence of increasing returns to scale; strong network externalities; and, finally, a data-centric structure[13]. These commonalities will be further discussed below.

The first characteristic of online platforms consists in the extreme returns to scale that they experience. Although in order to enter into a given digital market an undertaking must bear certain fixed costs – including the acquisition of the hardware and the development of the initial software –, the expenses of production are far from proportionate to the increase of customers served[14]. Once the infrastructure is set, the cost of serving more customers increases extremely slowly. The reason for this effect lies in the circumstance that information, which is at the core of online platforms and their services, can be transmitted to a vast number of people very cheaply[15].

Secondly, the digital market is characterized by strong network externalities. In other words, the utility of a given online platform for each user is linked to the number of other users that navigate it. Online messaging applications provide a clear example of this mechanism[16]: individuals are interested in using WhatsApp if enough of their acquaintances are also using it. A texting service has no appeal if the individuals with whom a user desires to communicate are not reachable through it. The same considerations can be held for various other online services, such as social networks, marketplaces, dating applications and so on. As it will be seen below, network

their core platform services, which reinforces existing entry barriers". Moreover, at article 3 the Commission proposed to identify gatekeepers based on (a) their impact on the internal market, (b) the circumstance that they act as gateways to customers and (c) the entrenched and durable position that they hold or are expected to hold. In particular, the impact on the market is based on a turnover threshold, the importance as a gateway is established on the basis of the number of monthly active users and if the number of monthly users has been reached for three years the undertaking is considered to have an entrenched and durable position.

[13] J. CRÉMER, Y.A. DE MONTJOYE, H SCHWEITZER, *Competition policy for the digital era*, cited *supra*, at pp. 21-24.

[14] OECD, *An introduction to online platforms and their role in the digital transformation*, cited *supra*, at p. 23.

[15] J. CRÉMER, Y.A. DE MONTJOYE, H SCHWEITZER, *Competition policy for the digital era*, cited *supra*, at p. 20. The marginal costs for more users to join and navigate a social media once it has been "built", for example, are very low if not null; the same is true in the case of search engines, marketplaces, and many more online services.

[16] Ibid.

externalities have important implications on entry barriers[17] and generate a winner-takes-all effect in the market[18].

Finally, one last common feature of online platforms consists in the circumstance that they are typically data centric. Data are at the core of the digital economy and of the functioning of services offered online[19]. By navigating online platforms, users provide a vast amount of information that carries a high economic value and that is gathered and processed by market operators. Such information is then employed by the platform for numerous purposes: to improve the service provided to end users as well as possible services offered to businesses; to trigger network effects; to profile end users; to expand to adjacent markets and so on.

Extreme returns to scale, network externalities and the data-centric structure are not the only characteristics of online platforms, albeit they are the ones that nearly all of them have in common. Other usual, although non-universal, features may include multi-sidedness or network effects. However, adopting these features as characterizing all online platforms implies a more restrictive notion of what these infrastructures are. In the following paragraphs some of the most important characteristics of online platforms will be further analyzed. In particular the importance of the economy of data, the characteristics of multi-sided operators and the importance of network effects.

[17] Due to network externalities, it is more difficult for new entrants to acquire users and a sufficient scale, which is crucial in order to be an effective competitor in the market. See: M. E. STUCKE and A. EZRACHI, *When competition fails to optimize quality: a look at search engines*, Yale journal of law and technology, vol. 18, issue 1, 2016, at p. 83; European Commission, Case n. COMP/M. 5727 – *Microsoft/Yahoo!*, 18 February 2010, at point 153; FTC Bureau of Competition, *Staff Memorandum to the Commission on Google Inc. 8*, 8 August 2012.

[18] D. A. HANLEY, *A topology of multisided digital platforms*, Connecticut Public Interest Law Journal, vol. 19 n.2, 2020, p. 289 ff.

[19] Autorité de la concurrence and Bundeskartellamt, *Competition law and data*, 10 May 2016, at p.11 ff.; M. E. STUCKE and A. P. GRUNES, *Big data and competition policy*, Oxford, 2016, p. 15 ff.

See also: OECD, *Big data: bringing competition policy to the digital era*, Background note by the sectretariat, DAF/COMP(2016)14, 27 October 2016; A. MARCIANO, A. NICITA and G.B. RAMELLO, *Big data and big techs: understanding the value of information in platform capitalism*, European journal of law and economics, vol. 50, 2020, at pp. 345-358; Executive Office of the President, *Big data: seizing opportunities*, report, May 2014, at p. 4.

1.1.2 The economy of data.

Although data always had a crucial importance in any market, due to technological development all aspects of people's life can be turned into information[20]. The extensive collection and analysis of users' data is one of the main characteristics of online platforms, as well as the foundation of essential aspects of the services offered therein[21], such as personalization and targeting[22]. As a result of technological innovation, the phenomenon of 'big data' emerged, emphasizing the increased ability of online operators to efficiently process information. In addition, the sources of users' information and the ways in which it can be acquired multiplied. These considerations led scholars to define a specific 'data value chain'. Given their importance, the big data phenomenon, the categorization of users' data and the data value chain will be further analyzed below.

To begin with, new technologies granted online platforms the possibility to analyze enormous amounts of information[23]. Even though it has always been important for businesses in the brick-and-mortar world[24], the centrality of data analysis in the digital economy cannot be overstated, considering its extreme dimension. Suffice it to report that the volume of data created in the world in 2018 was ten times higher than in 2011,

[20] This phenomenon is referred to with the term "datafication", see on this: K. CUKIER and V. MAYER-SCHOENBERGER, *The rise of big data: how it's changing the way we think about the world*, Foreign affairs, vol.92 n.3, 2013, at pp. 28-40.

[21] European Data Protection Supervisor, *Privacy and competitiveness in the age of big data: the interplay between data protection, competition law, and consumer protection in the digital economy,* preliminary opinion, 26 March 2014, above note 26, at p. 10. It was observed that numerous market players view and process datasets, going from individuals, institutions and businesses to governments and non-profit organizations.

[22] Autorità garante della concorrenza e del mercato ("AGCM"), Autorità per le garanzie nelle comunicazioni ("AGCOM") e garante per la protezione dei dati personali, *Indagine conoscitiva sui big data*, 10 febbraio 2020, at p. 70-71.

[23] OECD, *An introduction to online platforms and their role in the digital transformation*, cited *supra*, at p. 24.

[24] For example, data are a valuable input to improve the efficiency of an undertaking's organization and management, or a service's quality in the brick and mortar world and numerous retailers engage in pervasive data gathering, see: J.M. NEWMAN, *Antitrust in zero-price markets: foundations*, University of Pennsylvania law review, vol. 164, 2015, at p. 166. In AGCM, AGCOM e Garante per la protezione dei dati personali, *Indagine conoscitiva sui big data*, cited *supra*, at p. 70-71 it was observed that data are a crucial input for marketing campaigns, as well as the management of call centers and of financial or banking activities.

amounting to 28 Zettabytes (ZB), which is comparable to 250.000.000.000 DVDs, and it is foreseen that by 2025 it will reach 167 ZB[25]. In light of these considerations, the phenomenon of gathering and elaborating data online earned the denomination of 'big data'. The term refers to the collection, analysis and storage of vast quantities of data, including personal ones[26]. The big data phenomenon is characterized by some recurring features, summed up by the 'so-called' four 'Vs': volume, velocity, variety and value[27]. The first 'v' refers to the quantity of data produced and gathered by online operators, which increased immensely, and will presumably continue to in the future[28]. Innovation in the technological sector drastically decreased the cost of collecting, storing, processing and analyzing data[29], which allowed the elaboration of larger volumes of information, earning the phenomenon the term '*big*' data. The second 'v' stands for velocity and refers to the speed at which information is generated and analyzed[30]. Nowadays it is possible to engage in real-time monitoring and now-casting[31], which offer platforms a large competitive advantage. Velocity is particularly crucial with respect to data characterized by fleeting value, which quickly loses its worth over time. This is the case, for example, of current geo-location which is used to assess real-time traffic conditions[32]. The third 'v' stands for variety and indicates the different content of data. Variety increases the value of information, since it allows

[25] AGCM, AGCOM e Garante per la protezione dei dati personali, *Indagine conoscitiva sui big data*, cited *supra*, at pp. 5-6.

[26] According to the Regulation (EU) 2016/679 of the European Parliament and of the Council *on the protection of natural persons with regard to the processing of personal data and on the free movement of such data* (General Data Protection Regulation) 27 April 2016 (OJ L 119, 4/05/2016, p. 1-88).

[27] M. E. STUCKE and A. P. GRUNES, *Big data and competition policy*, cited *supra*, at p. 16 ff.

[28] UK Competition and market authority, *The commercial use of consumer data*, report on the CMA's call for information, 2015, at p. 23.

[2929] OECD, *Data-driven innovation for growth and well-being: interim synthesis report*, October 2014, pp 8-10; McKinsey Global Institute, *Big Data: the next frontier for innovation*, Competition and productivity, June 2011, p 2.

[30] OECD, *Data-driven innovation for growth and well-being: interim synthesis report*, October 2014, at p. 11.

[31] In M. E. STUCKE and A. P. GRUNES, *Big data and competition policy*, cited *supra*, at p. 19, nowcasting is defined as the ability to predict what is happening as it occurs.

[32] Ibid., at p. 21.

the creation of comprehensive profiles for users[33]. The last 'v' characterizing the phenomenon under analysis relates to the economic value of information. This input allows the improvement and personalization of online services, a better targeting of consumers and a deeper knowledge of their behavior[34]. Finally, some authors added additional 'Vs' to describe the big data phenomenon, such as veracity – i.e. the truthfulness of data, which consists in its accuracy[35] –, visualization – which consists in the necessity to dispose the most relevant data in a visual way from which information can be easily drawn[36] – and so on.

A second important aspect concerning the big data phenomenon relates to the ways in which online platforms can acquire users' information. In general, any online activity generates a significant amount of data that can be collected by market operators. To better understand how this input is gathered, data are often divided into three categories: volunteered, observed, and inferred[37]. First of all, 'volunteered data' are those data intentionally provided by users[38]. This category includes information necessary to register to a website – such as the individual's name, email, date of birth

[33] Ibid., at p. 21. To create users' profiles as comprehensive as possible, market operators have to bring their data together in a system that allows them to infer new information, thereby increasing the value of this input. As it will be observed below, this operation is easier for gatekeepers that built a conglomerate of online services. As a matter of fact, these operators can collect a vast amount of different data, which can later be combined create a profile for each user.

[34] D. L. RUNBINFELD AND M. S. GAL, *Access barriers to big data*, 2017, in Arizona law review, vol. 59, 2017, at p. 342.

[35] Ibid., p. 347; see also: AGCM, AGCOM e Garante per la protezione dei dati personali, *Indagine conoscitiva sui big data*, cited *supra*, at p.8;

[36] Ibid.

[37] See among others: P. MANZINI, *Equità e contendibilità nei mercati digitali: la proposta di Digital Market Act*, I Post di AISDUE, Focus "Servizi e piattaforme digitali", n. 2, 2021, at p. 35, note 8; J. CRÉMER, Y.A. DE MONTJOYE, H SCHWEITZER, *Competition policy for the digital era*, cited *supra*, at p.24; A. EZRACHI and M.E. STUCKE, *Virtual Competition: the promise and perils of the algorithm-driven economy*, Harvard, 2016, at p. 15; Autorité de la concurrence and Bundeskartellamt, *Competition law and data*, cited *supra*, at pp.6-8; G. COLANGELO, *Big data, piattaforme digitali e antitrust*, Mercato concorrenza regole, fascicolo 3, 2016, at p. 427; UK competition and market authority, *The commercial use of consumer data,* cited *supra*, at p. 31; I. GRAEF, *Market definition and market power in data: the case of online platforms*, World Competition 38, n. 4, 2015, at p.475; World Economic Forum, *Personal Data: the emergence of a new asset class*, January 2011, at p.7; OECD, *Exploring the economics of personal data: a survey of methodologies for measuring monetary value*, OECD Digital economy papers, n. 220, 2013, at pp. 9-11.

[38] J. CRÉMER, Y.A. DE MONTJOYE, H SCHWEITZER, *Competition policy for the digital era*, cited *supra*, at p. 24.

and so on – as well as activities like sharing a picture on a social media, leaving a review on TripAdvisor or Amazon, etcetera. Secondly, 'observed data' consist in behavioral data produced by users through their online activities and include, for example, the amount of time a user spends on a given website[39]. Users' role is passive in this case, since they are not specifically providing information with the platform[40], rather they allow the latter to observe them. Lastly, through the analysis and elaboration of volunteered and observed data, online platforms may infer ulterior information[41]. The gender of a visitor to a website deduced on the basis of the products he or she has viewed, for instance, constitutes an 'inferred data'[42]. Although this theoretical categorization is not always clear in practice and there may be some grey areas, it provides a useful tool and a starter point to assess, among other things, whether access to a certain type of information may raise entry barrier[43].

Lastly, it remains to be discussed the process through which knowledge is 'extracted' from users' data, which constitutes the so-called 'data value chain'[44]. This process comprises three fundamental stages: the acquisition of data, its elaboration and its use. First of all, the initial phase is data acquisition, which consists in the process of creating, collecting and memorizing users' data. In general, data are created by users engaging in online services[45]. This information is then collected through the devices used to navigate the services – e.g. smartphones, computers, smartwatches, and so on[46]

[39] OECD, *An introduction to online platforms and their role in the digital transformation*, cited *supra*, at p. 66.

[40] Autorité de la concurrence and Bundeskartellamt, *Competition law and data*, cited *supra*, at p. 7. Observed information can easily be combined with volunteered ones in order to profile users.

[41] J. CRÉMER, Y.A. DE MONTJOYE, H SCHWEITZER, *Competition policy for the digital era*, cited *supra*, at p.25.

[42] Autorité de la concurrence and Bundeskartellamt, *Competition law and data*, cited *supra*, at p. 7.

[43] J. CRÉMER, Y.A. DE MONTJOYE, H SCHWEITZER, *Competition policy for the digital era*, cited *supra*, at p.24.

[44] Value chains are usually referred to as all the activities performed by an undertaking in order to deliver a valuable service or product, see J. M. CAVANILLAS, E. CURRY and W. WAHLSTER, *New horizons for a data-driven economy*, Springer international publishing, 2016, at p. 30.

[45] AGCM, AGCOM e Garante per la protezione dei dati personali, *Indagine conoscitiva sui big data*, cited *supra*, at pp. 10 ff. The Italian report observed that users can generate data also while they are offline, for example, through geo-tracking technology.

[46] Ibid., at 13-14. The most popular core platform services on the web offer services to users which in turn generate data which are collected by providers. Other market operators, on the contrary,

– and memorized into external memories. The second stage of the data value chain consists in the elaboration of the information collected, which requires the organization of acquired data and their analysis by algorithms[47]. Finally, the last stage is the use of the knowledge extracted by data. Through the analysis of users' information, undertakings are able to draw conclusions on consumers' behavior. This knowledge can then be employed for various purposes, among which the personalization of online services, of pricing strategies, for cross-selling of complementary products or services, for targeted advertisements, and so on[48].

In conclusion, the importance of data in the digital market cannot be overstated. The phenomenon of big data together with technological advancement allow operators to efficiently and effectively trace and analyze all online activities. Users' data – whether they are voluntarily provided, observed or inferred – are collected, analyzed and used for various purposes by online platforms. The knowledge extracted from these data is at the core of services such as targeted advertisement, and it is vital to improve and personalize core platform services in general.

1.1.3 Multi-sided platforms.

outsource tracking systems from larger providers or acquire users' data from data brokers, i.e. undertakings which collect and organize data online to sell them to third parties.

[47] Ibid., at 15-18. This stage is usually carried out by means of algorithms, which make use of technics such as machine learning. These algorithms, paired with large amount of data, contributed to revolutionize the way in which knowledge is extracted in digital markets. As for the tools needed to analyze and storage the data, they can be outsourced by undertakings that do not own them. However, it appears that these services are normally offered by dominant providers, with important implications from a competitive perspective.

[48] Ibid, at 18-20. Big data and their analysis, it should be noticed, can also be employed to improve public services or the management and organization of businesses in the brick and mortar world. See also: Uk Competition and Market Authority, *The commercial use of consumer data,* cited *supra*, at p. 77.

Most online core platform services cater to the needs of two or more distinct groups of users[49] (the so-called 'sides of the market'[50]), therefore they are referred to as multi-sided[51]. Multi-sided platforms act as intermediaries[52] among different groups of consumers – for example individuals, advertisers, merchants and so on – whose demand is interdependent. Moreover, the utility that a given category of consumers derives from the platform is connected to the identity and quantity of consumers of other groups[53]. The important implications of multi-sided platforms on competition earned them a central role in the debate over the digital market and antitrust. Although multi-sided core platform services differ from one another in many respects – for instance, they may offer different services, as well as the diverse functionalities[54] –, some common characteristics can be identified. In particular, multi-sided platforms generally present the following features: the existence of two or more distinct groups of users; indirect externalities across the different groups of consumers; a not neutral price structure. These aspects will be further discussed below.

[49] D. L. RUBINFELD AND M. S. GAL, *Access barriers to big data*, cited *supra*, at p. 357. AGCM, AGCOM e Garante per la protezione dei dati personali, *Indagine conoscitiva sui big data*, cited *supra*, at p. 72. The popularity of this business model in the digital market cannot be overstated and there are several examples of multi-sided platforms among which the Facebook's social network, Google's search engine, Amazon's marketplace.

[50] T. HOPPNER, *Defining markets for multi-sided platforms: the case of search engines*, World competition vol. 38, no. 3, 2015, at p. 350; L. FILISTRUCCHI, D. GERADIN, E. VAN DAMME, *identifying two-sided markets*, World competition, vol. 36, no. 1, 2013, at pp. 33-34.

[51] Although typically, economists use the term two-sided markets, the recent trend is to refer to online platforms as multi-sided. As a matter of fact, even though some platforms may have two sides like more traditional media – for example paper journals who present the side of readers and that of advertisers –, most core platform services operate as multi-sided markets, serving three or more distinct groups of consumers – for example YouTube connects creators of relatively brief videos, viewers and advertisers-. See on this topic: OECD, *Rethinking Antitrust Tools for Multi-Sided Platforms*, OECD Publishing, (2018) (www.oecd.org/competition/rethinking-antitrust-tools-for-multi-sided-platforms.htm), at p. 10.

[52] D. A. HANLEY, *A Topology of Multisided Digital Platforms*, cited *supra*, at p. 272.

[53] T. HOPPNER, *Defining markets for multi-sided platforms: the case of search engines*, cited *supra*, at p. 350.

[54] OECD, *Rethinking antitrust tools for multi-sided platforms*, cited *supra*, at p. 9-12. For example, in AGCM, AGCOM e Garante per la protezione dei dati personali, *Indagine conoscitiva sui big data*, 10 cited *supra*, at p. 72, multi-sided platforms are distinguished in attention based ones and those dedicated to the exchange of products or goods. In the first category can be included core platform services such as search engines (e.g. Google Search) or social network (e.g. Facebook, Instagram or Twitter). The category of platforms dedicated to the exchange of goods or services include marketplaces (e.g. Amazon or E-bay) as well as platforms devoted to the booking of hotels or bed&breakfast (e.g. Booking.com).

First of all, the more intuitive characteristic of multi-sided platforms relates to the fact that they connect and provide services to distinct groups of consumers. Some core platform services provide a product to two groups of consumers, they are the so-called two-sided platforms, whereas others aim at connecting three or more categories of users and are referred to as multi-sided. One example of a two-sided platform is provided by dating websites dedicated to heterosexual individuals, in this case the two different groups of consumers that are connected are those of men and women. Examples of multi-sided platforms are, among others: Amazon, which provides services to vendors, buyers and advertisers; Google, that offers a search engine to users who look for information, while providing advertising services to publishers and space for websites and content creators who wish to be reached by end users[55].

A second typical characteristic of multi-sided markets consists in the presence of indirect network externalities[56]. The utility that different groups of consumers can draw from the service provided by a multi-sided platform is related to the quantity and quality of users on other sides. In the case of YouTube[57], for example, viewers' interest in the platform will increase the more creators are active and publish their video-content, and vice versa. Indirect network externalities can be symmetrical, as well as asymmetrical[58]. In the case of YouTube, viewers' utility and content creators' is likely to be symmetrical. In fact, there is little use in creating videos for a platform which can only reach a small number of viewers, as well as dedicating attention to a platform that does not offer much content. A different scenario is provided by advertising services offered by, for instance, a social network. In this case, publishers are likely to

[55] T. HOPPNER, *Defining markets for multi-sided platforms: the case of search engines*, cited *supra*, p. 356.

[56] These effects occur when the size and characteristics of one group of consumers on the platform create a positive externality on one or more of the other groups of users, in turn attracting them to the platform. See on this topic: A. HAGIU AND J. WRIGHT, *Multi-sided platforms*, International journal of industrial organization, vol. 43, Issue C, 201), at pp. 162-163; AGCM, AGCOM e Garante per la protezione dei dati personali, *Indagine conoscitiva sui big data*, cited *supra*, at p. 72.

[57] Youtube is a video sharing and social media platform and it is a subsidiary of Alphabet.

[58] AGCM, AGCOM e Garante per la protezione dei dati personali, *Indagine conoscitiva sui big data*, cited *supra*. See also: Autorité de la concurrence and Bundeskartellamt, *Competition law and data*, cited *supra*, at p. 27.

be more interested in advertising a given service or product on a platform with a large user base, whereas the reverse is unlikely to be true. Therefore, in the case of multi-sided platforms the utility that different groups of consumers draw from the service is interconnected, however, it is not necessarily symmetrical[59].

Finally, asymmetrical network externalities are often reflected in the price structure adopted by the platform[60]. In particular, setting a non-neutral price structure can be advantageous for a multi-sided platform. Charging one side of the market while reducing the price paid on the other side, in fact, can affect the volume of transactions of the provider[61]. As a result, most providers offer their services for free to end users (the so-called 'free side'), in exchange for their attention and information[62]. Facebook, for instance, provides a social network where users can register for free to interact with their online friends, while producing data through their activities. Google as well offers its search engine to end users for free and gathers data on their behavior on the platform – among which their queries, the search terms used, the clicked results, the geographic location and so on[63]. Providers subsidize the 'free side' of the platform by offering a paid service to customers on a different side (known as the 'paying side'). Going back to the example of Facebook, the social network offers advertising spaces to publishers and targets potentially interested users with the relevant advertisements. The profit derived from the advertising service is used to subsidize the social network. The same mechanism characterizes numerous core platform services, among which Google's search engine, which provides an advertising service subsidizing its free services.

In conclusion, multi-sided platforms are extremely popular in the digital market. Numerous different core platform service providers adopted this business model.

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[59] Ibid.

[60] T. HOPPNER, *Defining markets for multi-sided platforms: the case of search engines*, cited *supra*, at p. 351. See also: J.- C. ROCHET AND J. TIROLE, *Two-sided markets: a progress report*, The RAND journal of economics, vol. 37, n. 3 (2006), at pp. 645–667.

[61] OECD, *Policy Roundtables: two-sided markets*, 2009, at p. 29.

[62] G. SURBLYTĖ, '*Competition law at a crossroad in the digital economy: is it all about Google*?', at p. 15.

[63] T. HOPPNER, *Defining markets for multi-sided platforms: the case of search engines*, cited *supra*, at p. 362.

Given the implications on competition of these platforms, they have been the object of extensive studies. In particular it was observed that multi-sided platforms share at least three distinguishing features, namely different and well defined groups of consumers, indirect externalities and a non-neutral price structure. Although not all core platform services are provided by multi-sided platforms, this market structure is vastly popular and presents important characteristics for the purpose of antitrust analysis.

1.1.4 Network effects.

A third aspect of the economy of online platforms that has important implications on the competitive structure of the digital market, consists in the existence of the so-called network effects[64]. Generally speaking, network effects emerge when the use of a given service or product increases the utility of said service or product for other consumers[65]. Antitrust analysis is not new to direct and indirect network effects. In particular, direct network effects relate to the increased utility of a product as more consumers use it[66]. Indirect network effects arise when an increase in the number of users of a product has an influence on another side of the market[67]. In the digital sector, operators experience numerous network effects[68], some of which strictly linked to

[64] R. O'DONOGHUE and J.PADILLA, *The law and economics of article 102*, Hart Publishing, 2013, 2nd edition, at pp. 158-159; M. E. STUCKE and A. P. GRUNES, *Big data and competition policy*, cited *supra*, at p. 160; European Commission, *Guidance on the Commission's enforcement priorities in applying Article 82 of the EC Treaty to abusive exclusionary conduct by dominant undertakings,* 24 February 2009 (OJ C 45, p. 7–20), at point 17.

[65] Autorité de la concurrence and Bundeskartellamt, *Competition law and data*, cited *supra*, at p. 27; R. O'DONOGHUE and J.PADILLA, *The law and economics of article 102*, cited *supra*, at p. 158.

[66] Ibid.

These effects are typical, for example, of the telecommunication sector. Intuitively, the utility of a telephone for a given consumer increases if more people have one and, therefore, can be reached through it.

[67] An example of indirect network effects can be found in the market for electronic game consoles. The more players use a given console, the more games will be developed that are compatible with it, which, in turn increases the popularity of said console. See: M. E. STUCKE and A. P. GRUNES, *Big data and competition policy*, cited *supra*, at p. 162; R. O'DONOGHUE AND J.PADILLA, *The law and economics of article 102*, cited *supra*, at p. 158; L. FILISTRUCCHI, D. GERADIN, and E. VAN DAMME, *Identifying two-sided markets*, cited *supra*, at p. 38.

[68] Competition law 4.0, *A new competition framework for the digital economy*, cited *supra*, at p. 16; J. M. YUN, *Overview of network effects and platforms in digital markets*, The global antitrust institute, Report on the Digital Economy, George Mason University, 2020, at p.3 ff.

users' data: firstly, "traditional" direct and indirect network effects; secondly, networks effects linked to the scale of data; thirdly, effects linked to the scope of data; finally, spill-over effects. These effects have the potential to foster concentration of market power; due to their relevance to antitrust analysis they will be further analyzed below.

To begin with, core platform services experience traditional network effects, both direct and indirect[69]. Social networks provide a clear example of services characterized by strong direct network effects. The value of Facebook, for instance, increases as more people register. Individual users, in fact, will derive more utility for the social network the more connections they can make[70]. The same mechanism characterizes instant messaging services such as WhatsApp, Signal or Telegram. Similar to the telecommunication sector, the value of an instant texting application for a given individual, increases as more people use it[71]. Providers of multisided platforms also experience indirect network effects. For example, the utility of a marketplace like Amazon for users, is linked to the number of sellers active on the platform, and vice versa. Likewise, the larger it is the user base of a given operating system ("OS"), the more independent software vendors will write applications compatible with it. This, in turn, will increase the popularity of the OS, restarting the positive loop[72]. A higher number of users also increases the value of an online multisided platform for publishers interested in purchasing advertising spaces[73]. These effects characterize

[69] Autorité de la concurrence and Bundeskartellamt, *Competition law and data*, cited *supra*, at p. 27; OECD, *An introduction to online platforms and their role in the digital transformation*, cited *supra*, at p. 22; Australian competition and consumer commission ("ACCC"), *Digital platforms inquiry*, final report, June 2019, at p. 11.

[70] Ibid. See also: Lear tailored solutions in economics, *Ex post assessment of merger control decisions in digital market*, Final report, document prepared for the CMA, May 2019, p. 3.

[71] In case n. COMP/M.7217 – *Facebook/WhatsApp*, 03/10/2014, at point 88, the European Commission highlighted the presence of direct network effects in consumer communication services, noticing how such services "*offer utility to customers if the people they want to communicate with are also users of that service*".

[72] European Commission, case COMP/C-3/37.792 – *Microsoft (I)*, 24/03/2004, at point 449; M. E. STUCKE and A. P. GRUNES, *Big data and competition policy*, cited *supra*, at p. 163.

[73] It should be noticed that network effects are not necessarily symmetric. As stated by the Autorité de la concurrence and the Bundeskartellamt in *Competition law and data*, cited *supra*, at p. 27: the value of a social network selling advertising spaces for publishers increases with the number of users, however it is not clear whether users value a higher number of advertisers or advertisements.

numerous platforms, especially – but not limited to – multisided ones, and they are susceptible to generate both negative and positive effects on the market. On the one hand, direct and indirect network effects may raise entry barriers and favor market concentration. An individual will likely choose the texting application that is used by the majority of people, rather than a less popular one, albeit qualitatively superior[74]. As a consequence, a new entrant will need to reach enough popularity in order to be an effective competitor and attract a sufficient number of users[75]. On the other hand, provided they are able to attract enough users, new entrants may benefit from network effects which will allow them to rapidly grow[76].

A second kind of network effects experienced by online platforms is linked to the scale of data. The collection of users' data allows providers to improve their services which, in turn, attracts more users who will generate more information and restart this positive feedback loop[77]. Google offers a perfect example of this mechanism: the more people use Google Search for their queries, the more data the algorithms receive, the better they will perform, attracting more users[78]. By the same token, Netflix is able to improve its service by tracing consumers' activity and improving personalized suggestions. The more information the streaming service collects, the better will the suggestions to users be[79]. Moreover, in the case of platforms offering targeted

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Nonetheless, users will likely benefit from the investments that the provider of a similar social network will be able to make for the improvement of the service as a result of the profit derived from selling advertising spaces. See also: L. FILISTRUCCHI, D. GERADIN, and E. VAN DAMME, *Identifying two-sided markets*, cited *supra*, at p. 38.

[74] M. E. STUCKE and A. P. GRUNES, *Big data and competition policy*, cited *supra*, at p. 168.

[75] Direct and indirect network effects, especially when combined with the use of big data, may confer a consistent advantage to the first providers that enter the market. This mechanism is normally referred to as the first mover advantage. On this topic, see: AGCM, AGCOM e Garante per la protezione dei dati personali, *Indagine conoscitiva sui big data*, cited *supra*, at p. 73.

[76] Autorité de la concurrence and the Bundeskartellamt, *Competition law and data*, cited *supra*, at p. 28. In light of their possibly beneficial effects, the report argues that network effects should be evaluated on a case-by-case basis.

[77] M. E. STUCKE and A. P. GRUNES, *Big data and competition policy*, cited *supra*, at p. 170; OECD, *Data-driven Innovation for growth and well-being*, OECD Publishing, 2015, Paris, http://dx.doi.org/10.1787/9789264229358-en, at p. 184.

[78] As pointed out by M. E. STUCKE and A. P. GRUNES in *Big data and competition policy*, cited *supra*, the algorithms that determine the functioning of Google Search learn by trial-and-error experiments, therefore the more data are fed into them the better will the service be.

[79] Ibid, at p. 183.

advertising services, the scale of collected data generates important network effects on the advertising side of the market as well. As a matter of fact, having more information allows a better targeting, increasing the profit of the provider. Online platforms can, then, invest the profit derived from advertising in the improvement of their core platform service, attracting more users which will, in turn, provide more data, restarting the loop[80]. Network effects based on the scale of data are typical in the digital market. The latter, in fact, revolves around the input of users' information. As it will be further explored below, these effects have a relevant impact on the structure of the market, especially on entry barriers and the distribution of economic power.

The third – above-mentioned – network effect, typical in the case of online platforms, relates to the scope of data. More specifically, the collection of a wide variety of information can trigger feedback loops benefitting integrated undertakings. As a matter of fact, gathering different data on individuals grants online platforms a better insight into consumers' behavior, allowing for an improvement of the personalization of services and increasing their popularity among users[81]. The creation by large providers of vast ecosystems made of numerous and diverse services, fosters this effect, since integrated gatekeepers are able to collect information from different sources. Alphabet, for instance, collects information on users from all of its services: its search engine Google, its video sharing platform YouTube, its electronic mail service Gmail, its navigational maps on Android devices, and so on[82]. This variety of information allows Alphabet to build a comprehensive profile for each user and better target him/her with ads, suggestions, etcetera[83].

Finally, online platforms experience spillover effects linked to the scope of data. Such effects occur when the increase in the number of users on one side of a multi-sided platform attracts more customers on the other side, which in turn attracts more

[80] AGCM, AGCOM e Garante per la protezione dei dati personali, *Indagine conoscitiva sui big data*, cited *supra*, at p. 72.

[81] M. E. STUCKE and A. P. GRUNES, *Big data and competition policy*, cited *supra*, at p. 186 ff.

[82] N. NEWMAN, *Search, antitrust and the economics of the control of user data*, Yale journal on regulation, vol. 30, No. 3, 2014, at pp. 46-47.

[83] Ibid.

users, creating a feedback loop[84]. Spillover effects can be found in traditional media as well. For example, as more people watch a given show, an increasing number of advertisers will want to display their ads during that program. However, the pervasive collection of personal data by online platforms can amplify these effects. In this regard, it was observed that the re-use of data gives rise to vast returns to scale and scope which generates positive feedback loops for businesses on one side of the market, which, in turns, reinforces the other sides[85]. Facebook can, once again, provide a relevant example. As users on the free side of the platform join in and provide more data, this growth can spillover by attracting more advertisers wanting to reach those users[86]. These mechanisms are extremely relevant to antitrust analysis, they can, in fact, foster market concentration and raise entry barriers

In conclusion, network effects and spillover effects are not new to antitrust analysis. Among others, traditional medias experience these mechanisms as well. However, the massive collection of data may strengthen these effects and cause users to choose a given service not because it is qualitatively superior, but rather because of these positive externalities[87]. As a consequence, the market might tip in favor of a dominant platform[88] and 'winner-takes-all' dynamics may arise.

1.2 The digital market in antitrust analysis: the relevant market.

One of the most discussed issues in relation to competition in the digital sector, relates to whether antitrust law is well equipped in order to effectively deal with the nature and functioning of digital markets[89]. The characteristics of the digital market

[84] STUCKE and GRUNES, *Big data and competition policy*, cited *supra*, at p. 189.

[85] OECD, *Data-driven innovation for growth and well-being*, Interim Synthesis Report, October 2014, at p. 29.

[86] STUCKE and GRUNES in *Big data and competition policy*, cited *supra*, at p. 193 ff.

[87] S. HOLZWEBER, *Market definition for multi-sided platforms: a legal reappraisal*, World Competition 40, n. 4, 2017, at p. 565 ff.

[88] AGCM, AGCOM e Garante per la protezione dei dati personali, *Indagine conoscitiva sui big data*, cited *supra*, at p. 72.

[89] Antitrust authorities have commissioned several reports on the matter, among others: Autorité de la concurrence and Bundeskartellamt, *Competition law and data*, cited *supra*; ACCC, *Digital platforms inquiry*, cited *supra*; CRÉMER, Y.A. DE MONTJOYE, H SCHWEITZER, *Competition policy for*

raise several challenges for the purpose of defining the relevant market, which is a fundamental preliminary step in the enforcement of merger control and of article 102 TFEU. The following paragraphs will discuss the issues surrounding the definition of the relevant market in relation to antitrust cases involving core platform services, along with the main solutions proposed by scholars.

As it is well known, market definition constitutes a fundamental tool for antitrust analysis, as it allows competition authorities to identify the boundaries within which firms compete among each other[90]. The purpose of market definition is threefold. First of all, it enables the identification of the actual competitors of a given undertaking[91]. Secondly, it allows competition authorities to evaluate the characteristics and the structure of the market involved. Finally, it provides the boundaries within which the assessment of market power can take place[92].

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the digital era, cited *supra*; Competition 4.0, *A new competition framework for the digital economy*, cited *supra*; AGCM, AGCOM e Garante per la protezione dei dati personali, *Indagine conoscitiva sui big data*, cited *supra*; Global Antitrust Institute, *Report on digital economy*, George Mason University, 2020.

[90] European Commission, *Notice on the definition of relevant market for the purposes of Community competition law*, (OJ C 372, p. 5–13) 9/12/1997, at point 2 ff. Market definition presents two dimensions: the product dimension and the geographic one. The relevant product market includes all products or services that are viewed by consumers as interchangeable because of their characteristics, price and intended use. The relevant geographic market comprises the area, in which the undertaking involved is active, that presents sufficiently homogeneous competitive conditions and is distinguishable from neighboring areas. The definition of the relevant market relies on the analysis of three main sources of competitive constraints: (a) demand substitutability; (b) supply substitutability and (c) potential competition. (a) Demand substitutability is determined on the basis of the range of products that are viewed as substitutes by consumers. The idea is to determine the effective alternative sources of supply (both from the perspective of the product and the geographic location of alternative suppliers) for consumers. If consumers are able to switch easily, it will be less probable that the undertaking considered has a high degree of market power. (b) Supply side substitution refers to whether suppliers can, in response to a small and permanent change in price, switch production to the relevant product and market it in a short term without incurring in significant additional costs or risks. If these circumstances occur, the undertaking considered will be subject to a relevant competitive pressure which will regulate its behavior. (c) Finally, potential competition relates to the possible entry of new market operators. This source of competitive constraint, however, is not generally taken into consideration at the stage of market definition, but at a later stage, since it requires to analyze the conditions of entry.

[91] Ibid. The actual competitors of the undertaking involved in the analysis are those which are able to exercise competitive pressure thereby preventing said undertaking to behave anticompetitively.

[92] T. HOPPNER, *Defining markets for multi-sided platforms: the case of search engines*, cited *supra*, at p. 352. Moreover, it is worth recalling how much the definition of a relevant market can influence the finding of dominant. As a matter of fact, the narrower the market, the easiest it will be to find a given undertaking dominant. On the contrary a market that is too wide may cause false negatives in the

The definition of the relevant market in the case of core platform services requires antitrust authorities to take into account the characteristics of the digital sector. Core platform services and the economic structure of gatekeepers, however, raise several challenges for the purposes of market definition: first of all, in the case of multi-sided platforms it is necessary to verify whether multiple markets should be defined; secondly, the absence of a monetary price for numerous core platform services offered to end consumers neutralizes the functioning of price-centric quantitative tools to determine demand substitution; thirdly, the circumstance that gatekeepers often build entire ecosystems around a main core platform service raises the question on whether an ecosystem-specific market should be defined; finally, antitrust authorities should consider the possibility to identify a relevant market for data, in order to better evaluate market power in digital markets[93]. These aspects will be further analyzed in the following paragraphs.

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evaluation of the degree of market power held by the undertaking considered. Hence, a correct definition of the relevant market is crucial in order to identify actual dominant positions.

[93] Some authors also observed that the definition of the relevant market in antitrust analysis encounters an additional challenge related to the substitutability of online services with services offered in the brick and mortar world. It was stated that antitrust analysis has rarely considered the substitutability between online services and offline ones, except in case of advertisements services (European Commission, case n. COMP/M.4731 – Google/DoubleClick, 11/03/2008). See: D. MANDRESCU, *Applying EU competition to online platforms: the road ahead*, European Competition Law Review, vol. 38, 2017, at p. 374. This instance was recently recognized by the European Commission as well, in its *Evaluation of the commission notice on the definition of relevant market for the purposes of community competition law of 9 December 1997*, Staff working document, SWD(2021) 199 final, 12 July 2021, at p. 31. According to the evaluation of the Commission, among the challenges that the digital markets pose to the definition of the relevant market there is the assessment of online v. offline competition (see also: Competition 4.0, *A new competition framework for the digital economy*, cited *supra*, at p. 29). However, at a closer look there appears to be limited substitutability between offline and online services, in particular core platform services. Online services, in fact, are characterized by very specific features and functionalities that can rarely be encountered in the brick-and-mortar world. Moreover, the structure of these services as well as the use and analysis of data that they allow for distinguish them greatly from their alleged offline counterparts. For example, in the case of search engines and social networks, it appears difficult to imagine an alternative in the brick-and-mortar world. Although a search engine might be considered a substitute for a library or a travel agency, the reverse is debatable; search engines offer immediate and personalized results, targeted advertisements and register data on the behavior of users that actual libraries do not have the ability to track. Similarly, although the offline world offers a variety of places for socialization, social networking sites offer functionalities that distinguish them from brick-and-mortar world's alternatives, among which personalized advertisements, friends suggestions, functionalities relating to reactions to posts, and so on. See: F. THÉPOT, *market power in online search and social networking: a matter of two-sided markets*, World Competition, vol. 36, no. 2, 2013, at pp. 207-209. It should also be pointed out that data

1.2.1 The relevant market(s) of multi-sided platforms.

One of the main criticalities that arise in antitrust analysis relates to the definition of the relevant market in the case of multi-sided platforms. This issue cannot be overstated, since a large number of undertakings offering core platform services are characterized by a multi-sided structure[94]. These operators offer services to multiple and well-defined groups of consumers. As a consequence, in defining the relevant market(s), competition authorities and courts have to determine the number of markets that should be defined in each case[95] and, in case of multiple markets, to incorporate in the analysis the relation among them[96].

First of all, when a multi-sided platform is involved, all sides must be examined by antitrust authorities in order to assess whether they fall into one single market or whether multiple markets should be identified[97]. Two theories have been put forward

collection online is vastly more pervasive than offline, leading to highly personalized services, see: I. GRAEF, *Market definition and market power in data: the case of online platforms*, cited *supra*, at p. 475.

[94] Some authors consider multi-sidedness a defining characteristic of online platforms, see for example: S.P. CHOUDARY, M.W. VAN ALSTYNE and G.G. PARKER, *Platform revolution: how networked markets are transforming the economy and how to make them work for you*, W.W. Norton and Company, 2016. Although not all online platforms are necessarily two or more-sided, this structure is clearly popular and was largely discussed by scholars, see among others: T. HOPPNER, *Defining markets for multi-sided platforms: the case of search engines*, cited *supra*, at p. 349–366; I. GRAEF, *Market definition and market power in data: the case of online platforms*, cited *supra*, at pp. 473–506; S. HOLZWEBER, *Market definition for multi-sided platforms: a legal reappraisal*, cited *supra*, at pp. 563–582; J. CRÉMER, Y.A. DE MONTJOYE, H SCHWEITZER, *Competition policy for the digital era*, cited *supra*, at p. 127; J.M. YUN, *Overview of network effects and platforms in digital markets,* cited *supra*.

[95] D. MANDRESCU, *The SSNIP test and zero-pricing strategies: considerations for online platforms*, European Competition and Regulatory Law review, vol. 2, issue 4, 2018, at p. 245.

[96] M. EBEN and V.H.S.E. ROBERTSON, *The relevant market concept in competition law and its application to digital markets: a comparative analysis of the EU, US and Brazil*, Graz Law Working Paper Series, working paper n. 01/2021, at p. 13.

[97] Multi-sided markets do not solely characterize the digital sector, numerous businesses' structure is multi-sided: e.g., traditional media, like television and newspapers, as well as payment cards. Television and newspapers connect viewers to advertisers, while payment cards connect cardholders and merchants. The European Commission has adopted decisions in cases involving multi-sided markets. In European Commission, case COMP/34.579 - *MasterCard*, 19/12/2007, at point 275 ff. the EU Institution evaluated whether the different sides of the market could constitute separate markets and if the payment system itself could constitute a different market (see: M. EBEN and V.H.S.E. ROBERTSON, *The relevant market concept in competition law and its application to digital markets: a comparative analysis of the EU, US and Brazil*, cited *supra*, at p. 14). In European Commission, case COMP/M.4523 – *Travelport/Worldspa*n, 21/8/2007, at point 9 ff. the Commission considered the nature of the global distribution systems involved and evaluated whether they should be considered multi-sided markets. The major difficulty of assessing the relevant market in cases in which the undertaking offers a service

to provide a practical approach to verify the number of markets to define. The first method bases the identification of multiple markets on the absence of a transaction among consumers. In particular, a single market should be identified if a transaction between different groups of consumers occurs on the platform, otherwise a different market should be defined for each side[98]. This approach is relatively straightforward, as it links the determination of the number of markets to a precise parameter. Nonetheless, it has been pointed out that the concept of a 'transaction' can be vague and provide little certainty. A second approach proposes to apply to multi-sided platforms the same line of reasoning used in cases involving aftermarkets. Specifically, antitrust authorities should evaluate whether the competitive conditions on the various sides are homogeneous by calculating if a sufficient number of costumers on one side of a platform would switch to a different platform as a result of a moderate price increase of the services/products on the other side. If so, a single market should be defined and vice-versa[99]. The application of this method would likely confirm the finding of two different markets in the Facebook/WhatsApp merger[100]: it is reasonable to imagine that users would not change social media due to an increase in the price for advertisements. On the contrary, this method leads to the definition of a single market in the case of platforms connecting travel agents and travel service providers: if the pricing policy of the platform were to increase, thereby deterring travel agents from using it, travel service providers would probably rely on a different distribution system and vice versa[101]. Both theories provide practical solutions that can be adopted by antitrust authorities, although the latter one avoids the issue of precisely defining the concept of a 'transaction'.

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to two or more different groups of consumers is to evaluate whether the sides should be treated as a single market or not.

[98] L. FILISTRUCCHI, *A SSNIP test for two-sided markets: the case of media*, Economics of Networks, 2008, at p. 45.

[99] S. HOLZWEBER, *Market definition for multi-sided platforms: a legal reappraisal*, cited *supra*, at p. 571 ff.

[100] European Commission, *Facebook/WhatsApp*, cited *supra*.

[101] This finding has been made by the Commission in the case: European Commission, *Travelport/Worldspan*, cited *supra*.

Secondly, if multiple markets are identified, antitrust authorities have to include in their analysis the relation between these markets. The importance of this issue cannot be overstated. The characteristics of multi-sided platforms, in fact, heavily impact at least two aspects relevant to antitrust analysis: product substitutability and the interdependence of customers' demands. On the one hand, product substitutability might not be equivalent for different categories of customers. If one considers the market for newspapers, for instance, readers might consider as substitutes different products than advertisers[102]. On the other hand, the demand of different groups of consumers of a multi-sided undertaking is interdependent[103]. This aspect is reflected in the price-cost mark-up, which is determined in light of, among other things, the demand elasticity of different sides[104]. The network effects that link the demand of different groups of users might even make it more profitable to set the price for one side of the market to zero, which, as it will be seen below, poses ulterior challenges to antitrust analysis[105].

In conclusion, multi-sidedness is a largely common structure for providers of core platform services. This feature has important implications for antitrust analysis. In particular, when dealing with a multi-sided platform, competition authorities have to

[102] T. HOPPNER, *Defining markets for multi-sided platforms: the case of search engines*, cited *supra*, at p. 352.

[103] The complexities in antitrust analysis deriving from multi-sided platforms have been considered by the Commission in its *staff working document evaluation of the Commission Notice on the definition of relevant market for the purposes of Community competition law of 9 December 1997*, (SWD/2021/0199 final), 12 July 2021, at p. 37.

[104] So, for instance, a club that act as a (two-sided) platform for heterosexual men and women might set a lower price for women in order to attract more men and, therefore, increase profit. The two demands (of men and women) are interconnected, and such characteristic plays an important role in price setting, which will not necessarily reflect the cost of the service. On the contrary, in a one-sided market, such as a supermarket, the profit of farmers selling products to a given store is not linked necessarily to the profit earned by the store from selling grocery to end-consumer, hence, the price will more likely reflect the cost of each product. This difference should be kept in mind when analyzing multi-sided markets, since in two-sided market a high-price cost margin does not necessarily reflect a high degree of market power, as well as a below-cost pricing does not necessarily constitute a predatory pricing. See: F. THÉPOT, *Market power in online search and social networking: a matter of two-sided markets*, World Competition, vol. 36, no. 2 (2013), at p. 199.

[105] On this topic, see among others: J.M. NEWMAN, *Antitrust in zero-price markets: foundations*, cited *supra*, at pp.149-206; D. MANDRESCU, *The SSNIP test and zero-pricing strategies: considerations for online platforms*, cited *supra*, at pp. 244-257.

determine whether multiple markets should be identified. This evaluation can be based either on the existence of a transaction on the platform or by assessing if competition conditions are homogeneous on all sides. If multiple markets are identified, antitrust analysis has to include the relation among them, given the important impact it generates on product substitutability and the interdependence of the demand of different sides.

1.2.2 Relevant markets at zero-price.

A second issue concerning the definition of the relevant market in the case of core platform services, relates to the circumstance that most of these services are offered to end users for free [106]. As observed above, setting the price of a service at zero can be an efficient strategy to maximize profit in multi-sided markets [107]. In particular, multi-sided platforms often set the price at zero for a group of users, in order to attract more customers on the 'paying side' of the service and thereby increase their earnings[108]. The absence of a monetary exchange does not mean that a market does not exists[109].

[106] The gratuity of these services is to be intended in the sense that no monetary payment is required to end users to use the service. Nonetheless, according to part of the scholarship, users pay by surrendering their information and by paying attention to the platform. See, among others: V. BAGNOLI, *The big data relevant market*, Concorrenza e Mercato 2016, vol. 23, at p. 73 ff. However, it should be noticed that considering users' data as a price for core platform services raises some issues. In AGCM, AGCOM e Garante per la protezione dei dati personali, *Indagine conoscitiva sui big data*, cited *supra*, at pp. 89 and 93-95, the Italian antitrust authority highlighted that in order for data to be considered as a form of compensation towards the use of core platform services, users should be aware of the economic value of their information. Such awareness, however, cannot be taken for granted. The circumstance that online services are generally offered without requiring the payment of a monetary price, has the effect of altering the rationality of consumers' choices with respect of their privacy. Specifically, this "free effect" causes users who do value their privacy to make choices that are incoherent with their believes. Moreover, the information asymmetry that characterizes the digital sector does not allow users to gain a full comprehension of how many data they are surrendering in exchange for the use of core platform services.

[107] L. FILISTRUCCHI, D. GERADIN and E. VAN DAMME, *Identifying two-sided markets*, cited *supra*, at p. 34. See also above note 99.

[108] As observed above, this strategy is fostered by network effects. The interdependence of the demands of different groups of customers imply that the number and/or quality of users on one side of the market influences the value of the service for the other side(s). Moreover, in the specific case of core platform services, the data provided by users on the free side also generates network effects and renders the setting of the price at zero profitable.

[109] In various occasions, in fact, the Commission has found a relevant market for free products or services. See: European Commission, case n. COMP/M.7217 – *Facebook/WhatsApp*, 03/10/2014, at

However, it causes the inapplicability of the well-known SSNIP test[110]. This test, although not mandatory[111], is habitually used by antitrust authorities in order to determine the demand substitution for a given product or service. Since it is centered around the competitive parameter of price, it cannot be employed in the analysis of the 'free side' of core platform services[112]. Calculating a hypothetical 5-10% increase of 0, in fact, is pointless since it would still amount to zero. In order to define relevant markets in the case of free core platform services, two main solutions have been proposed. Some scholars suggested to adjust the SSNIP test to adapt it to a zero-price situation, by basing it on different parameters, like quality or costs. Others suggested to rely on qualitative indicators to define the market. These solutions will be further discussed below.

To begin with, some scholars suggested to adapt the SSNIP test to the 'free side' of digital platforms by using the parameter of quality. The substitution of price with quality entails determining whether users would switch to a different service in response to a small, but significant, and non-transitory decrease in quality (the so-called SSNDQ[113] test). This method, however, presents several shortcomings[114]: (a) since quality is a difficult parameter to measure[115], identifying a 'small but not

point 4 ff; European Commission, case n. M.8124 – *Microsoft/LinkedIn*, 06/12/2016, at point 17 ff.; European Commission, Case AT.39740 – *Google Search (Shopping)*, 27/06/2017, at points 152 and 158 ff.

[110] European Commission, *Notice on the definition of relevant market for the purposes of Community competition law*, (OJ C 372, p. 5–13) 9/12/1997, at 17: the SSNIP test (acronym for: small but significant non-transitory increase in price) consists in verifying whether "*customers would switch to readily available substitutes or to suppliers located elsewhere in response to a hypothetical small (in the range 5 % to 10 %) but permanent relative price increase in the products and areas being considered* ".

[111] As a matter of fact, the Commission's Notice on the definition of the relevant market (see above note 104) at 36 ff, only lists the SSNIP test among the methods that can be adopted in order to establish the product dimension of the relevant market. Antitrust authorities, in fact, may also rely on the characteristics of the product or service involved or their intended use.

[112] D. MANDRESCU, *The SSNIP test and zero-pricing strategies: considerations for online platforms*, cited *supra*, at p.245; J. CRÉMER, Y.A. DE MONTJOYE, H SCHWEITZER, *Competition policy for the digital era*, cited *supra*, at p. 44 ff.

[113] SSNDQ is the acronym of 'Small but significant, non-transitory decrease in quality'.

[114] D. MANDRESCU, *The SSNIP test and zero-pricing strategies: considerations for online platforms*, cited *supra*, at p. 252 ff.

[115] Quality is particularly difficult to recognize, let alone to measure, online because the functioning of core platform services is highly complex.

insignificant' decrease would be problematic in and of itself; (b) determining the qualitative elements of a given core platform service would be a highly complex operation because they are likely to vary for each user, which makes this parameter fairly ambiguous; (c) finally, consumers will have more difficulties in assessing the qualitative level of a service rather than its price[116]. Nonetheless, the Commission has recently used the SSNDQ test in its case law. In particular, in its decision on Google Android, the institution considered whether original equipment manufacturers would be likely to switch to a different licensable smart mobile operative system in the event of either a small but significant, non-transitory deterioration of the quality of Android app store[117], leading the way for future decisions.

A second possible adaptation of the SSNIP test entails the replacement of price with users' costs[118], the so-called SSNIC[119] test. This method entails the evaluation of consumers' reaction in response to a 5-10% increase in attention[120] and information[121]

[116] As a consequence of the difficulty for users to identify the quality level of a core platform service, they would likely be unable to detect a decrease in quality of such service as well as a suitable – and better – alternative. In addition, the 'free effect' linked to the absence of a monetary price required to use core platform services might have behavioral implication inasmuch as it may cause users to overlook qualitative degradation that they would not have otherwise accepted, thereby altering the normal functioning of the demand of a given service. See: M.S. GAL AND D.L. RUBINFELD, *The hidden costs of free goods: implications for antitrust enforcement*, NYU Law and Economics working papers, research paper n. 14–44, 2015, at p. 9; J. M. NEWMAN, *Antitrust in zero-price markets: foundations*, cited *supra*, at pp. 184-187.

[117] European Commission, case AT.40099 – *Google Android*, 18/07/2018, at point 286.

[118] See: J. M. NEWMAN, *Antitrust in zero-price markets: applications*, Washington University law review, vol. 94, n. 1, 2016, p. 66-70; D. MANDRESCU, *The SSNIP test and zero-pricing strategies: considerations for online platforms*, cited *supra*, at pp. 250-252.

[119] SSNIC is the acronym for 'small but significant non-transitory increase in cost'.

[120] 'Attention costs' relate to consumers' exposure to advertisements. The idea is that users or core platform services which offer advertising space to publishers, are exchanging their attention to use the free service. In this case, users implicitly permit advertisements by using the service. See: J.M. Newman, *Antitrust in zero-price markets: foundations*, cited *supra*, at pp. 171-172. In relation to attention costs, the SSNIC test would require an evaluation on whether an increase in the number of ads presented to users would induce them to change service.

See also: W. SPENCE, *Facebook, the Attention Economy and EU Competition Law: Established Standards Reconsidered?*, European business law review, vol. 31, n. 4, 2020, pp. 693-724.

[121] 'Information costs' relate to the amount of data that users of a given core platform service are required or encouraged to disclose. In the case of core platform services, users are required to surrender information in exchange for access to zero-priced products, see: J.M. NEWMAN, *Antitrust in zero-price markets: foundations*, cited *supra*, at pp. 166-167. In relation to these costs, the SSNIC test would involve evaluating whether an increase in the quantity of data that they need to provide the platform in order to use its service would induce them to change provider.

costs of core platform services. This proposal presents numerous criticalities: (a) since information and attention costs are complicated to understand for users, there is a higher risk of false results; (b) while price is a straight-forward parameter, attention and information costs are more ambiguous and different users might value them differently; (c) finally, defining a 5-10% increase in attention and information costs is extremely complicated given the ambiguity of such parameter.

Finally, in order to define the market for a free core platform service, antitrust authorities can rely on qualitative tools. As it is well known, the use of the SSNIP test is not mandatory[122]. In order to define the relevant market in cases involving core platform services, the European Commission has often relied on qualitative evidence. In its decision on the merger between Facebook and WhatsApp, for example, the European institution defined the market for online communication services, which were provided to end users for free, by relying on their functionalities[123]. In Microsoft/LinkedIn, the market for professional social networks, which in its basic version was offered for free to end users by LinkedIn (the so-called 'freemium' version), was identified by relying on the characteristics of the service as well as its functionalities[124]. Finally, in the Google Shopping case the Commission defined the relevant markets for search engines and comparison shopping services based on their functionalities and characteristics[125].

In conclusion, in order to determine demand substitutability in the case of free core platform services, the Commission has normally relied on qualitative tools. Nonetheless, the use of the SSNDQ in the Google Android case leaves the door open to the possibility of employing quantitative tools centered around parameters different from price.

[122] The Commission has recently reiterated that it is not required to carry out a SSNIP test when defining the market, numerous evidentiary elements can be used to this purpose and there is no hierarchy among them (European Commission, *Google Search (Shopping)*, cited *supra*, at point 242 ff.).

[123] European Commission, *Facebook/WhatsApp*, cited *supra,* at point 20 ff.

[124] European Commission, *Microsoft/LinkedIn*, cited *supra*, at point 87 ff.

[125] European Commission, *Google Search (Shopping)*, cited *supra*, at point 155 ff.

1.2.3 Relevant market and digital ecosystems.

The definition of a relevant market encounters further complications in the case of gatekeepers' ecosystems. As mentioned above, gatekeepers often enjoy a durable position on the market due to, among other things, the vast ecosystems that they build around a main core platform service. By creating these conglomerates[126], undertakings are better able to exploit network effects[127], especially those based on the scope of data[128]. Consequently, gatekeepers compete to draw users into and steer their demand towards the services included in the ecosystem[129]. Interoperability, transversal usage of information and the subsequent deeper personalization, nudges, biased rankings, default settings, are only a few of the tactics that may be adopted to lock users into a given ecosystem and render multi-homing and exiting more difficult[130]. The specific competitive dynamics of these digital 'microcosmos' require a rethinking of the analysis and identification of relevant markets. In particular, it has been argued that ecosystems-specific aftermarkets and primary markets should be defined when lock-in effects are particularly strong[131].

In order to fully capture the peculiarities of digital ecosystems, market definition cannot be limited to a single (complementary) service of a given gatekeeper. On the contrary, the macro level should be considered as well to understand the competitive mechanisms at play[132]. To this end, it has been suggested to apply the theories developed for cluster markets and aftermarkets. As for the former, the concept of

[126] Google, for example, around its search engine has progressively built an ecosystem made of numerous services: an email service, a comparison platform service, an operative system, a fitness tracker application and so on.

[127] See paragraph 1.1.4.

[128] V.H.S.E. ROBERTSON, *Antitrust market definition for digital ecosystems*, Concurrences, Competition policy in the digital economy, n. 2, 2021, at p. 4.

[129] J. CRÉMER, Y.A. DE MONTJOYE, H SCHWEITZER, *Competition policy for the digital era*, cited *supra*, at pp. 47-48.

[130] Ibid.

[131] Ibid., p. 48; see also: M. EBEN AND V.H.S.E. ROBERTSON, *The relevant market concept in competition law and its application to digital markets: a comparative analysis of the EU, US and Brazil*, cited *supra*, at p. 25-29; Competition 4.0, *A new competition framework for the digital economy*, cited *supra*, at p. 28.

[132] V.H.S.E. ROBERTSON, *Antitrust market definition for digital ecosystems,* cited *supra*, at p. 5.

cluster markets includes different products or services that are not substitutable with each other but are expected to be found or consumed together by customers [133]. Moreover, cluster markets compete with other cluster markets. By relying on this concept, antitrust authorities would be able to consider digital conglomerates at a macro level. However, clear parameters to identify a cluster market are lacking, and the case law is scarce[134].

In order to capture the complexity of digital ecosystems, especially for the purposes of defining a market for the conglomerate dimension, some scholars suggested to apply the concept of aftermarkets[135]. According to the European case law, when purchasing a given primary product, if consumers take into account its life-cycle costs, then – instead of two separated markets – a system-specific market should be defined for primary and aftermarkets products[136]. In the words of the European Court of Justice: a single market or a system market could be defined if "*a sufficient number of consumers would switch to other primary products if there were a moderate price increase for the products or services on the after markets and thus render such an increase unprofitable*[137]". Applying this reasoning to digital ecosystems would allow for a definition of a system-specific market if competitive conditions were to be homogeneous for all the various services provided by the gatekeeper.

The application of cluster markets and aftermarkets may provide interesting insights into digital ecosystems, however they do not necessarily capture the layered structure of such entities. Digital ecosystems do compete against each other, nonetheless single core platform services also compete with other single core platform

[133] Ibid. See also the jurisprudence reported by the author at footnote n. 36.

[134] Ibid.

[135] S. HOLZWEBER, *Market definition for multi-sided platforms: a legal reappraisal*, cited *supra*, at p. 576. Aftermarkets are markets intended for the supply of products or services that are needed in connection with the use of relatively long-lasting product previously purchased. The principal product constitutes the primary market, whereas the secondary product needed in connection to the first is referred to as the aftermarket, see: OECD, *Competition issues in aftermarkets*, Background note by the secretariat, DAF/COMP(2017)2, p. 5.

[136] V.H.S.E. ROBERTSON, *Antitrust market definition for digital ecosystems,* cited *supra*, at p. 7; see also: OECD, *Competition issues in aftermarkets*, cited *supra*, at point 57.

[137] Court of Justice, T-427/08, *CEAHR*, 5 December 2010, ECLI:EU:T:2010:517, at point 105.

services. Moreover, the gatekeeper owning the ecosystem might compete with providers using its own services[138]. Therefore, depending on the circumstances of the specific case, it might be necessary to identify a relevant market for a single service and/or an ecosystem-specific market that highlights the peculiar competitive conditions that characterize the services as a whole.

In conclusion, the circumstance that gatekeepers built ecosystems around a single core platform service, raises the issue of whether ecosystem-specific markets should be defined, since these conglomerates are characterized by specific market dynamics. In order to have a complete comprehension of the markets involved, some scholars suggested to adopt a multilayered approach to market definition[139]. In any case, the opportunity to define both a macro-level as well as an individual market for a single service should be evaluated on a case by case basis.

1.2.4 A relevant market for data.

Users' data are a crucial asset for digital providers, so much so that online services are usually offered for free to users, in exchange for their data[140]. In light of this consideration, the definition of a specific market for users' data has been suggested. In particular, it has been argued that this operation would provide precious insights to antitrust analysis. Firstly, given the mechanisms of core platform services and the centrality of data in digital environments, the definition of a data-market would grant a deeper comprehension of market power and market dynamics[141]. Secondly, a data-

[138] V.H.S.E. ROBERTSON, *Antitrust market definition for digital ecosystems,* cited *supra*, at p. 8.

[139] Ibid.; S. HOLZWEBER, *Market definition for multi-sided platforms: a legal reappraisal*, cited *supra*, at p. 576; CRÉMER, Y.A. DE MONTJOYE, H SCHWEITZER, *Competition policy for the digital era*, cited *supra*, at p. 48.

[140] V. BAGNOLI, *The big data relevant market*, cited *supra*, at p. 86.

[141] P.J. HARBOUR AND T.I. KOSLOV, *Section 2 in a web 2.0 world: an expanded vision of relevant product markets*, Antitrust law journal, vol. 76, N. 3, 2010, at p. 784. The authors pointed out that "*Given the role of network effects, one might wonder whether any other firm will be able to chip away at Google's search supremacy without access to a comparable trove of data*". Moreover, in AGCM, AGCOM e Garante per la protezione dei dati personali, *Indagine conoscitiva sui big data*, cited *supra*, at p. 93 and ff., the Italian antitrust authority highlighted that core platform services providers are strongly incentivized to gather as much users' data as possible. As a matter of fact, the collection and analysis of information allow for an increase in profit through the offering of the primary service and

market would provide antitrust authorities with a deeper understanding of competitive consequences of data-driven mergers[142]. The accumulation of great amounts of users' information, in fact, is likely to create and/or reinforce dominance in the digital markets and the definition of a market for users' data would offer a clear framework to address these concerns. Finally, a data-market would allow a better comprehension of the expansion capabilities of gatekeepers. One of the issues characterizing the digital sector relates to the ability of core platform service providers to expand on markets where they were not present before and quickly dominate them[143]. This is possible, among other things, due to the accumulation and analysis of massive quantities of users' data[144]. A market for data could provide a useful tool to better analyze the potentially uncontrolled economic expansion of gatekeepers, in a dynamic dimension[145]. Nonetheless, the definition of a data market raises two main issues: first of all, under the current standards, a relevant market can be defined when an actual exchange takes place, however since normally data are used as an internal input, competition authorities have not defined a market for information yet; secondly, data collected online by different providers are not necessarily interchangeable, which should probably be taken into consideration. These aspects will be analyzed below.

To begin with, the main problem with the proposal of defining a relevant market for data relates to the absence of an actual exchange (in the meaning of an economic transaction)[146]. Normally, providers do not sell users' information, rather they use

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its personalization, of additional services against a price, of target advertising and of the selling of elaborated information. Moreover, in the case of multi-sided platforms, positive externalities, economies of scale and scope amplify the advantages that firms can draw from data collection.

[142] The definition of a data-market would allow for a better evaluation of the potentially anti-competitive effects derived from the integration of significant. See Part 2.

[143] AGCM, AGCOM e Garante per la protezione dei dati personali, *Indagine conoscitiva sui big data*, cited *supra*, at pp. 79-81. In addition, the report states that given the ability of online providers to quickly and successfully expand to markets where they were not present before, a greater role in antitrust analysis should be attributed to the competitive pressure exercised by undertakings active in adjacent markets.

[144] AGCM, AGCOM e Garante per la protezione dei dati personali, *Indagine conoscitiva sui big data*, cited *supra*, at p. 79.

[145] I. GRAEF, *Market definition and market power in data: the case of online platforms*, cited *supra*, at p. 492.

[146] Ibid., p. 489. It should be noticed that some authors have held that the exchange imposed by the platform to users, i.e. to allow them to utilize the service for free in exchange for their information,

them as an input to personalize theirs core platform services. Only a few providers resell data – for instance, Twitter licenses collected information about users to third parties and is active on a "traditional" market for data[147]. Since in most cases data is merely employed as an input, a market for data has never been identified in antitrust cases[148]. Nonetheless, defining such a market would allow for the characterization and the subsequent better comprehension of the digital environment[149]. This function is in line with the Notice on the relevant market adopted by the Commission, which does not statically define the concept of the relevant market[150]. On the contrary, this phase of the analysis can be adapted to the objectives of competition policy[151]. In principle, therefore, nothing prohibits the definition of a data market to assess the competitive conditions of the digital market – in order to evaluate mergers, as well as of abuses of dominant position[152] –, even if an actual exchange (in the meaning of an economic transaction) does not occur.

As mentioned above, the definition of a data relevant market raises the question on whether all kinds of users' data are homogeneous[153]. Specifically, it can be argued that

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should be considered as a transaction, thereby allowing for the definition of a related relevant market. However, users' data should not be considered as a price paid by users to benefit from "free" core platform services. Although it is true that users surrender their data to online platforms, their information cannot be considered as part of the price paid to use a given service. Such an assimilation, in fact, cannot be operated if users are not of the transferal of data and of the related economic value. See: AGCM, AGCOM e garante per la protezione dei dati personali, *Indagine conoscitiva sui big data*, cited *supra*, at p. 89.

[147] Ibid.

[148] In case the case on *Facebook/WhatsApp*, cited *supra*, at points 70-72, the European Commission expressly excluded the existence of a data market, since neither of the companies involved were active in the selling of users data or provision of data analytic services. Although in case n. M.9660 – *Google/Fitbit*, 17/12/2020, at points 290 ff., the Commission identified a market for the provision of data for medical research and real-world evidence, however such market has been delineated very narrowly. A general market for users' data as a tool to assess competitive conditions in digital markets has never been defined.

[149] V.H.S.E. ROBERTSON, *Antitrust law and digital markets: a guide to the European competition law experience in the digital economy*, Competition policy international, 21 June 2020, at p.8.

[150] European Commission, *Notice on the definition of relevant market for the purposes of Community competition law*, (OJ C 372, p. 5–13) 9/12/1997, at 10.

[151] Ibid.

[152] V. BAGNOLI, *The big data relevant market as a tool for a case by case analysis at the digital economy: Could the EU decision at Facebook/WhatsApp merger have been different*?, 12th ASCOLA Conference competition law for the digital economy, final draft, 2 June 2017, at p. 25.

[153] A preliminary distinction relates to the difference between online and offline data. In particular, it has been discussed whether the information accessible, for example, by a bank or a retailer offline is

a different data market should be defined for different types of users' data. This seems to find confirmation in the case law. In analyzing the perspective merger between Telefónica/Vodafone/Everything Everywhere[154], the Commission debated whether data analytics services for static online advertising and for mobile advertising should constitute two separate relevant markets. In particular, it was noticed how the information collected via mobile data analytics is more personal, geo-located and can be crossed-referenced with call behavior, the same precision cannot be achieved through static online analytics[155]. Moreover, in the Google/DoubleClick merger[156], the EU institution observed how search and non-search advertising differ greatly[157], hinting to the fact that data on users' queries are a more precise indicator of their interests compared to other information[158]. Accordingly, different relevant markets might need to be defined for different types of data, among which search data, social network data and e-commerce data[159]. A similar approach appears reasonable, especially considering the different type of information collected by different kinds of core platform services: for example, search engines collect information about users' search queries and clicked results; social networks gather data provided by individuals building their profiles as well as interacting with their friends; e-commerce platforms

comparable to the information gathered by online services providers. It has been concluded that there is little substitutability – if any – between online and offline data. Collecting abilities of online providers are much more pervasive than those of offline operators. A bookstore will usually not know the time that a customer has spent in front of a shelf. On the contrary, Amazon gathers this kind of information. See: I. GRAEF, *Market definition and market power in data: the case of online platforms*, cited *supra*, at pp. 496-497.

[154] European Commission, case n. COMP/M. 6314 – *Telefónica/Vodafone/Everything Everywhere/JV*, 4/09/2012.

[155] Ibid., at 199 and ff.

[156] European Commission, case n. COMP/ M.4731 – *Google/DoubleClick*, 11/03/2008.

[157] While search-based advertisements are targeted to users based on their interests as revealed by their search queries, the targeting of non-search ads is based on different information which were considered by the Commission to represent users' interests in a less precise manner.

[158] Ibid., at 50 and ff. The same reasoning was also adopted by the Commission in the case on *Google/Fitbit*, cited *supra*, at point 52 and ff. Moreover, at 430 and ff., the institution discussed the value of Fitbit data in relation to Google's advertising services. Fitbit's data on users' status of health and physical activity, for instance, is considered as an additional input rather that a substitute for search data.

[159] I. GRAEF, *Market definition and market power in data: the case of online platforms*, cited *supra*, p. 498 and ff.

aim at accumulating information on consumers' purchasing behavior and products of interest[160].

In conclusion, the definition of a data relevant market requires to rethink the purpose of this step of antitrust analysis. This tool is not solely important to define the boundaries of competition between firms, but also to characterize the market and to provide a background to develop coherent theories of harm[161]. In relation to the digital market, the advantages that can be derived from the definition of a data relevant market are numerous, going from a deeper comprehension of market power and market dynamics[162], to a clearer framework in order to control data-driven mergers and an effective framework of the expansive potential of online conglomerates. In light of these considerations, the definition of a relevant market for users' data appears as a valuable tool. The Notice on the relevant market does not seem to prevent the determination of such a market even in cases in which an economic transaction involving this input does not take place. Finally, the Commission already recognized the specificity of different typologies of data, which leads us to advocate in favor of the definition of different markets based on the content and origin of the information considered.

1.3 The digital market in antitrust analysis: market power.

[160] Ibid.

[161] V.H.S.E. ROBERTSON, *Antitrust law and digital markets: a guide to the European competition law experience in the digital economy*, cited *supra*, at p. 8.

[162] P.J. HARBOUR AND T.I. KOSLOV, *Section 2 in a web 2.0 world: an expanded vision of relevant product markets*, cited *supra*, at p. 784. The authors pointed out that "*Given the role of network effects, one might wonder whether any other firm will be able to chip away at Google's search supremacy without access to a comparable trove of data*". Moreover, in AGCM, AGCOM e Garante per la protezione dei dati personali, *Indagine conoscitiva sui big data*, cited *supra*, at p. 93 and ff., the Italian antitrust authority highlighted that core platform services providers are strongly incentivized to gather as much users' data as possible. As a matter of fact, the collection and analysis of information allow for an increase in profit through the offering of the primary service and its personalization, of additional services against a price, of target advertising and of the selling of elaborated information. Moreover, in the case of multi-sided platforms, positive externalities, economies of scale and scope amplify the advantages that firms can draw from data collection.

The structure and the functioning of the digital market have relevant implications on the assessment of market power and the subsequent finding of dominance[163]. This phase of antitrust analysis characterizes both merger control and the enforcement of article 102 TFEU: while the former requires to declare incompatible with the internal market any merger that would result in the strengthening or creation of a dominant position[164], article 102 TFEU only applies to undertakings holding a dominant position in the internal market or in a substantial part of it[165]. In order to assess the existence of a dominant position, antitrust authorities can rely on several indicators, among which the undertakings' market shares, entry barriers, the presence of suitable alternatives in the market, and so on[166].

In relation to the assessment of market power, the digital market raises four issues. First of all, market shares based on sales volume might not be as informative in the case of online platforms, since network effects influence the price structure of digital services. Secondly, given its dynamicity and short innovation cycles, the analysis of

[163] According to the case law, an undertaking holds a dominant position in the relevant market when it can behave to an appreciable extent independently of its competitors, its customers and ultimately of its consumers, See: Court of Justice, C-27/76, *United Brands Company and United Brands Continentaal BV v Commission of the European Communities*, 14 February 1978, ECLI:EU:C:1978:22, at point 65. In European Court of Justice, C-85/76, *Hoffmann-La Roche v. Commission of the European Communities*, 13 February 1979, ECLI:EU:C:1979:36, at point 39, the Court clarifies that "*such a position does not preclude some competition, which it does where there is a monopoly or a quasi-monopoly, but enables the undertaking which profits by it, if not to determine, at least to have an appreciable influence on the conditions under which that competition will develop, and in any case to act largely in disregard of it so long as such conduct does not operate to its detriment*". See also: European Commission, *Guidance on the Commission's enforcement priorities in applying Article 82 of the EC Treaty to abusive exclusionary conduct by dominant undertakings* (OJ C 45, p. 7-20), 24/2/2009, at point 9 ff.

[164] According to the EC merger regulation, the creation or strengthening of a dominant position in the internal market through a concentration would result in a significant impediment to effective competition, see: Council Regulation (EC) N. 139/2004, on the control of concentrations between undertakings (the EC Merger Regulation), 20 January 2004 (OJ L 24, p. 1–22), 29/1/2004, at article 2.2.

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

[166] Moreover, the structure of the market must be taken into account by assessing, in particular, the position of the undertaking and its competitors, constraints exercised by actual or potential competitors and the countervailing buyers power. European Commission, *Guidance on the Commission's enforcement priorities in applying Article 82 of the EC Treaty to abusive exclusionary conduct by dominant undertakings* (OJ C 45, p. 7-20), 24/2/2009, at point 12.

market power in the digital market requires to carefully consider entry barriers, especially those linked to network effects, lock-in of consumers and economies of scale. Third of all, market power in the digital sector is strictly intertwined with the collection and analysis of users' data[167]. In particular, the analysis of market power should comprise the repercussions of the phenomenon of big data on entry barriers in the market. Finally, the presence of a few large digital conglomerates relevantly impacts the competitive structure of the digital market. In particular, the mechanisms of these providers risk to raise entry and expansion barriers connected to the economies of scope and lock-in effects. The following paragraphs will be dedicate to the analysis of these aspects.

1.3.1 Market shares in digital markets.

The finding of dominance in a given market is a necessary step for both merger control and the application of article 102 TFEU. To assess whether a dominant position is held by a given undertaking in the relevant market, the Commission may refer to several factors, among which the market shares held by the undertaking involved[168]. Market shares have been largely relied upon by antitrust authorities in the analysis of mergers and abuses. This factor constitutes an important indicator of market power and several antitrust authorities have established market shares-based criteria to assess dominance[169]. Moreover, the use of this element grants undertakings a higher degree

[167] V.H.S.E. ROBERTSON, *Antitrust law and digital markets: a guide to the European competition law experience in the digital economy*, cited *supra*, at pp. 9 ff.

[168] Market shares are measured by calculating the ratio of sales of an undertaking to the total sales in the market.

[169] The European Commission and the Court of Justice have presumed the existence of a dominant position in cases in which undertakings held market shares over certain percentages. See: OECD, *Abuse of dominance in digital markets*, 2020, http://www.oecd.org/daf/competition/abuse-of-dominance-in-digital-markets-2020.pdf, at p. 19; O'DONOGHUE R. AND J. PADILLA, *The law and economics of article 102*, cited *supra*, at p. 147 ff. Very high market shares (above 70%) were deemed by the Court of Justice to raise a strong presumption of dominance (Court of Justice, C-85/76, *Hoffmann-La Roche & Co AG v Commission*, 13 February 1979, ECLI:EU:C:1979:36, at point 59); Market shares between 50% and 70%, are likely to raise a presumption of dominance (Court of Justice, C-62/86, *AKZO Chemie BV v Commission of the European Communities*, 3 July 1991, ECLI:EU:C:1991:286, at point 60); market shares between 40% and 50% were found to require additional evidence to prove the existence of a dominant position (Court of Justice, c-85/76, *Hoffmann-La Roche & Co AG v Commission*, 13 February

of legal certainty, as they may easily assess their position in the market. The use of this parameter in the digital sector, however, requires a few adjustments related to the number of markets defined for online platforms and the presence of strong network effects

To begin with, in the case of multi-sided platforms, the use of market shares requires to consider multiple sides[170]. In particular, antitrust authorities should consider the platforms' market shares in relation to multiple markets. In addition, the pervasiveness of network effects in the digital sector and their implication on the price structure of online services, reduce the accuracy of market shares as an indicator of market power[171]. Since the price of core platform services for end users is often set to zero, the traditional way to calculate market shares does not appear to reflect the market power of online providers[172]. As a solution, some authors suggested to base market shares on factors other than the volume of sales. The elements suggested include: users share, which is based on the number of active users of a given platform[173]; data shares, based on the turnover of a given undertaking active in a market for data[174]; the volume of transactions enabled by the provider, which might be particularly informative in the case of marketplaces[175]. These adjustments could

1979, ECLI:EU:C:1979:36, at point 58); finally, market shares below 40% are considered a good proxy for the absence of a dominant position, however the existence of a high degree of market power can be found even when the 40% threshold is not reached if there are other factors indicating dominance (Court of Justice, T-219/99, *British Airways plc v Commission of the European Communities*, 17 December 2003, ECLI:EU:T:2003:343, at point 211).

[170] OECD, *Abuse of dominance in digital markets*, cited *supra*, at p. 20.

[171] J. CRÉMER, Y.A. DE MONTJOYE, H SCHWEITZER, *Competition policy for the digital era*, cited *supra*, at p. 48

[172] J.U. FRANCK and M. PEITZ, *Market definition and market power in the platform economy*, report, Centre on regulation in Europe (CERRE), 2019, at p. 70.

[173] Ibid., p. 71 ff. See also: OECD, *Abuse of dominance in digital markets*, cited *supra*, at pp. 19-20. See also: Bundeskartellamt, *Facebook, Exploitative business terms pursuant to Section 19(1) GWB for inadequate data processing*, case summary, 15 February 2019. In this case, to determine the dominance of the social network giant, the German competition authority used the shares of monthly and daily active users of Facebook.

[174] I. GRAEF, *Market definition and market power in data: the case of online platforms*, cited *supra*, at p. 502. Relying on the turnover of a platform through the monetization of data would provide important information on its competitive strength not only in relevant markets for services or products, but also in the market for the fundamental input of users' information.

[175] In J.U. FRANCK AND M. PEITZ, *Market definition and market power in the platform economy*, cited *supra*, at footnote 291, it is observed that the *Bundeskartellamt* in the case B6-39/15,

contribute to make this indicator more informative in cases involving online providers'. Nonetheless, digital markets are incredibly dynamic environments with short innovation cycles, and the assessment of dominance should not only be based on market shares[176]. Attention should be paid, in particular, to other factors, among which entry barriers.

In conclusion, market shares are an important indicator of market power for the purpose of merger control and the enforcement of article 102 TFEU. Due to the characteristics of the digital sector, the tool under analysis requires some adjustments to be informative[177]. Market shares based on sales volume are not as helpful when strong network effects influence the price structure of online platforms. In these cases, market shares could be calculated based on other parameters, among which the number of users, the revenue derived from data and the volumes of transactions. Moreover, several scholars noticed that, given the short innovation cycles and the dynamicity of the digital sector, the analysis of market power should not be based solely on market shares. Other factors, such as the strong barriers linked to network externalities, lock-ins and economies of scale, should be carefully considered.

1.3.2 Network effects, lock-ins and entry barriers.

Immonet/Immowelt, 20 April 2015, at p. 71, estimated that the real estate platform involved had a share of more than 70% in transactions, which was considered as an evidence of market power.

[176] The European Commission has recognized the inadequacy of market shares as a tool for finding market power in several decisions on proposed mergers. In Court of Justice, T-79/12, *Cisco System v. Commi*ssion, 11 December 2013, EU:T:2013:635, at point 69, the General Court agreed with the Commission and stated that the one for consumer communications was a dynamic and fast-growing sector in which large market shares are not necessarily an accurate indicator of market power, inasmuch as they could turn out to be ephemeral. Moreover, in its decisions on the mergers between Facebook and WhatsApp (cited *supra*, at point 99) and Apple and Shazam (case n. M.8788 – *Apple/Shazam*, 16/09/2018, at point 162), the Commission stated that market shares are not a perfect indicator of market power in fast-growing sectors with short innovation cycles.

[177] See European Commission, *Google Search (Shopping)*, cited *supra*, at point 56 ff. Even though it was recognized that in fast-growing markets with short innovation cycles market shares are not necessarily indicative of a high degree of market power, in this case the Commission deemed them to be an important evidence since the markets in which Google was active were not giving signs of instability during the periods considered.

Among the factors considered in the assessment of market power, an important role is played by entry barriers[178]. The assessment of this factor is particularly important in the digital sector, being it highly dynamic and characterized by short innovation cycles[179]. In light of these considerations, the mere analysis of market shares is not sufficient to provide antitrust authorities with a comprehensive understanding of the competitive conditions of this market. Therefore, entry barriers, in particular those determined by network effects, the lock-in of users and economies of scale should be carefully analyzed.

To begin with, the digital market is characterized by strong network effects, amplified by the adoption of a multi-sided structure by several core platform services' providers. As mentioned above, network effects trigger feedback loops which lead to high entry barriers and market concentration[180]. The correlation between market power and network externalities has been widely acknowledged by antitrust authorities[181]. The analysis of this factor is particularly important for the assessment of dominance and market tipping in digital markets[182].

[178] Barriers to entry are one of the factors that antitrust authorities have considered in assessing the market power in competition cases and merger control. These are the barriers to entry and expansions of actual and potential competitors in the relevant market. By making it more difficult for rivals to enter or to expand, entry barriers contribute to reinforcing the position of an incumbent in the market. See: European Commission, *Guidance on the Commission's enforcement priorities in applying Article 82 of the EC Treaty to abusive exclusionary conduct by dominant undertakings* (OJ C 45, p. 7-20), 24/2/2009, at points 16-17.

[179] See the case law cited at footnotes 179 and 180.

[180] See, among others: Autorité de la concurrence and Bundeskartellamt, *Competition law and data*, cited *supra*, at p. 27; J. CRÉMER, Y.A. DE MONTJOYE, H SCHWEITZER, *Competition policy for the digital era*, cited *supra*, at p. 20; Stigler Committee on Digital Platforms, *Final Report*, September 2019, at p. 38 and ff.; Competition law 4.0, *A new competition framework for the digital economy*, cited *supra*, at pp. 15 and ff.; AGCM, AGCOM e Garante per la protezione dei dati personali, *Indagine conoscitiva sui big data*, cited *supra*, at p. 72.

[181] See, among others: European Court of Justice, Case T-201/04, *Microsoft Corp. v Commission of the European Communities*, ECLI:EU:T:2007:289, 17 September 2007, at 558, the Court observed that Microsoft's dominant position was found on the basis of its market shares, as well as entry barriers connected to, among other things, network effects; European Commission, *Facebook/WhatsApp*, cited *supra*, at point 127 and ff. the institution has conducted a deep analysis of network effects in the markets involved; European Commission, *Microsoft/LinkedIn*, cited *supra*, at point 340 and ff. the Commission considered the effects of the merger on network effects in the market for professional social networks.

[182] Market tipping is the determination of the market in favor of a provider, strengthening its position.

A second factor that contributes to foster the concentration of market power in the sector under analysis consists in the presence of lock-in effects. In other words, users of online services can, at times, be "locked into" the platform that they are navigating. Lock-in effects may derive from several elements: firstly, if the cost of switching provider is high – either in terms of price[183] or convenience[184] – users may find it difficult to abandon the service they are currently using; secondly, due to the absence of interoperability among rival providers[185], high switching costs can contribute to prevent users from leaving a service; thirdly, lock-in effects may be the result of the low proclivity of users to change providers due to inertia, leading to the so-called "status quo bias"[186]; finally, lock-in effects can be determined by the presence of strong network effects[187]. Lock-in effects contribute to the accumulation of market power in the hands of a few large providers. Nonetheless, there are factors that mitigate these effects which should be considered in antitrust analysis, in particular multi-homing. When multi-homing is widespread among users of a given online service, lock-in effects decrease[188]. In evaluating market power, the assessment the lock-in of

[183] For example, a user wanting to switch operating system (OS) on a device would have to pay the price of a new service.

[184] Considering a core platform service such as a social network, for instance, a user wishing to switch provider would have to convince a consistent number of his/her contacts to also change, otherwise switching would not be convenient, since the user would not be able to benefit from the very function of the social networking service.

[185] Considering the example of switching the OS on a device, the issue of interoperability for a user wanting to switch provider arises if the software applications that he/she uses were not compatible with different OSs. Entry barriers caused by obstacles to interoperability between products have been found, for instance, in Court of Justice, Case T-201/04, *Microsoft Corp. v Commission of the European Communities*, 17 September 2007, ECLI:EU:T:2007:289, at 558.

[186] In its decision on *Facebook/WhatsApp*, cited *supra*, at point 111, the European Commission found that users' inertia make them susceptible to pre-installation. When applications are preinstalled, switching costs for users are higher because of their 'status quo bias'.

[187] AGCM, AGCOM e Garante per la protezione dei dati personali, *Indagine conoscitiva sui big data*, cited *supra*, at p. 72. An example of the connection between network effects and lock-in can be found in target advertising services offered by core platform services. Publishers advertising their products on Google will have a hard time leaving the platform for another on offering a better-quality advertising service if it does not have a matching number of users.

[188] AGCM, AGCOM e Garante per la protezione dei dati personali, *Indagine conoscitiva sui big data*, cited *supra*, at p. 72-73. In evaluating the possibility of multi-homing, however, the costs that users bear, even in terms of convenience, should be evaluated. In particular, the sole circumstance that a core platform service is offered for free to end users does not necessarily mean that multi-homing will occur. For example, users multi-homing for social networks, such as Facebook for instance, will need to bear the costs of the time necessary to build and update all their profiles. Hence, antitrust authorities

users – due to switching costs, behavioral considerations and network effects –, as well as the frequency of multi-homing, should be (and have been) carried out by antitrust authorities on a case-by-case basis[189].

Finally, a third important factor contributing to the accumulation of market power consists in the presence of economies of scale. As observed above, in order to enter the digital market, it is necessary to bear certain fixed costs[190], however, once the infrastructure is set, the cost of serving more customers increases very slowly[191]. Positive returns to scale provide incumbents with a strong advantage over potential entrants or rivals that have not reached the same production level yet [192]. The importance of the existence of these barriers is amplified by the circumstance that the algorithms – which are at the basis of the functioning of most core platform services – learn by doing, hence if they gain more experience the service's quality increases[193].

Barriers to entry are particularly important when assessing the existence of a dominant position in the digital market. As a matter of fact, this sector is highly dynamic and market shares cannot provide antitrust authorities with a realistic and comprehensive understanding of the structure of the market. Among the characteristic of the digital sector that contribute to increase entry barriers there are strong network effects, lock-in effects and economies of scale.

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should evaluate whether multi-homing is actually practiced by users. It should also be noticed that data portability can provide a useful corrective tool to the difficulties of switching and multi-homing. If users are enabled to transfer their information from a core platform service to another, the costs of switching or using more services will likely decrease.

[189] Considerations on users' incentives to multi-homing against the costs in terms of time of using multiple professional social networks have been carried out by the European Commission in its decision on the merger between Microsoft and LinkedIn (European Commission, *Microsoft/LinkedIn*, cited *supra*, at point 345).

[190] Fixed costs include, for example, the acquisition of the hardware (e.g. computers and technological infrastructure) and the development of the initial software (e.g. an application, a social network, a given algorithm, etc.).

[191] OECD, *An introduction to online platforms and their role in the digital transformation*, cited *supra*, at p. 23.

[192] R. O'DONOGHUE AND J.PADILLA, *The law and economics of article 102*, cited *supra,* at pp. 157-158. See also: European Commission, case n. COMP/38.784 - *Telefónica*, 4/7/2007, at point 226. In the latter case, the Commission found that the incumbent's position on the market was protected by the existence of large economies of scale. Such circumstance determined the Commission to state that entrants would not be able to achieve the necessary scale to effectively compete.

[193] R. O'DONOGHUE AND J.PADILLA, *The law and economics of article 102*, cited *supra*, at p. 158

1.3.3 Data-related barriers to entry and expansion.

In the digital market, the possession of large quantities of users' data is an additional element contributing to the accumulation of market power[194]. Through their services, online platforms constantly gather vast amounts of information on users[195]. By elaborating this information, providers subsidize their (often free-to-use) services and generate profits [196] . Users' data are at the core of targeted advertising, personalization, as well as a trigger for various network effects and barriers to entry. As a result, the accumulation of large quantities of information is an important factor in gaining market power. This circumstance is particularly intensified in the case of gatekeepers' ecosystems, which are able to collect large quantities of information on users from several services[197]. This allows them to build comprehensive profiles on individuals and grants them a knowledge that can hardly be matched by new entrants[198]. The resulting economic power can easily be leveraged on adjacent markets in which the data possessed by the incumbent conveys a strong competitive advantage[199]. Therefore, data-related entry barriers should be thoroughly analyzed by competition authorities in order to accurately evaluate the market power of a given

[194] J. CRÉMER, Y.A. DE MONTJOYE, H SCHWEITZER, *Competition policy for the digital era*, cited *supra*, at p. 49.

[195] The collection of this crucial input is conducted directly by providers of platform services as well as through the use of third-party websites and applications. Third party tracking allows to scoop up users' digital footprint and collect the related information in order to build comprehensive users' profiles.

[196] L.M. KHAN, *Sources of tech platform power*, Georgetown law and technology review, vol. 2.2, 2018, at p. 329.

[197] Ecosystems are particularly apt at locking users in due to the advantages derived from integration of services and the (frequent) limited interoperability of with rival services.

[198] AGCM, AGCOM e Garante per la protezione dei dati personali, *Indagine conoscitiva sui big data*, cited *supra*, at p. 77. In its inquiry the Italian antitrust authority observed that digital ecosystems grant gatekeepers the opportunity to gather, combine and exploit users' data while respecting data protection laws in relation to the purpose to which they are collected and used.

[199] J. CRÉMER, Y.A. DE MONTJOYE, H SCHWEITZER, *Competition policy for the digital era*, cited *supra*, at p. 49. As observed by the Italian antitrust authority, large providers controlling digital ecosystems may be perceived as holding a relevant degree of market power in markets that they have not entered yet (see: AGCM, AGCOM e Garante per la protezione dei dati personali, *Indagine conoscitiva sui big data*, cited *supra*, at p. 80).

provider [200]. The present paragraph will carry out three important considerations on data-related entry and expansions barriers.

To begin with, in markets based on big data, where large quantities of information are necessary in order to effectively compete, the combination of such input with network externalities may contribute to confer a substantive advantage to first movers[201] and, at the same time, raise entry barriers for potential competitors[202]. New entrants, in fact, will need to match the dataset of the incumbents. Therefore, in general, the larger the dataset of the incumbent, the higher data-related barriers will be faced by actual and potential competitors.

Secondly, when analyzing the importance of big data as an entry barrier, the quality, nature and quantity of information necessary to operate in the relevant market must be considered. For example, in the case of search engines collecting more data increases the quality of the selection of relevant results for each query[203]. Therefore, a new entrant will have to at least match the quantity of data held by the incumbent to compete effectively. In the market for targeted advertising online, on the contrary, access to up-to-date data is more important than the quantity of information held. In such a market, the incumbents' competitive advantage linked to the volumes of data they own is inferior and new entrants face lower entry barriers[204]. Therefore, when analyzing data-related entry barriers in a given market, it is important evaluate the context. In particular, the purpose for which this input is collected.

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[200] J. CRÉMER, Y.A. DE MONTJOYE, H SCHWEITZER, *Competition policy for the digital era*, cited *supra*, at p. 49.

[201] With the term *first mover* scholars and antitrust authorities refer to the first providers of a given product or service that entered the related market.

[202] AGCM, AGCOM e Garante per la protezione dei dati personali, *Indagine conoscitiva sui big data*, cited *supra*, at p. 73.

[203] Nonetheless, it has been observed that there may be diminishing returns to scale once a certain volume of requests has been reached. In such cases it has been held that the improvement of the selection of results in response to a query may decrease. See: V. KATHURIA, *Greed for data and exclusionary conduct in data-driven markets*, Computer law and security review, vol. 35, 2019, at p. 92; AGCM, AGCOM e Garante per la protezione dei dati personali, *Indagine conoscitiva sui big data*, 10 febbraio 2020, at p. 74.

[204] Ibid.

See also: European Commission, *Google Search (Shopping)*, cited *supra*, at point 287.

Finally, data-related entry barriers are connected to the issue of the availability of information for actual rivals or new entrants. In other words, if an incumbent possesses a dataset that is not replicable by potential and actual competitors, barriers to entry and expansion are higher. Scholars discussed the issue of access to data at length. While some hold that, due to their non-rivalrous nature[205] and wide availability[206], data do not raise competition concerns[207], others observed that this input is not necessarily accessible by all operators[208]. Moreover, users' attention – which is essential in order to obtain information – is a rivalrous good[209]. It was also pointed out that the collection

[205] Data are claimed to be non-rivalrous due to the fact that, in principle, an undertaking collecting a piece of information does not preclude others from gathering the same information. Users are able to provide different platforms with the same data and different operators can elaborate the same information. Moreover, since the value of data lie in the knowledge that can be extracted from them, it can be held that different data can be used to extract the same piece of information. For example, search engines and social network can infer music preferences of a given user starting from, respectively, his/her search queries or social interactions. See: I. GRAEF, *Market definition and market power in data: the case of online platforms*, cited *supra*, at p. 479.

[206] As for the availability of users' data, some authors have held that this input is ubiquitous and easily accessible due to low costs of collection, storage and analysis, see: D. S. TUCKER AND H. B. WELFORD, *Big mistakes regarding big data*, Antitrust source, 2014, at p. 3.

[207] Ibid., at p. 7. See also: D. D. SOKOL AND R. COMEFORD, *Antitrust and regulationg big data*, George Mason Law Review, 2016, vol. 23, at pp. 1129-1161.

[208] Autorité de la concurrence and Bundeskartellamt, *Competition law and data*, cited *supra*, at p. 37. Some unique data may only be available to certain providers or through specific access point. In such cases that unique access points to unique - not substitutable - data may lead to the impossibility to replicate that information raising entry barriers. In D. L. RUNBINFELD and M. S. GAL, *Access barriers to big data*, cited *supra*, at p. 351 the authors bring the example of third world countries in which cellphones are the main devices to access the internet. Under these circumstances, cellphones providers have a significant competitive advantage over other market players. A similar reasoning has been adopted by the European Commission in its decision to authorize the acquisition of Fitbit by Google (European Commission, *Google/Fitbit*, cited *supra*). At point 520, the Commission found that Fitbit users' data were a unique set of information that was only accessible through a unique source, i.e. the relevant Web API. In such case, if the merged entity were to restrict the access to said API, other market operators would not have been possible to access such data. Moreover, incumbents may be tempted to exclude rivals by preventing them from gathering the same data. Examples of such conducts can be found, for example, in Google's practice to restrict portability of advertising campaigns through exclusive agreements, thereby preventing other online platforms from accessing data on such campaigns. See on this: I. GRAEF, *Market definition and market power in data: the case of online platforms*, cited *supra*, at p. 480; A.P. GRUNES and M.E. STUCKE, *No mistakes about it: the important role of antitrust in the era of big data*, Antitrust source, issue 269, 2015, at p. 7.

[209] A user giving attention (and consequently their data) to an online service cannot give, at the same time, attention to another one. Therefore, to determine whether users' information is available to competitors, it is not just relevant to inquire whether multi-homing is a widespread practice, but also whether there is a substantial difference in the time spent on a platform rather than another. See: R. POLLOCK, *Is Google the next Microsoft: competition, welfare and regulation in online search*, 2010, Review of network economics, vol. 9, issue 4, at pp. 1-31; G. SURBLYTĖ, *Competition law at a*

of data requires consistent investments[210] and that factors such as strong network externalities, the low tendency of users to multi-home and robust lock-in effects contribute to raise information-related barriers, by reducing accessibility of this input.

In conclusion, data-related entry and expansion barriers are an important factor for the evaluation of market power. This circumstance is not unknown to competition enforcement, in particular in merger control[211], and the competitive importance of the accumulation of users' data has been widely recognized[212]. Nonetheless, when evaluating data-related entry barriers, a case by case analysis should be carried out in order to identify the quality, quantity and nature of information necessary to effectively compete.

1.3.4 Digital ecosystems and market power.

One final element to consider in the assessment of market power relates to digital ecosystems. Conglomerate structures are widespread in the digital economy. Numerous gatekeepers, in fact, built ecosystems around one main core platform service. Examples of this phenomenon are provided by several large online operators, like Facebook, Apple, Amazon and Google[213]. This circumstance is strictly connected to the value of users' data. The competitive advantage provided by the aggressive

crossroad in the Digital Economy: is it all about Google?, EuCML, vol 4, issue 5, 2015, at pp. 170-178. It is worth noticing that in the decision on *Microsoft/LinkedIn*, cited *supra*, at points 344-345, the European Commission observed that, even when multi-homing happens, users tend to give most of their attention and time to a single platform.

[210] Either consisting in providing a service to users in order to capture their data or in acquiring information from data brokers. See: Autorité de la concurrence and Bundeskartellamt, *Competition law and data*, cited *supra*, at p. 38. Moreover, both tactics present several difficulties. In fact, network and lock-in effects, as well as the tendency of users to maintain the 'status quo', might hinder the ability of a new entrant providing a rival online service to gather enough users. Whereas acquiring data from brokers presents the drawback of not giving the provider the possibility to gain a consistent flow of information and of not matching the informative depth reached via offering core platform services.

[211] See *infra* Part 2.

[212] J. CRÉMER, Y.A. DE MONTJOYE, H SCHWEITZER, *Competition policy for the digital era*, cited *supra*, at p. 109. The competitive advantage provided by large datasets can be used as a basis to leverage market power, raising concerns from the perspective of competition law.

[213] Competition law 4.0, *A new competition framework for the digital economy*, cited *supra*, at p. 17.

accumulation and elaboration of information can be leveraged not only within a single service, but also in different markets. As a consequence, gatekeepers are perceived as holding a dominant position in markets in which they have not entered yet and that might have little – if anything – to do with their core businesses[214]. Digital conglomerates have an important impact on the competitive structure of the digital market, in particular in relation to barriers connected to economies of scope and lock-in effects.

First of all, the proliferation of digital ecosystems online is due, among other things, to the presence of economies of scope. These derive from the common input necessary for numerous online/smart services: users' data. Pooling users' information from across the ecosystem is useful to create evermore comprehensive profiles and increase the level of personalization of each single service. Moreover, this operation allows gatekeepers to identify potential new products or services for which there may be a demand. As a result, the competitive advantage of conglomerates that are able to combine users' data will significantly grow, with little chance to be matched by actual or potential competitors[215].

A second important consequence of the existence of digital ecosystems relates to the lock-in of users. As mentioned above, users online may experience lock-in due to numerous circumstances, among which the creation of consumption synergies[216]. In particular, it was observed that once a user enters a digital ecosystem by, for example, purchasing a device operating on a given OS, he/she will be unlikely to shop around for different services, such as software applications, and will rather purchase within the ecosystem[217]. As a consequence, actual and potential competitors of the

[214] Ibid. The report brings the example of Amazon and Google. Amazon is not just a provider of a marketplace, but also one of the largest providers of cloud-computing services. Google can count within its ecosystem several different services, like its search engine, an advertising service, smart-phones operating services, smart-homes, etc.

[215] Competition law 4.0, *A new competition framework for the digital economy*, cited *supra*, at p. 18.

[216] V.H.S.E. ROBERTSON, *Antitrust market definition for digital ecosystems*, cited *supra*, at p. 8.

[217] Ibid.

conglomerate will encounter additional difficulties in gaining users. This factor contributes to the accumulation of market power in the hands of the larger providers.

In conclusion, the implications of digital ecosystems on the distribution of market power should be carefully considered in antitrust analysis. Pervasive economies of scope and lock-in effects determined by integrated providers, in fact, contribute to raising entry barriers in the market and, as a result, to allow the accumulation of market power.

Conclusive remarks.

The characteristics of the digital market and its operators foster the accumulation of market power and winner-takes-all dynamics. Economies of scale and scope linked to users' data, as well as network effects connected to a multi-sided structure, contribute to provide a consistent advantage to incumbents. As a result, a few large gatekeepers emerged in the market, acting as gateways between business users and end users. These undertakings built entire ecosystems around a main core platform service, thereby consolidating their position. These circumstances fired up a debate over the role of competition law in the digital market. Studies and market inquiries revealed a number of issues concerning antitrust analysis in the digital market and, in particular, the steps of the definition of the relevant market and the assessment of dominance. The definition of the relevant market for online services cannot forego to consider the multi-sided structure of most providers, the absence of a monetary price of numerous services and the presence of digital conglomerates. Moreover, antitrust authorities should take into consideration the possibility to define a market for data, given the importance of such input. As for the assessment of dominance, this phase cannot rely solely on the evaluation of market shares based on the volume of sales. On the contrary, entry barriers are particularly important indicators, especially those related to data. In addition, the presence of digital conglomerates has a relevant impact on the accumulation of power.

In conclusion, from the analysis carried out so far, it appears that EU antitrust rules are sufficiently flexible to efficiently address the challenges raised by the digital sector sector[218]. Due to the characteristics of this market, some indicators used by antitrust authorities will require an adjustment, but overall the toolkit at their disposal appears sufficient.

[218] The European Commission in its *Evaluation of the Commission Notice on the definition of relevant market for the purposes of Community competition law of 9 December 1997*, Staff working document, SWD(2021) 199 final, 12 July 2021, also recognized that the basis of market definition remain solid even in the context of the digital market. The areas that, according to the results of the evaluation, showed the need to be modernized concern the definition of markets where the price is set to zero and the issues that emerged in relation to digital ecosystems.

PART 2

2.1 Data driven mergers.

The digital sector is ever-changing and increasingly crucial for the economy. As explored above, within the digital market, the so-called gatekeepers [1] play a fundamental role in the lives of users navigating 'core platform services' [2]. This phenomenon raised a wide debate on the competitive implications of multi-sided platforms and the phenomenon of big data[3]. One of the issues largely discussed among

[1] The figure of the gatekeeper or "access controller", as defined by the recent Commission Proposal for the Digital Markets Act, is held by the provider of core platform services who acts as an "access point" (or gateway) between business users or end users. Gatekeepers benefit from a long-lasting and established position in the marketplace, often resulting from the creation of conglomerate ecosystems around the core platform service that help to reinforce barriers to market entry. See in this regard: European Commission, *Proposal for a Regulation of the European Parliament and of the Council on Fair and Contestable Markets in the Digital Sector* (Digital markets act), (OJEU COM(2020) 842 final, 2020/0374(COD)), December 15, 2020, Article 3.

[2] The term basic platform services refers to the list contained in Article 2 of the European Commission's proposal for the adoption of a Digital Markets Act, above note 1: services of (a) online intermediation; (b) online search engines; (c) online social networking services; (d) video sharing platform services; (e) number-independent interpersonal communication services; (f) operating systems; (g) cloud computing services; and (h) advertising services, including advertising networks, ad exchanges, and any other advertising intermediation services, provided by a provider of any of the basic platform services listed by letters (a) through (g).

[3] See among others: G.COLANGELO, *Big data, piattaforme digitali e antitrust*, Mercato e concorrenza regole, n. 3, 2013, p. 425 ff.; A. EZRACHI and M.E. STUCKE, *Virtual competition*, Cambridge Mass. & London Eng., 2016; M.E. STUCKE and A.P. GRUNES, *Big data and competition policy*, Oxford, 2016; G. PITRUZZELLA, *Big data, competition and privacy: a look from the antitrust perspective*, Concorrenza e mercato, 2016, p. 15 ff.; L. KHAN *Amazon's antitrust paradox*, in The Yale law journal, vol. 126, 2017, p. 710 ff.; M.R. PATTERSON, *Antitrust law in the new economy*, Harvard University Press, 2017; A.EZRACHI AND. M.E.STUCKE, *Emerging antitrust threats and enforcement actions in the online world*, Competition law international, vol 13, no. 2, 2017, p. 125 ff.; P. MANZINI, *Prime riflessioni sulla decisione Google Android*, rivista.eurojus.it, 2018; P. MANZINI, *Le restrizioni verticali della concorrenza al tempo di internet*, Diritto del commercio internazionale, 2018, p. 289 ff.; R. NAZZINI, *Online platforms and antitrust: where do we go from here?*, Rivista italiana di antitrust, n.1, 2018, p. 5 ff.; D. MANDRESCU, *Applying (EU) competition law to online platforms: reflections on the definition of the relevant market(s)*, World Competition 41, n. 3, 2018, p. 453 ff.; M. KATZ and J. SALLET, *Multisided Platforms and Antitrust Enforcement*, in The Yale law journal, vol. 127, 2018, p. 2142 ff.; A. EZRACHI and V. ROBERTSON, *Competition, Market Power and Third-Party Tracking,* World competition 42, n. 1, 2019, p. 5 ff.; G. COLANGELO and M. MAGGIOLINO, *Antitrust über alles. whither competition law after Facebook?*, World competition 42, n.3, 2019, p.355 ff.; B.KOTAPATI ET AL., *The antitrust case against Apple*, Yale University, digital platform theories of harm paper series, Paper n. 2, 2020; D. GERADIN AND D. KATSIFIS, *The antitrust case against the Apple App Store*, 2020; H.J.

scholars concerns the acquisitions by gatekeepers of companies with a high technological potential and/or a vast dataset, and their effects on the competitive structure of the internal market. The importance of this phenomenon cannot be overstated, especially considering that just from 2015 to 2017 the GAFAM [4] participated in 175 mergers [5]. Many acquisitions were driven by the desire of gatekeepers to possess specific strategic resources[6]. By the same token, the so-called data-driven mergers are guided by the competitive advantage resulting from the acquisition of the target company's dataset. As it is well-known, users' data are a fundamental competitive asset in the digital sector. Their economic value lies in the information derived from their analysis, which is then used by operators to personalize and improve their services. Because of their value, the services through which data are collected are frequently offered to end users for free.

As seen above, the competitive advantages provided by users' data have granted this asset a central role in the debate on competition in the digital sector [7]. The

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HOVENKAMP, *Antitrust and platform monopoly*, University of Pennsylvania Law School, Research paper N. 20-43, 2020; A. MARCIANO, A. NICITA and G.BATTISTA RAMELLO, *Big data and big techs: understanding the value of information in platform capitalism*, European journal of law and economics, vol. 50, n. 3, 2020, p. 345 ff.; V. ROBERTSON, *Excessive data collection: privacy considerations and abuse of dominance in the era of big data*, Common market law review, vol. 57, 2020, p. 161 ff.; G. CAGGIANO, *La proposta di Digital Service Act per la regolazione dei servizi e delle piattaforme online nel diritto dell'Unione europea*, I Post di AISDUE, Focus "Servizi e piattaforme digitali", n. 1, 2021; P. MANZINI, *Equità e contendibilità nei mercati digitali: la proposta di Digital market act*, I Post di AISDUE, Focus "Servizi e piattaforme digitali", n. 2, 2021.

[4] Term used to refer to Google, Amazon, Facebook, Apple and Microsoft.

[5] A. GAUTIER and J. LAMESCH, *Mergers in the digital Economy*, CESifo Working paper, No. 8056, 2020.

[6] Ibid., p. 27

[7] The studies on the subject are numerous, see for example: Autorité de la Concurrence and Bundekartellamt, *Competition law and data*, 10 May 2016; Federal trade commission, *Big Data: a tool for inclusion or exclusion? understanding the issues (FTC Report)*, January 2016; FURMAN, *Unlocking digital competition: report of the digital competition expert panel*, March 2019; J. CRÉMER, Y. DE MONTJOYE AND H. SCHWEITZER, *Competition policy for the digital era*, European Commission, report, March 2019; Lear tailored solutions in economics, *Ex post assessment of merger control decisions in digital market*, cited *supra*; ACCC, *Digital platforms inquiry*, final report, June 2019; Brics competition law and policy center, *Digital era competition: a bricks view*, report, September 2019; Competition law 4.0, *A new competition framework for the digital economy*, Federal Ministry for Economic Affairs and Energy (BMWi), September 2019; Stigler Committee on Digital Platforms, *Final Report*, September 2019; AGCM, AGCOM e Garante per la protezione dei dati personali, *Indagine conoscitiva sui big data*, 10 February 2020; UK Competition and markets authority, *Online platforms and digital advertising*, 1 July 2020.

importance of information, however, raises a number of challenges to antitrust enforcement, among which some difficulties in the determination of its economic value, since normally data are not exchanged against a price[8]. Moreover, due to the inherent difficulties of measuring these aspects, the effects of data-driven mergers on the level of data protection offered by core platform services[9] and on users' choice[10] have often been ignored.

After analyzing some preliminary issues, the present part will examine the case law of the European Commission on data-driven acquisitions by the so-called gatekeepers, in order to identify the progress and criticalities still characterizing this field. First, the role of data in the digital ecosystem will be recalled, specifically in relation to merger control (infra 2). Second, the difficulties of evaluating the effects of data-driven mergers on the levels of data protection offered by online services will be discussed (infra 3). Thirdly, the implications on users' choice of the increasing personalization of core platform services will be explored (infra 4). In light of these considerations, the most representative data-driven mergers analyzed by the Commission will be examined, with particular attention to the extent to which data and privacy protection have been considered (infra 5 and 6). Finally, the recent decision on the merger between Google and Fitbit will be discussed (infra 7). This decision represents a detrimental setback in relation to the evaluation of the role of data protection and consumers' choice in merger control.

[8] See among others: J.M. NEWMAN, *Antitrust in zero-price markets: foundations*, University of Pennsylvania law review, vol. 164, 2015; T. HOPPNER, *Defining markets for multi-sided platforms: the case of search engines*, cited *supra*; I. GRAEF, *Market definition and market power in data: the case of online platforms*, World competition, vol. 38, n.4, 2015, at pp.501-504; M.C. WASASTJERNA, *The implications of big data and privacy on competition analysis in merger control and the controversial competition-data protection interface*, European business law review, vol. 30, N. 3, 2019, at pp. 359-364.

[9] While aware of the difference between privacy and data protection, for the purpose of this paper the two terms will be used synonymously to indicate the user data protection regime offered by basic platform services.

[10] OECD, *Big data: bringing competition policy to the digital era*, Background note by the Secretariat, 29-30 November 2016, p. 1-19.

2.2 Data in the digital market and merger control.

As mentioned above, the most popular services on the internet are the so-called 'core platform services'. This category includes social networks, search engines, marketplaces, and many other services that most internet users navigate daily[11]. These services are normally offered for free to end consumers, who in exchange agree to providers collecting a large amount of their personal data[12]. Once processed, this information is employed by providers of online services for various purposes. Steam, for example, collects data from its users – who are mainly video games consumers – and analyzes them to elaborate a list of recommended games for each player[13]. The same mechanism applies to providers of core platform services offering advertising space. In this case, the data collected is analyzed to identify those users who are most interested or incline to buy certain products or services, in order to show them the relevant ads.

For providers of core platform services, users' data represent a major competitive advantage from numerous perspectives. First, the accumulation of data generates several network effects characterizing the digital market[14], which tend to strengthen

[11] Such services often are offered through the so-called "multi-sided" platforms. This term refers to the fact that usually core platform services connect multiple, well-defined groups of consumers: Amazon, for example, connects sellers to buyers. In this case, the utility of the platform to sellers will be greater the more numerous are consumers on the other side, and vice versa.

[12] Some data is directly provided by users to online operators, for example at the moment of signing up to a website, while other data is "observed" during the usage of the service. Finally, several information is "inferred" based on data "provided" and "observed".

[13] See Steam's Privacy Policy Agreement, Section 3.7, first paragraph: "*We may process information collected (...) so that content, products and services shown on the pages of the Steam store (...) can be tailored to meet your needs and populated with relevant recommendations and offers (...)*".

[14] H. SHELANSKI, S. KNOX and A. DHILLA, *Network effects and efficiencies in multisided markets*, background material, OECD, 15 November 2017, at p. 3: with particular reference to multi-sided platforms, "*network effects are the cross-platform externalities that result when the actions of participants on any side of the platform, or of the platform itself, affect participants on other sides of the platform (or the functioning of the platform itself)*". See also: M.E. STUCKE and A.P. GRUNES, *Big Data and competition policy*, cited *supra*, chapters 11-14; G. COLANGELO, *Big data, piattaforme digitali e antitrust*, Mercato concorrenza regole, vol. 3, 2016, at pp. 435-436.

the position of already dominant operators[15]. Secondly, the collection and storage of online data operate as an entry and expansion barrier. In order to be competitive, in fact, new entrants must already possess sufficiently large datasets. As a result, the larger the datasets of established operators are, the more difficult will be for new entrants to match them and effectively compete[16]. Finally, the creation and analysis of large datasets may provide large operators the possibility to rapidly expand and dominate connected markets[17].

Due to the fundamental role of data in the digital market, as well as their economic value, mergers that have the effect of combining large datasets have been at the center of a wide discussion. In particular, two aspects of EU merger control appear particularly problematic in relation to the acquisitions under analysis: first, the detection of such mergers appears inadequate at the European Union level; secondly, the analysis of these operations presents numerous challenges.

With regard to the first aspect, despite their strategic importance and the resulting union of significant datasets[18], numerous acquisitions taking place in the digital sector

[15] M.E. STUCKE and A.P. GRUNES, *Big Data and competition policy*, cited *supra*, at p. 170; AGCM, AGCOM e Garante per la protezione dei dati personali, *Indagine conoscitiva sui big data*, cited *supra*, at p. 72.

[16] Depending on the purpose to which data are used, however, this barrier may be more or less problematic. For example, in order to compete effectively in markets where information is used primarily for advertising, data must be recent. In this case, entering the market is less difficult, since the majority of data held by incumbents may no longer be relevant. On this topic, see: N.P. SCHEPP E A. WAMBACH, *On big data and its relevance for market power assessment*, Journal of European competition law & practice, vol. 7, issue 2, 2016, at pp.120-121; AGCM, AGCOM e Garante per la protezione dei dati personali, *Indagine conoscitiva sui big data*, cited *supra*, at p. 74.

[17] This circumstance has disruptive effects on competition law. Moreover, it requires a fine-tuning in how the relevant market is defined, as pointed out by the Italian antitrust authority in its report on big data (AGCM, AGCOM e Garante per la protezione dei dati personali, *Indagine conoscitiva sui big data*, cited *supra*, at p. 80). In order to evaluate this circumstance in antitrust analysis, a wider attention should be paid to gatekeepers' ecosystems, as mentioned in Part 1.

[18] See, M.E. STUCKE and A.P. GRUNES, *Big Data and Competition Policy*, cited *supra*, at pp. 155-255. In this regard, the US Federal Trade Commission has initiated a lawsuit against the social network giant, Facebook, holding, among other things, that the gatekeeper has put in place certain acquisitions for anti-competitive purposes, see Federal Trade Commission, press release: *FTC sues Facebook for illegal monopolization*, 9 December 2020. In addition, it should be noted that several scholars have strongly criticized the relaxed attitude of antitrust control on data-driven acquisitions, even calling for the dismemberment of some of the largest companies active in the digital sector. On the topic see for example: M. KHAN, *The separation of platforms and commerce*, Columbia law review, vol. 119, n. 4, 2019, at p. 973 ff.; R. VAN LOO, *In defense of breakups: administering a 'radical' remedy*, Cornell law review, vol. 105, 2020; Team Warren, *Here's how we can break up big tech*, Medium, 8 March 2019,

have often fell short of the turnover thresholds above which a merger is recognized as having a "European dimension"[19]. This situation led some scholars to wonder whether the turnover threshold set by the EU Regulation on merger control leaves gaps with respect to digital markets[20]. As a solution, it was suggested to replace the threshold triggering the obligation to notify a merger to the Commission, currently centered on the companies' turnover, with a parameter based on the value of the transaction[21]. This approach, however, presents some issues, among which identifying a threshold that is high enough not to generate an excessive number of notifications and, at the same time, low enough not to leave gaps[22].

Secondly, as for the problems characterizing the analysis of data-driven mergers, these mainly concern two aspects. Firstly, the absence of a monetary price – for both users' data and for the free side of core platform services – highlights the limits of the Commission's analysis in relation to those methods that are centered on this parameter (first of which, the SSNIP test). Core platform services, in fact, are normally

(https://medium.com/@teamwarren/heres-how-we-can-break-up-big-tech-9ad9e0da324c); R. REICH, *Break up Facebook (and while we're at it, Google, Apple and Amazon*), The guardian.com, 20 November 2018, (https://www.theguardian.com/commentisfree/2018/nov/20/facebook-google-antitrust-laws-gilded-age).

[19] Council Regulation (CE) n.139/2004, On the control of concentrations between undertakings (EC Merger Regulation), (OJ 2004, L 024 p. 1–22), at article 4, c. 1.

[20] V. E. OCELLO, C. SJÖDIN and A. SUBČS, *What's up with merger control in the digital sector? Lessons from the Facebook/Whatsapp EU merger case*, Competition merger brief, issue 1, 2015; Monokolpolisson, *Competition policy: The challenge of digital markets*, special report n. 68, 2015, at pp. 105-111; J. CRÉMER, Y. DE MONTJOYE and H. SCHWEITZER, *Competition policy for the digital era*, cited *supra*, at pp. 110-116.

[21] This solution has been adopted by Austria and Germany. See section 35(1a) GWB (Germany) and section 9(4) KartG (Austria). See also: Bundeskartellamt / Bundeswettbewerbsbehörde, *Guidance on Transaction Value Thresholds for Mandatory Pre-merger Notification,* luglio 2018 (Section 35 (1a) GWB and section 9 (4) KartG,).

[22] The report *Competition policy for the digital era* suggests waiting and evaluating the functioning of the threshold introduced by the Austrian and German systems. The authors of the report also suggest to make sure that the gap left by the EU merger control regulation indeed requires a rethinking of the notification system, see: J. CRÉMER, Y. DE MONTJOYE and H. SCHWEITZER, *Competition policy for the digital era*, cited *supra*, at pp. 114-116. It should also be noted that the European Commission's proposal for the adoption of a Digital Markets Act, cited *supra*, at article 12 requires a notification to the Commission for any proposed concentration "*involving another provider of core platform services or any other service provided in the digital sector, regardless of whether it is notifiable to a Union competition authority under Regulation [139/2004]*".

subsidized by publishers purchasing advertising space[23] or through commissions payed by business users[24]. Secondly, numerous competitive dimensions that are relevant in data-driven mergers are different from price. Providers of core platform services, in fact, mainly compete on innovation and quality, including the level of protection of users' data. Moreover, the width of choice offered to users is also an important parameter. The evaluation of these aspects is crucial to effectively protect consumers' welfare[25]. Nonetheless, analyzing the levels of innovation, quality and choice presents some difficulties, especially due to the lack of use of adequate analytical tools. Nevertheless, these important competitive dimensions cannot be ignored by antitrust authorities during the enforcement of merger control.

2.3 Data protection as a qualitative aspect of core platform services.

As anticipated, the competitive analysis of mergers with respect to consumers often focuses on the parameter of price. This is an excellent tool for assessing whether an acquisition will have anticompetitive effects, since price is an important aspect for consumers and, if it does not result in a lower quality level, paying less for a product is surely preferable. In addition, for the purposes of evaluating a merger's effects on price, the Commission can use traditional tools, such as the well-known SSNIP test[26].

However, price is not the only parameter on which undertakings compete, nor is it the only relevant element to consumers. Aspects such as the quality of the product or service, innovation, as well as the width of choice offered to consumers also play

[23] Core platform service providers often sell advertising space. The advertising service involves showing advertisements to users that are potentially interested in the product or service. This targeting is based on users' information - for example, queries launched by individuals on search engines - collected through the platform.

[24] This is the case of marketplaces, such as Amazon, App-stores, such as Apple's, and so on.

[25] See BEUC, *The role of competition policy in protecting consumers' well-being in the digital era*, Report, October 2019.

[26] European Commission, *Notice on the definition of the relevant market* (97/C 372/03), (OJ C372, p. 5-13), 9/12/1997, at 17: the SSNIP test (acronym for: small but significant non-transitory increase in price) consists in verifying whether "*customers would switch to readily available substitutes or to suppliers located elsewhere in response to a hypothetical small (in the range 5 % to 10 %) but permanent relative price increase in the products and areas being considered* ".

important roles. Although these parameters are crucial in all markets, they are particularly relevant for those services offered in the digital sector. As mentioned above, core platform services are normally offered to end-users for free[27] and, therefore, the element of price is usually missing. In this case, one relevant qualitative aspect of online services consists in the protection of users' data[28]. In some instances, the European Commission has indeed recognized data protection as a qualitative parameter of competition[29]. Nonetheless, in general such acknowledgement did not lead to relevant consequences. Overall, one can state that a firm separation between data protection and antitrust concerns has been held by the institution. This approach is due, among other things, to the complexities of developing the necessary tools to analyze mergers' anti-competitive effects on the level of data protection offered by these services. As a solution, scholars proposed five main methodologies[30]: the introduction of a SSNDQ test; the use of surveys and consultations; the quantification of the value of data to infer the value of data protection; the application of Article 21 of Regulation 139/04[31]; the *ex ante* evaluation of the possibility for the merged entity to abusively lower the quality of the services offered. These methodologies will be further discussed below.

The first proposal concerns the introduction of an SSNDQ[32] test. This solution requires to determine whether users would switch to a different service in response to a small, but significant, and non-transitory decrease in quality. This method, however,

[27] Or at an extremely low price.

[28] After the acquisition of WhatsApp by Facebook, many users abandoned the instant messaging service fearing a degradation of the conditions related to their privacy. See: R.DILLET, *Bye bye, Whatsapp: Germans switch to Threema for privacy reasons, Tech crunch*, 21 February 2014; H. TANRIVERDI, *Whatsapp-Konkurrent Threema verdoppelt Nutzerzahl*, Süddeutsche Zeitung, 21 February 2014.

[29] European Commission, case n. COMP/M.7217 – *Facebook/Whatsapp*, 03/10/2014, at point 87: privacy is included among the features that are becoming increasingly more important for consumers of texting applications. See also: European Commission, press release, *Mergers: Commission approves acquisition of LinkedIn by Microsoft, subject to conditions*, Bruxelles, 6 December 2016; European Commission, case n. M.8124 – *Microsoft/LinkedIn*, 06/12/2016, at point 350.

[30] The list does not aim at being exhaustive, rather it has exemplificative value.

[31] Council Regulation (CE) n.139/2004, on the control of concentrations between undertakings, cited *supra*.

[32] SSNDQ is the acronym of '*Small but significant, non-transitory decrease in quality'.*

presents several drawbacks. First, quality is a difficult parameter to measure, therefore identifying a 'small but not insignificant' decrease in quality is problematic in and of itself. Secondly, the qualitative elements of a service are likely to be different for each user, which makes this parameter fairly ambiguous. Thirdly, even assuming that data protection is generally recognized as a qualitative aspect, for the SSNDQ test to be successful, users would have to be able to readily recognize a slight decline in the quality of a service and identify a better competing one[33]. This is unlikely to be the case due to the information asymmetry that characterizes the digital market and the intricacy of the internet's operating mechanisms[34]. Users of online services, in fact, are not normally in a position to fully understand the ways in which their data are collected and elaborated. Finally, additional problems in the application of the SSNDQ test arise from the so-called 'free effect'[35]. According to this effect, by setting the price of a service to zero, operators can persuade consumers to accept conditions that they would not have agreed to otherwise, thereby distorting the rationality of their choices. This effect can be relevant in relation to privacy conditions imposed by providers of core platform services which are offered for free. In this case, the fact that the service is free of charge may lead users to make decisions that are inconsistent with their preference, in particular those concerning the level of data protection[36]. These circumstances make the use of the SSNDQ test particularly challenging.

A second proposal to include considerations on data protection into the analysis of data-driven mergers suggests the use of consultations and surveys. These tools can be employed to determine the value of privacy for consumers. Consultations and surveys are certainly easy to employ and they are familiar tools for the Commission. Their

[33] M.E. STUCKE and A.P. GRUNES, *Big Data and competition policy*, cited *supra*, at p. 120

[34] M.C. WASASTJERNA, *The implications of big data and privacy on competition analysis in merger control and the controversial competition-data protection interface*, cited *supra*, at p. 363.

[35] M.S. GAL and D.L. RUBINFELD, *The hidden costs of free goods: implications for antitrust enforcement*, NYU law & economics working papers, research paper n. 14–44, 2015, at p.9.

[36] F. COSTA-CABRAL and O. LYNKSEY, *Family ties: the intersection between data protection and competition in EU law*, Common market law review, vol. 54, 2017, at p.28.

disadvantage, however, lies in the individual, hypothetical and perspective-based nature of the opinions of the persons involved[37].

A third methodology is based on the numerous studies aiming at identifying the economic value of personal data[38]. In particular, from the value of information, authorities could infer evaluations related to data protection. Among the elements considered as a "basis" to identify the economic value of information[39] there are: the price at which data are exchanged, in markets in which they are sold; the financial results for each data record; the cost of data breaches; and the price consumers would be willing to pay to insure their information. However, this approach appears to be inaccurate, since the elements at the basis of the evaluation only indirectly related to the value of data protection[40].

The fourth solution proposed by the scholarship, involves the use of the procedure provided for by Article 21(4) of Regulation 139/04[41]. The latter allows Member States to take appropriate measures to protect legitimate interests other than those taken into consideration by the Regulation itself. In order to include data protection considerations among the terms and conditions imposed on core platform services operators engaging in data-driven mergers[42], this solution would require the recognition of privacy as a public interest[43]. Such an approach, however, presents the

[37] OECD, *Exploring the economics of personal data: a survey of methodologies for measuring monetary value*, Digital economy papers, 2 April 2013, at p.32.

[38] Among others: R.K. CHELLAPA and R.G. SIN, *Personalization versus privacy: an empirical examination of the online consumer's dilemma*, Information technology and management 6, 2005; D. CVRCEK ET AL., *A study on the value of location privacy*, Proceedings of the 5th ACM workshop on privacy in the electronic society, WPES, 2006; K.L. HUI ET AL., *The value of privacy assurance: an exploratory field experiment*, MIS quarterly, vol. 31, n. 1, 2007.

[39] Ibid., at pp. 18-32. See also: M.C. WASASTJERNA, *The implications of big data and privacy on competition analysis in merger control and the controversial competition-data protection interface*, cited *supra*.

[40] OECD, *Exploring the economics of personal data: a survey of methodologies for measuring monetary value*, cited *supra*.

[41] Council Regulation (CE) n.139/2004, on the control of concentrations between undertakings, cited *supra*.

[42] A. CHIRITA, *Data-driven mergers under EU competition law*, 20 June 2018, in *The future of commercial law: way forward for harmonization*, Hart Publishing, 2019, at pp. 180-182.

[43] According to the third paragraph of Article 21 of Regulation 139/2004, privacy could be submitted by states to the Commission for consideration in order to be recognized as a public interest.

disadvantage of requiring a strong political stance by the member States, which would likely be subject to severe criticisms.

Finally, the last solution consists in including in the analysis of data-driven mergers an evaluation of the possibility for the merged entity to degrade the quality of its service in relation to the level of data protection, without this leading to a loss of market power[44]. Such a degradation of quality would constitute an abusive conduct, therefore, its likelihood should be assessed by antitrust authorities during their analysis[45]. The difficulties of this approach stem from the aprioristic nature of such an assessment.

The inclusion of data protection among the competitive parameters of the services offered in the digital sector appears to be due[46]. In particular, it is imperative that antitrust authorities do not overlook the balance of beneficial effects stemming from data-driven mergers and the possible anticompetitive, negative consequences on the level of data protection offered by the services involved[47].

2.4 Highly personalized core platform services versus users' choice.

In addition to price, quality and innovation, an additional important parameter of competition consists in the possibility for consumers to choose from a wide range of services and/or products. In order to ensure the competitive structure in a given market, antitrust authorities have to assess the effects of mergers on this parameter as well[48].

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[44] F. COSTA-CABRAL and O. LYNKSEY, *Family ties: the intersection between data protection and competition in EU law*, cited *supra*, p. 37; EDPS, *On the coherent enforcement of fundamental rights in the age of big data*, Opinion 8/2016, at p. 15.

[45] Court of Justice, C-12/03 P, *Commission of the European Communities c. Tetra Laval BV*, 15 February 2005, ECLI:EU:C:2005:87, at point 74.

[46] OECD, *Quality consideration in zero-price economy*, Note by the European Union, 28 November 2018, at p. 15.

[47] M.C. WASASTJERNA, *The implications of big data and privacy on competition analysis in merger control and the controversial competition-data protection interface*, cited *supra*, at p. 361.

[48] Council Regulation (CE) n.139/2004, cited *supra*, at 26; European Commission, Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings (2008/C 265/07) (OJ C 031, p. 5–18), 05/02/2004, at p. 8; European Commission, Guidelines on the assessment of non-horizontal mergers under the Council Regulation on the control of concentrations between undertakings (2008/C 265/07) (OJ C 265, p. 6–25), 18/10/2008, at p. 10.

In data-driven mergers the element of users' choice has two dimensions: the choice between alternative core platform services and the choice users exercise within the same single core platform service.

First, in order to discuss users' choice in the digital sector, the strong personalization of core platform services should be discussed. As seen above, these services allow providers to collect a huge variety of information that carries significant economic value. In order to collect more data, core platform services compete to keep users' attention as long as possible, by personalizing the content that is showed to them. The high degree of personalization of online services has unquestionable advantages. In the case of search engines, for example, personalization allows users to view results that are more fitting to their searches. By the same token, personalized social networking services show to each user posts relevant to his/her interests, and so on. This phenomenon, however, presents the disadvantage of depriving users of any control over the content they see and of locking them on a few, large platforms seeking to "monopolize" their attention. The accumulation of data by gatekeepers makes the phenomenon of multi-homing[49] more challenging, it raises barriers to entry, and it favors the strengthening of already dominant undertakings[50]. By their very nature, these effects negatively impact the ability of users to choose between different competing services.

The second dimension of users' choice in the digital market relates to the one they exercise within a single core platform service. Specifically, when using a core platform service, individuals can choose among the contents, ads, and products offered within

Moreover, this parameter has been explicitly evaluated in various decisions adopted by Commission, enforcing Article 102 TFEU, see among others: Court of Justice, C-202/07 P, *France Télécom v. Commission*, 2 April 2009, ECLI:EU:C:2009:214; European Commission, case n. COMP/C-3/37.792 – *Microsoft*, 24/05/2004, confirmed by the General Court, Case T-201/04, *Microsoft Corp. c. Commission of the European Communities*, 17 September 2007, ECLI:EU:T:2007:289; European Commission, case n. COMP/C-3/37.990 – *Intel*, 13/05/2009.

[49] The phenomenon of multi-homing occurs when users are active on multiple core platform services offering the same function. For example, users multi-home when they are active on multiple professional social networks or when they use multiple generic search engines.

[50] Personalization and the subsequent gathering of more data can have the effect of reinforcing network effects, increasing the so-called "switching costs," – i.e., the costs the consumer incurs to switch services - as well as the consumer lock-in effect – which locks the user into the service.

it. Marketplaces provide a great example, as an individual wanting to purchase a given product on a similar platform may normally choose between several different options. However, a high degree of personalization can cause users to be locked into personal "filter bubbles". This is due to the fact that a person browsing a service is mainly and more prominently showed content corresponding to his/her interests, which are determined by algorithms on the basis of data previously collected on that individual. These "bubbles" are extremely difficult to exit[51] and they limit the possibility of choice for users with respect to the contents of a given online service. The digital market is vast, and consumers are often ignorant of what is not explicitly showed to them. Therefore, by not allowing users of a given core platform service to explore the contents that are outside of their own personal "filter bubbles", the phenomenon of personalization is likely to artificially reduce consumers' choice[52] and, consequently, harm their welfare.

In light of these considerations, it can be held that antitrust analysis of data-driven mergers should assess the effects caused by the combination of relevant datasets on the degree of personalization of core platform services and, consequently, on users' width of choice. However, despite the importance of this parameter, the Commission has rarely considered it in the context of merger control.

2.5 Data as a competitive advantage in the case law of the European Commission.

In order to carry out an exhaustive analysis of data-driven mergers, and specifically those involving core platform services, it is necessary to first discuss some of the

[51] V. E. PARISER, *The filter bubble: what the internet is hiding from you*, Penguin, 2012.

[52] A consumer who uses, for example, a marketplace service to research and purchase a smartphone, makes a choice in identifying the specific phone he intends to buy among several options. If this consumer is in his "filter bubble" and he/she is showed mainly, and in a prime positioning, offers for a certain model, he/she will be subject to a limitation of the range of products to choose from. Consumer choice can also be limited as a result of the personalization of advertisements. This is clear in the case, for example, of a female user being advertised razors. In her "filter bubble," the core platform services is likely to show ads for women razors rather than men's, even though the difference between such products consists simply in the colors.

acquisitions that have been decided by the Commission over the last few decades[53]. In the decisions that will be examined, the institution increasingly valued the role and importance of data in the digital sector. In particular, the competitive advantage linked to the possession of large datasets found extensive recognition in relation to the advertising side of core platform services. On the contrary, the effects of data-driven mergers on the qualitative level of the services offered to end users, and in particular on data protection, and of consumers' choice have often been ignored. This trend was briefly interrupted by two cases in which the Commission appeared willing to evaluate the consequences generated by the union of large datasets on end users of core platform services. However, in more recent cases the Commission went back to its previous approach. The present paragraph and the following ones will consider the Commission's decisions on data-driven mergers, starting with the group of cases in which the institution recognized data merely as a competitive advantage. Afterwards, the two decisions in which more attention was paid to data protection as a qualitative aspect of core platform services and to consumers' choice will be discussed. Finally, the Commission's decision on the Google/Fitbit merger, dated December 2020, will be analyzed to assess which approach was followed by the institution in that occasion.

The first group of decisions include the following cases: Google/DoubleClick, TomTom/ TeleAtlas, VodafoneUk/TelefonicaUk/EverythingEverywhere/JV and Apple/Shazam.

As mentioned above, in these decisions the competitive advantage linked to the acquisition of large datasets was largely recognized by the Commission. In Google/DoubleClick[54], the institution found that data trigger network effects and

[53] For the purposes of this analysis, the decisions by the Commission that have been selected are the ones considered to be more representatives of the phenomenon of data-driven mergers. This list is not to be intended as exhaustive, rather it has exemplificative value.

[54] European Commission, case n. COMP/M.4731 – *Google/DoubleClick*, 11/03/2008. This acquisition came to the attention of the Commission upon request made by the same undertakings involved, following the procedure set out by Article 4(5) of R139/2004. The merger involved Google, a well-known company operating in the online advertising market and the provider of the homonymous popular search engine, and DoubleClick, which offered a service to advertisers which allowed them to monitor the performance of their online advertisements.

increase barriers to entry[55]. Moreover, one of the theories of harm that was analyzed related to the possibility that DoubleClick's dataset could increase Google's ability to personalize advertisements and, consequently, to raise the prices of its targeted advertising service[56]. In Tomtom/TeleAtlas[57], the Commission recognized that data were both an indispensable input for navigation map services and a barrier to entry[58]. In the case of VodafoneUk/TelefonicaUk/EverythingEverywhere/JV[59], the institution verified whether the data accumulated by the joint venture would put advertisers in a position of dependence on the targeted advertising services offered by the companies involved[60]. Finally, in the Apple/Shazam[61] decision, the Commission noted that the acquisition would provide the merged entity with some information that amounted to a significant competitive advantage[62]. Nevertheless, in all of these decisions, the Commission always concluded that the accumulation of information would not have caused anticompetitive effects to occur on the market. Specifically, mergers involving advertising services were often approved based on the consideration that other

[55] OECD, *Big data: bringing competition policy to the digital era*, cited *supra*, at pp. 9-12.

[56] *Google/DoubleClick*, cited *supra*, at points 359-366.

[57] European Commission, case n. COMP/M.4854 – *TomTom/Tele Atl*as, 14/05/2008. This merger involved TomTom, a manufacturer of portable navigation systems and the software to use them, and TeleAtlas, supplier of the digital map database necessary to operate the navigation systems, from which TomTom itself obtained its supplies.

[58] Ibid, points 114-125. In order to obtain such data, it is necessary to employ vehicles that travel the roads that one wishes to map. It was not considered likely for new entrants to replace this source with users' feedback. In fact, while users might have incentives to contribute to the improvement of a working navigation map, they would not be as motivated to contribute to the production of a new digital map database or to improve a poor quality one. Consequently, if the merged entity had refused to provide new entrants with digital map databases, entering the market would have become considerably difficult.

[59] European Commission, case n. COMP/M.6314 – *Telefónica UK/Vodafone UK/Everything Everywhere/JV*, 04/09/2012. The companies involved are active in various sectors of the telephony market. Theobjective of the joined venture was to share and analyze users' data collected by each company, in order to achieve a better understanding of consumer behavior and send targeted advertising messages to those individuals who provided the relative consent.

[60] Idib. at points 529-534.

[61] European Commission, case n. M.8788 – *Apple/Shazam*, 16/09/2018. The decision concerned the acquisition of Shazam, a popular music content recognition application, by Apple, a well-known manufacturer of various devices, software applications, as well as the iOS operating system.

[62] Ibid. at 210-220. Specifically, the institution investigated whether such information would provide Apple with the ability to place rivals of Apple Music – Apple's music streaming application - at a competitive disadvantage through the promotion of "targeted" advertisements and targeted marketing campaigns based on Shazam's data.

companies possessed equally vast datasets[63] or that pre-existing contractual constraints to some extent limited the merged entity from using that data[64].

In the decisions under analysis, the assessment of the effects of the mergers on the free side of the market was either entirely absent or incomplete[65]. A brief mention of the consumers' side can only be found in Tomtom/TeleAtlas. In particular, while assessing whether the merged entity could have used the sensitive information on its customers held by TeleAtlas, the Commission compared the lack of protection of confidential data to a degradation of the value of navigation maps. The decision found that the perceived value of the maps provided by TeleAtlas would decrease if consumers feared that their confidential information would be shared with TomTom. On this point, the Commission concluded that the merged entity would still have the incentives to protect such confidential data[66].

In conclusion, in analyzing these data-driven mergers, the Commission mainly considered the "paid" side of the market. Possible anticompetitive effects resulting from the union of datasets on the users' side were ignored, with the exception of a brief passage in the Tomtom/TeleAtlas case, which, however, concerned business customers' data.

2.6 Data protection as a qualitative parameter of competition in the case law of the European Commission.

[63] In *Google/Doubleclick*, cited *supra*, the Commission concluded that the data possessed by the merged entity would not constitute a non-replicable input due, among other things, to the fact that other companies active in this sector already had access to similar information. In Telefónica UK/Vodafone UK/Everything Everywhere/JV, cited *supra*, the Commission found that a dataset suitable for efficient "targeting" was already held by other market operators active in the online advertising market – among which Facebook, Google or Microsoft.

[64] In *Google/DoubleClick*, cited *supra*, at points 359-366, the Commission pointed out that DoubleClick was contractually bound to use the data collected on behalf of each customer solely for the purpose of improving the "targeting" of his/her ads (and not to improve the targeting of other customers).

[65] In *Telefónica UK/Vodafone UK/Everything Everywhere/JV*, cited *supra*, the Commission merely noted that the targeted advertising messages sent by the joint venture would only be received by consumers who had provided their consent.

[66] *TomTom/TeleAtlas*, cited *supra*, at points 272-275.

As already mentioned, only in two cases the Commission recognized data protection as a qualitative aspect of the core platform services involved in data-driven mergers. These include the Facebook/WhatsApp and the Microsoft/LinkedIn decisions. As it will be discussed below, in the former case the institution merely acknowledged privacy-related conditions as a qualitative aspect of a core platform service, whereas in Microsoft/LinkedIn it adopted a more decisive position.

As mentioned above, the object of the first case was the acquisition of WhatsApp by Facebook[67]. Both Facebook and WhatsApp provided core platform services offered for free to end consumers, respectively a social network and a messaging application. Through their services, the undertakings collected large amounts of users' data. However, while WhatsApp did not contain advertisements and was characterized by a higher level of data protection, Facebook employed users' information to improve the targeted advertising service offered on the "paid" side of the platform. This case gave rise numerous comments by several scholars[68]. The considerations raised by this decision in relation to data and their protection are threefold.

Firstly, the decision contains an assessment of the competitive advantage linked to the union of the companies' datasets. In this regard, the European Commission assessed whether the transaction would allow Facebook to use the acquired dataset to improve the quality of its targeted advertising service on its well-known social network. However, the institution observed that a large amount of data – that could be

[67] European Commission, case n. COMP/M.7217 – *Facebook/WhatsApp*, 03/10/2014. This merger dates back to 2014 and involved the acquisition of WhatsApp, a very popular instant messaging application, by the well-known social network Facebook.

[68] See among others: P.G. DE ZÁRATE CATÓN, *The EU Commission unconditionally clears an acquisition in the social media sector (Facebook/WhatsApp)*, Concurrences, 3 October 2014; E. OCELLO, A. SUBOCS and C. SJÖDIN, *The EU Commission unconditionally approves in first phase an acquisition in the digital sector (Facebook / WhatsApp)*, Concurrences, 3 October 2014; L. KIMMEL and J- KESTENBAUM, *What's up with WhatsApp? A transatlantic view on privacy and merger enforcement in digital markets*, Antitrust 29, n. 1, 2014, at pp. 48-55; V. BAGNOLI, *The big data relevant market as a tool for a case by case analysis at the digital economy: could the EU decision at Facebook/WhatsApp merger have been different?,* Ascola Conference 2017 on Competition Law For The Digital Economy; C. CARUGATI, *The 2017 Facebook saga: A competition, consumer and data protection story*, European competition and regulatory law review, vol.2, 2018, at pp.4-10; V. BAGNOLI, *Questions that have arisen since the EU decision on the WhatsApp acquisition by Facebook*, Market and Competition Law Review, vol. 3, n. 1; 2019, pp. 15-51; M. MACCARTHY, *Privacy as a parameter of competition in merger reviews*, Federal Communications Law Journal, vol. 72, issue 1, 2020, pp.1-44.

used to target ads – was still been available to other operators, therefore, even if Facebook were to carry out such a conduct as a result of the acquisition, it would not cause the strengthening of its position in the market for online advertising[69].

Secondly, the Commission dedicated a brief passage of its decision to the issue of data protection. The institution recognized the growing importance of aspects like privacy protection and security for users of instant messaging services such as WhatsApp[70]. However, the decision does not carry on any in-depth examination of this issue, rather it reiterated that privacy concerns do not belong to the field of antitrust law[71].

Thirdly, the effects of the union of Facebook and WhatsApp's datasets on end users have not been considered by the institution[72]. Compared to the social network, the service offered by WhatsApp was characterized by higher level of protection of its users' data. The combination of the information gathered by the two companies, therefore, could have decreased the quality of WhatsApp messaging application in relation to privacy conditions. Nevertheless, the Commission simply pointed out that a user wanting to change instant messaging service, as a result of a degradation of data protection conditions, would not have incurred in relevant monetary costs[73].

In conclusion, the Facebook/WhatsApp decision fell short in relation to the analysis of the users' side of the services involves, which was sorely neglected[74]. Although data protection was recognized as an increasingly important element for

[69] *Facebook/WhatsApp*, cited *supra*, at points 184-189.

[70] Ibid. at points 87 e 174.

[71] Ibid. at points 164.

[72] In this regard, at point 136 of its decision, the Commission merely considered that, if the companies' datasets had been combined, there could have been a strengthening of network effects to Facebook's advantage. The Commission, moreover, considered the combination of the datasets to be unlikely because of the technical difficulties that Facebook claimed the transaction would pose. These assertions later proved to be misleading, leading to the imposition of a large fine on Facebook (see European Commission, press release, *Mergers: Commission fines Facebook €110 million for providing misleading information about WhatsApp takeover*, 18 May 2017).

[73] This consideration does not take into account the fact that in order to make such a switch effectively, a user would have to convince most of his contacts to migrate as well. In addition, the Commission failed to consider the information disparity that characterizes basic platform services, due to which end users may not be able to readily recognize a degradation in the conditions of protection of their data.

[74] M.E. STUCKE and A.P. GRUNES, *Big data and competition policy*, cited *supra*, at p. 81

WhatsApp's users, the Commission maintained a firm division between privacy protection and antitrust enforcement, to the point of not including the former among the qualitative aspects of the service.

The second decision in which the Commission assessed the importance of data protection as a qualitative aspect of core platform services, concerned the Microsoft/LinkedIn merger[75]. This decision presents four interesting passages: firstly, the recognition that data protection can be considered a competitive parameter under certain circumstances; secondly, the analysis of the competitive advantage linked to the union of significant datasets; thirdly, the observations concerning the effects on users' choice of the pre-installation of a service in smart devices; finally, the considerations of the Commission in relation to the phenomenon of multi-homing.

First of all, the decision under examination contains important reflections on the aspect of data protection. Innovating compared to its previous decisions, the institution acknowledged that data protection constitutes an important parameter of competition for a given service to the extent that consumers consider it as such[76]. After rightfully clarifying that issues strictly relating to privacy protection fall outside the scope of antitrust law, the Commission recognized that the level of data protection offered to LinkedIn users represented a relevant competitive parameter of the service and it had to be considered as a component of consumers' welfare[77]. To this date, the Microsoft/LinkedIn decision is the most advanced in relation to the recognition of data protection as a qualitative aspect of core platform services.

The second interesting aspect of this merger concerns the consequences on the advertising market deriving from the acquisition of the LinkedIn's dataset by Microsoft. In this regard, the Commission acknowledged the possibility that the union of datasets would place LinkedIn's competitors in a position of dependence from the

[75] European Commission, case n. M.8124 – *Microsoft/LinkedIn*, 06/12/2016. This concentration involved the acquisition of LinkedIn, a well-known professional social network, by Microsoft, a global company active in the production of numerous products including computers and operating systems.

[76] European Commission, Press release, *Mergers: Commission approves acquisition of LinkedIn by Microsoft, subject to conditions*, 6 December 2016.

[77] *Microsoft/LinkedIn*, cited *supra*, at point 350.

merged entity. Nonetheless, the institution concluded that, even after the merger, a sufficient amount of information would continue to be available in the market for advertising purposes[78].

As for the possible effects of the merger on consumers' choice among different professional social networks – the third interesting aspect of the decision under analysis –, the Commission observed that if the merger were to cause the marginalization of a rival professional social network offering a higher level of data protection, users' choice would be restricted. In particular, if Microsoft were pre-install LinkedIn on the devices running its operating system, users' tendency to "preserve the *status quo*"[79] could grant the social network a substantial competitive advantage[80]. As a matter of fact, the pre-installation of a core platform service is likely to negatively impact the important competitive parameter of consumer choice[81], especially considering users' behavior online.

Finally, the last passage of the decision that deserves further discussion is the one in which the Commission acknowledged the limits of the phenomenon of multi-homing. The institution observed that users tend to give most of their attention and time to a single platform, even when other providers are offering a similar service. Consequently, a provider with sufficient market power might exploit this behavior by pushing users towards its own core platform service, making exiting it a less attractive option[82].

In conclusion, the strategic importance of data on users gathered and analyzed online has always been recognized by the Commission in its case law on data-driven mergers. On the contrary, the effects caused by the union of significant datasets on the

[78] Ibid. at points 179-180.

[79] Ibid., at points 309-310. The "*status quo bias*" of users has the effect of raising the cost of switching services, consequently hindering the entry of new entrants.

[80] *Microsoft/LinkedIn*, cited *supra*, at point 350.

[81] As a result of these considerations, the Commission cleared the merger with conditions. Specifically, Microsoft undertook to continue to provide rival professional social networks with access to certain data necessary for the functionality of their services, see *Microsoft/LinkedIn*, cited *supra*, at point 437.

[82] Ibid. at points 344-345.

"free" side of core platform services have often been ignored. In particular, the change of approach that occurred between the Microsoft/LinkedIn decision of 2016 and the Apple/Shazam decision of 2018 appears confusing and concerning. Only two years after the acknowledgement of privacy as an important competitive parameter of core platform services, the European authority went back to excluding data protection related concerns from the field of competition law. As mentioned above, in the Apple/Shazam case, the anticompetitive effects that were analyzed concerned mainly the market for music streaming applications and were deemed to be unlikely by in light of, among other things, the EU Data Protection Regulation (GDPR)[83]. Indeed, the reliance on the GDPR, which was about to be implemented at the time of the adoption of the Apple/Shazam decision[84], may explain why the Commission reconsidered the inclusion of data protection among the competitive parameters of core platform services. Nonetheless, this reversion appears risky and detrimental for the protection of consumers' welfare.

2.7 Google-Fitbit: one step forward, two steps back.

In light of the analysis led so far, this paragraph will discuss the Commission's recent decision on Google/Fitbit[85]. As it will be discussed, this decision overcomes the typical objection that data is a fungible resource and contains an in-depth analysis of the competitive advantage linked to the collection of information in markets for online advertising and digital health services. However, an assessment of the effects of the merger on parameters such as data protection and users' choice among different core platform services or within a single service still lacks.

[83] Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data (General Data Protection Regulation) (OJ L 119, p. 1-88) 4/05/2016.

[84] The GDPR entered into force in May 2016, however, its implementation occurred two years later, in May 2018.

[85] European Commission, case n. M.9660 – *Google/Fitbit*, 17/12/2020. This decision was adopted by the Commission in December 2020.

The decision of the European Commission concerned the acquisition by Google of the American company Fitbit[86] – a producer of wearable devices, in particular smartwatches, and devices tracking users' physical activity[87]. Fitbit's dataset was a particularly relevant element in this case[88]. The devices it produces, in fact, collect numerous data on consumers, including their position, their state of health and fitness[89]. Four considerations can be made on the decision under analysis: firstly, the analysis of the competitive advantage resulting from the combination of the companies' datasets; secondly, the lack of any consideration on the effects of the acquisition on users' welfare, in particular with regard to the level of data protection offered by the services involved; thirdly, the absence of an assessment on the consequences of the concentration on users' choice; finally, the general phenomenon of data-driven concentrations involving smart devices. These aspects will be discussed below.

First of all, in its decision on the Google/Fitbit case, the Commission dedicated numerous passages to the analysis of the anti-competitive effects – horizontal, vertical and conglomerate – of the merger, linked to the acquisition of Fitbit's dataset by Google. As for the horizontal effects[90], the institution observed that the acquisition of Fitbit's dataset would allow Google to strengthen its position in the market for targeted

[86] European Commission, Press release, *Commission clears acquisition of Fitbit by Google, subject to conditions*, 17 December 2020.

[87] *Google/Fitbit*, cited *supra*, at points 3-4.

[88] in light of the internal documents of the companies involved, the Commission stated that Fitbit's dataset was not the central reason for its acquisition by Google (see *Google/Fitbit*, cited *supra*, at point 488). Nonetheless, Fitbit's dataset and the competitive advantage linked to its acquisition was a focal point in the antitrust analysis concerning the possible anti-competitive effects of the transaction.

[89] Ibid., at points 414-418

[90] Ibid, at point 399 ff. The decision refers to paragraph 36 of the Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings, (OJ C 031, p. 5 - 18) 05/02/2004. This paragraph states that certain concentrations may impede effective competition in the market by providing the merged entity with a degree of control over a particular input, resulting in higher entry and expansion costs.

online advertising[91] and to raise entry and expansion barriers for rivals[92]. Even though EU data protection and privacy laws[93] impose certain restrictions on data combination, they were not deemed to be sufficient to prevent these negative outcomes. With respect to vertical effects, the Commission found that the merged entity could limit the access to the Web API[94] necessary for operators of the digital health sector to use Fitbit's data . Although there are numerous sources of users' health data, the institution observed that Fitbit users' data are only accessible via the relevant Web API[95], hence limiting operators from accessing such information to would put them at a competitive disadvantage[96]. Finally, in relation to conglomerate effects, it was recognized that, by acquiring Fitbit, Google would access commercially sensitive information about its competitors in the market for software applications[97]. However, the Commission concluded that this would not give rise to anti-competitive effects. Therefore, with respect to the competitive advantage linked to Fitbit's dataset, the analysis led by the EU institution appears exhaustive and careful in relation to the numerous markets involved. Moreover, the recognition that the fungibility and abundance of data in a

[91] For the sake of completeness, we point out that the Commission also assessed the potential horizontal effects of the union of the companies' datasets on the market for generic search engines, as well as the market of digital health services. In both cases, the institution considered that Fitbit's data would not cause anti-competitive effects.

[92] *Google/Fitbit*, cited *supra*, at points 454-468. The Commission observed that not even the entry or expansion of competitors, or improvements in the efficiency of Google's service would have offset the anti-competitive effects linked to the union of the two datasets. These effects would include a possible reduction of advertisers' choice in the online advertising market.

[93] In particular, the decision refers to the GDPR, cited *supra*, and Directive No. 2002/58/EC of the European Parliament and of the Council concerning the processing of personal data and the protection of privacy in the electronic communications sector (OJ L 201, p. 37-47) 31.7.2002.

[94] The acronym API refers to a set of rules and specifications that a software program follows in order to access and use the services and resources of another software program or hardware that uses the same API. In practical terms, APIs allow hardware and software programs to communicate with each other.

[95] Google/Fitbit, cited *supra*, at point 520.

[96] In response to the Commission's concerns, Google has committed not to use certain categories of data collected by Fitbit - particularly data related to consumers' health and state of fitness - for Google Ads or other search advertising, display advertising, and ad intermediation services or products. In addition, the gatekeeper has undertaken the commitment not to limit the access to the Web API necessary to use the health and fitness data concerning Fitbit users who have given their consent.

[97] *Google/Fitbit*, cited *supra*, at point 818 ff. Specifically, point 833 refers to consumer lists of third-party vendor applications.

market does not prevent a data-driven merger from harming competition constitutes a step forward compared to previous decisions.

Conversely, the decision seems to take two steps back with respect to both the protection of the data of users of the services involved and their possibility of choice. The first step backwards concerns the lack of analysis of the possible negative effects of the merger on the level of protection of users' data provided by the services. In this regard, some market players[98] observed that competition in the digital market takes place, among other things, on the parameter of data protection[99]. The acquisition of Fitbit would further reduce the pressure on Google to compete on the privacy standards offered to users[100], thereby degrading their welfare. In response, the Commission reiterated that the right to privacy is guaranteed by the GDPR, triggering the criticism of the EU consumer organization (BEUC)[101]. Distancing itself even further from the Microsoft/LinkedIn decision, the Commission held a clear (and widely objectionable) separation between merger control and data protection.

The Commission's second setback concerns the absence of an analysis of the possible negative consequences of the merger in relation to the parameter of users' choice. Fitbit's data, in fact, may be used for a greater customization of Google's ecosystem[102]. As mentioned above, the increasing personalization of core platform

[98] It was noted that it will be more difficult for users to monitor who will use their health data and for what purposes. The Commission responded that the Privacy Regulation (R.679/2016) is a sufficient safeguard to address these issues. See: *Google/Fitbit*, cited *supra*, at note 299; European Commission, press release, Commission clears acquisition of Fitbit by Google, subject to conditions, Dec. 17, 2020.

[99] Privacy International, *Submission to the European Commission regarding the proposed acquisition of Fitbit*, Inc. by Google LLC, page 12.

[100] Google/Fitbit, cited *supra*, at point 452.

[101] n its position paper, the organization noted that Google's use of Fitbit's health and wellness data may expose end users to a qualitative degradation of data protection. This risk, while mitigated, is not averted by Google's commitment not to use certain user data for advertising purposes. See BEUC, position paper, Google-Fitbit Merger Competition concerns and harms to consumers, May 2020, p.5. In addition, following the merger clearance, the head of the European consumer organization (BEUC) remarked that the competitive effects of acquiring a large amount of data should be assessed in their complexity, focusing on how similar mergers can strengthen already dominant digital ecosystems in the market. See BEUC, press release, *Google's Fitbit takeover: EU merger control proves unable to protect consumers in the digital economy*, 17 December 2020.

[102] In fact, Google's restrictive commitments on the use of the Fitbit dataset relate only to advertising services.

services may cause a reduction of the range of content that users see within it. This, in turn, may restrict their choice and hinder their capability of exiting the platform[103].

Finally, the phenomenon of data-driven mergers involving companies producing smart devices deserves a brief, additional consideration. Smart wearable devices reach a deeper informational level compared to computers, tablets or classic smartphones, since they progressively erase the distinction between users' online and offline lives[104]. In this regard, an example is offered by the acquisition of Nest Labs, an American company producing intelligent thermostats and carbon monoxide detectors, by Google. This case was analyzed and authorized by the Federal Trade Commission in 2014[105]. A central motive behind the acquisition was Nest Labs' dataset. Through its products, this company collected information on thermostats' usage habits of its customers. Google's goal was likely to use this data to further personalize its services and advertisements. After all, back in 2013, Google already expected that, in the future, its users would use its services and view its ads on a growing range of devices[106]. The parallelisms with Google/Fitbit are clear: Fitbit's wearable devices allow for an even more pervasive collection of consumer information than Nest Labs' thermostats. These operations clearly show how the boundaries between activities conducted online and offline are thinning, as smart devices and the internet of Things become more common[107].

In conclusion, the Commission's decision on the Google/Fitbit case appears to be flawed, both from the perspective of the absence of a recognition of data protection as

[103] The only observation that indirectly affects the personalization phenomenon is found in the analysis of the horizontal effects of the purchase of the Fitbit dataset. The Commission considered whether the acquisition of this information asset would strengthen Google's position in the market for search engine services, concluding that in this case the most relevant data would relate to the results clicked by users who performed a search rather than the data owned by Fitbit. *Google/Fitbit*, cited *supra*, at points 469-474.

[104] As pointed out by Stucke and Grunes, the internet of Things (or IoT) can be used to better track consumers and extrapolate even more data, in order to better profile them, propose even more personalized advertising, induce them to buy more, even propose personalized prices, see M.E. STUCKE AND A.P. GRUNES, Big data and competition policy, cited *supra*, at p.90.

[105] J. RIBEIRO, *Google's Acquisition of Nest gets US FTC clearance,* PC World, 5 February 2014.

[106] Google Inc., letter to Security and Exchange Commission, 20 December 2013.

[107] M.E. STUCKE AND A.P. GRUNES, *Big data and competition policy*, cited *supra*, at p.90.

a qualitative aspect of the services involved, and in terms of the lack of analysis concerning the effects of an increased level of personalization on end-consumers' choice. This approach is all the more dangerous considering that smart devices reach a particularly deep informative level, of which consumers are not necessarily aware. As the development of the internet of Things advances, data-driven concentrations involving smart products will likely increase. As a result, it will be increasingly more important that antitrust authorities include in their analysis a serious assessment of the consequences of data-driven mergers on aspects like data protection and users' choice. In order to maintain pluralism in the digital sector, competition protection can no longer afford to be defective in analyzing the qualitive aspects of core platform services, including data protection, as well as users' choice.

Conclusive remarks.

The ever growing importance of the digital marketplace for the economy is unquestionable. Online services are often offered to users for free in exchange for their data, which are the founding element of the digital market. The accumulation of data contributes to the centralization of market power in the hands of a few large operators. In this context, the control of data-driven mergers constitutes a crucial tool to preserve competition in the market.

Data-driven mergers may negatively impact the quality of core platform services, by causing a degradation of the levels of data protection offered to users. Moreover, by allowing a drastic increase in the personalization of core platform services, they may affect the competitive parameter of users' choice. Although these aspects are difficult to assess, they are important components of consumers' welfare and should not be ignored in merger control.

As examined above, in evaluating perspective mergers, the Commission always recognized the competitive advantage linked to the combination of large datasets[108].

[108] In 2021, the Commission opened an investigation into the proposed acquisition of Kustomer by Facebook. The main concern of the Commission relates to whether the merger would strengthen

However, the effects of such mergers on users' welfare were mainly ignored. The approach adopted in the more recent Google-Fitbit merger maintained the separation of privacy and competition concerns and did not consider anti-competitive effects on users' choice. This approach appears dangerous, especially in light of the fact that the transaction involved a company active in the market for smart wearable devices. The internet of Things, in fact, allows operators to reach a deeper level of information and to erase the boundaries between consumers' online and offline lives.

In conclusion, the Commission's approach to data-driven mergers is characterized by a lack of analysis of the free side of basic platform services. While considered by users an increasingly important aspect, data protection is regrettably ignored by the EU antitrust authority. By the same token, data-driven merger control often disregards the disadvantages of an ever-growing personalization on end-consumers' choice. Data protection and consumer choice have important implications on competition between core platform services. The absence of considerations on these aspects undermines the very function of merger control, which constitutes a crucial tool to prevent the creation and/or the strengthening of dominant positions based on the union of significant datasets in the market. An exhaustive analysis would, on the contrary, be beneficial for the competitive and pluralistic structure of the digital sector.

Facebook's position in the market for advertising services. According to the press release, the commission observed that as a result of the acquisition, the social network giant could more easily acquire "customer transaction data" and "other event data". It remains to be seen whether the Commission will adopt a decision that will include considerations on data protection levels offered to end-users, as well as on the parameter of choice. See: European Commission, press release, *Mergers: Commission opens in-depth investigation into proposed acquisition of Kustomer by Facebook*, 2 August 2021.

PART 3

3. Abuses of dominance in data collection.

The economic value of users' data, in particular in relation to online services, generated a pervasive collection of information. As it is well known, data on individuals' online activities are used by operators for a variety of purposes. Targeted advertising, personalized intermediation services, recommendations all depend on the sizes and quality of platforms' datasets. It does not come as a surprise, then, that providers aim at collecting as much information as possible in order to create comprehensive profiles on their customers. To comply with data protection legislation, profiling practices have to be centered around the data subject's consent. Data harvesting conducts, however, are not solely relevant to data protection[1]. Misleading privacy related terms imposed by the provider of a service, in fact, can also pertain to consumer protection law. Moreover, when similar practices affect competition, they can be construed as anticompetitive, triggering the enforcement of antitrust law. Given the commonalities of privacy, consumer protection and antitrust policies – the boundaries of which are not always easily defined – there is a consistent risk of overlapping, especially in relation to practices related to data collection.

The present chapter provides an analysis of abuses of dominance related to data collection. In particular, these conducts can be both exclusionary as well as exploitative. Whereas the former category includes the collection of business users' non-public information by the incumbent to gain a competitive advantage in a connected market, the latter involves the imposition to end-users of abusive terms and conditions in relation to the service's privacy policy. These practices raise two main issues: first, due to the unclear boundaries between competition law, privacy and consumer protection it is not always clear which one is the appropriate policy to

[1] See: V.H.S.E. ROBERTSON, *Excessive data collection: privacy considerations and abuse of dominance in the era of big data*, Common market law review, vol. 57, 2020.

enforce, in order to avoid overlapping; second, the categorization of these conducts under article 102 TFEU seems to be controversial.

As discussed in the following paragraphs, we believe that antitrust violations should not be addressed under data and consumer protection legislation, and vice versa. Nonetheless, privacy and consumer protection policies can provide useful benchmarks for competition enforcement. Moreover, we argue that antitrust authorities already have apt theories of harm to tackle abuses of dominance related to data collection.

3.1 Gatekeepers and business users' proprietary data: an introduction.

Gatekeepers are fundamental trading parties for business users which want to operate online. At the same time, acting as intermediaries between end users and providers of products and services, gatekeepers' success depends on their business users[2]. On the one hand, online platforms grant businesses vast possibilities in terms of the range of audience that can be reached[3]. On the other hand, the presence of a high number of business users enriches intermediary platforms, making them more appealing for consumers[4]. This interdependence is particularly manifest in the case of digital marketplaces. Merchants benefit from operating through an online marketplace, due to the possibility of reaching customers that would be precluded to them otherwise. As for online marketplaces, their value is strongly connected to the number of third party sellers offering their products via their service. End users, in fact, will be far more interested in navigating a marketplace where they can find a vast quantity of

[2] J. CRÉMER, Y.A. DE MONTJOYE, H SCHWEITZER, *Competition policy for the digital era*, final report, European Commission, Luxembourg: publications office of the European Union, 2019, at pp. 4 and 49.

[3] The presence of a business user on an online platform is often extremely advantageous in terms of the visibility it may acquire from a geographic perspective. Online platforms in fact reach end users even outside the boundaries of a given country. I. GRAEF, *Differentiated treatment in platform-to-business relations: eu competition law and economic dependence*, Yearbook of European law, vol. 38, n. 1, 2019, at p. 448.

[4] Ibid.

offers[5]. Despite these mutual advantages, providers of core platform services tend to have more bargaining power than their business counterparts, paving the way to the possibility of engaging in unfair practices[6]. Moreover, in light of the strong vertical integration characterizing gatekeepers and large providers – which often compete with third parties operating on their platforms – the incentives to abuse their power increases[7]. A marketplace provider owning a retail business competing with its business users can easily leverage its position to provide a competitive advantage to its subsidiary. The double role of platform operators, in fact, allows them to hinder competition by leveraging their position on the market in order to increase their profit, as well as to raise entry and expansion barriers[8].

A specific data-related conduct, falling into the category of leveraging abuses, involves the collection of non-public data of business users competing with the platform in a downstream market. Specifically, vertically integrated platforms acting as intermediaries between business and end users, may obtain access to non-public economic data of third parties and use them to grant a competitive advantage to their own business[9]. Such behavior may hinder the ability of rivals to effectively compete in the downstream market, while allowing the platform's business to avoid the normal risk of competition. This conduct has gathered the attention of several competition

[5] The same mechanism can be observed in other core platform services as well. As the Australian antitrust authority pointed out in its inquiry into digital platforms, for example, Google and news media businesses have a similar two-way relationship. On the one hand, Google offers news media businesses a channel to reach readers and the more content it can offer to users, the more attractive will the service be. On the other hand, numerous news media businesses rely on Google as a gateway to online audience. Nonetheless, it has been highlighted that news media business rely on Google to such a degree that the latter became an unavoidable trading partner.

See: ACCC, *Digital platforms inquiry*, final report, 2019, at p. 8.

[6] Ibid. See also: I. GRAEF, *Differentiated treatment in platform-to-business relations: EU competition law and economic dependence*, cited *supra*, at p. 449.

[7] Competition law 4.0, *A new competition framework for the digital economy*, Federal Ministry for Economic Affairs and Energy (BMWi), September 2019, at p. 50.

[8] J. CRÉMER, Y.A. DE MONTJOYE, H SCHWEITZER, *Competition policy for the digital era*, cited *supra*, at pp. 6-7. The report specifies that leveraging conducts can be both "offensive" – aiming at increasing profits – as well as "defensive", preventing entrance in adjacent-niche markets. Nonetheless these types of leveraging do not differ from a legal or analytical perspective.

[9] A. ADAMS, *A Monopoly as vast as the Amazon: how Amazon's proprietary data collection is a violation of the treaty on the functioning of the European Union*, American university international law review 36, no. 3, 2021, p. 569.

authorities, among which the European Commission[10], as well as the German antitrust authority ("*Bundeskartellamt*")[11].

In light of the above, the abusive use of third parties' non-public data by dominant online platforms raises concerns in relation to competition in the digital sector. The following paragraphs will further discuss the conduct under analysis. To begin with, the characteristics of the conduct will be outlined (see *infra 3.1.1*). Secondly, the legal frameworks that are applicable to this practice will be discussed (see *infra 3.1.2*). Finally, in light of these considerations, the cases involving Facebook and Amazon, furthered by the European Commission and by the *Bundeskartellamt*, will be examined (see *infra 3.1.3)*.

3.1.1 Leveraging market power through the use of proprietary data.

The abusive collection and use of business users' non-public economic data by online platforms to gain a competitive advantage on downstream markets, recently gained a lot of attention by antitrust authorities[12]. The potential disruptive effects of this practice derive from the importance of data in the digital sector.

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[10] The European Commission recently sent two statements of objections to respectively Amazon and Facebook, see: European Commission, press release, *Antitrust: Commission sends Statement of Objections to Amazon for the use of non-public independent seller data and opens second investigation into its e-commerce business practices*, 10 November 2020; European Commission, press release, *Antitrust: Commission opens investigation into possible anticompetitive conduct of Facebook*, 4 June 2021.

Moreover, it is worth observing that the use of proprietary data of third parties operating on a platform to gain competitive advantage was also been included by the Commission in its proposal for the adoption of the Digital market act, see: 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, Brussels, 15 December 2020, at article 6 letter (a). See also: M. EIFERT ET AL., *Taming the giants: the DMA/DSA package*, Common market law review, vol. 58, 2021, at p. 998; P. MANZINI, *Equità e contendibilità nei mercati digitali: la proposta di Digital Market Act*, post di Aisdue, III (2021), aiusdue.eu., at p. 39.

[11] In 2019, the *Bundeskartellamt* reached an agreement with Amazon in relation to the conditions imposed on third party merchants, including those relating to the product information. See: Bundeskartellamt, press release, *Bundeskartellamt initiates abuse proceeding against Amazon*, 29 November 2018; Bundeskartellamt, press release, *Bundeskartellamt obtains far-reaching improvements in the terms of business for sellers on Amazon's online marketplaces*, 17 July 2019.

[12] See: Autorité de la concurrence and Bundeskartellamt, *Competition law and data*, 10 May 2016, at p. 19; Competition law 4.0, *A new competition framework for the digital economy*, cited *supra*, at p. 50, the report refers in particular to the case in which a platform exploits its role of gatekeeper in relation

To begin with, the abusive use of business users' non-public data falls into the general category of leveraging practices, which aim at exploiting the incumbent's market power in one market, to gain a competitive advantage in an adjacent one. Leveraging practices, which are not new to competition authorities, are particularly significant in the digital market. In this regard, in its proposal for the adoption of the digital market act, the Commission observed that a few large online platforms act as gateways between business and final users[13]. As discussed above, these gatekeepers often enjoy an entrenched position in the market due to the creation of large ecosystems around a core platform service. As a result, they have a double role as controllers of a given market and competitors within it[14]. This circumstance facilitates the adoption of strategies aiming at replicating downstream the dominant position held by a given operator in an upstream market.

Second of all, the abuse under analysis can, theoretically, be broken down into two separate conducts: (a) the collection of sensitive non-public information and (b) the practice of sharing this information with a subsidiary to grant it a competitive advantage. As for the collection of non-public data, online platforms acting as gatekeepers can require business users to surrender their information in order to

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to access to data to gain a competitive advantage; ACCC, *Digital platforms inquiry*, cited *supra*, at p. 532.

As it is well known, Amazon is a popular marketplace offering a digital space where independent vendors can sell their products to end users. Amazon also owns a retail business which competes along with its business users on that same marketplace. As the controller of the marketplace, Amazon allegedly collected third party non-public data and used them to gain a competitive advantage.

[13] In its *Proposal for a Regulation of the European Parliament and of the Council on contestable and fair markets in the digital sector* (Digital markets act), cited *supra*, the European Commission recognized that a few large platforms are acting as online gateways between business users and final users. These dominant undertakings enjoy an entrenched and durable position often due to the creation of conglomerate ecosystems around the main core platform service. The strong tendency of gatekeepers to expand to various and diverse businesses is due, among other things, to the economies of scale and scope that characterize the digital sector. See: P. MANZINI, Equità e contendibilità nei mercati digitali: la proposta di Digital Market Act, cited *supra*, at p. 33-37.

[14] As already observed, see above paragraph 4.1 and ff., in the Google Search (shopping) case, for example, Google offered its search engine to comparison shopping services' websites, while at the same time competing with them through its subsidiary Google Shopping. European Commission, case n. AT.39740 - *Google Search (Shopping)*, 2018/C 9/08, 27 June 2017. See also: J. CRÉMER, Y.A. DE MONTJOYE, H SCHWEITZER, *Competition policy for the digital era*, cited *supra*, at pp. 60-63; P. ALEXIADIS and A. DE STREEL, *Designing and EU intervention standard for digital platforms*, EUI working papers RSCAS 2020/14, 26 February 20, at pp. 6-9.

operate on the service, as well as gather the information generated through their activities[15]. For example, a platform offering an intermediation service to travel agents, will collect data directly provided by these users, as well as the information that is generated through their activities. As for the second phase of the conduct, the use of non-public data to gain an advantage on a downstream market is linked to the element of vertical integration of the intermediary platform[16]. In light of these considerations, the abuse under analysis is relevant to two moments of the data value chain: the collection of information and its use.

A final aspect of the abuse under analysis relates to its effects on the market. Although an undertaking favoring its business is, in general, a legitimate economic strategy, the strong position of gatekeepers in the digital market might cause anticompetitive effects relevant for the application of article 102 TFEU. In particular, this practice falls into the category of exclusionary abuses, since anticompetitive effects will likely affect the rivals of the platforms' subsidiary[17]. Operators, in fact, might be discouraged from entering the market if their profit are unsure due to the risk of being deprived of sensitive information. Moreover, knowing their strategies, services and products could be copied by the incumbents' subsidiary, business users might lose incentives to innovate. Lastly, these exclusionary effects will likely impact the range of choice offered to end users insofar as rivals may be pushed out of the market.

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[15] See: European Commission, press release, *Antitrust: Commission sends Statement of Objections to Amazon for the use of non-public independent seller data and opens second investigation into its e-commerce business practices*, 10 November 2020; European Commission, press release, *Antitrust: Commission opens investigation into possible anticompetitive conduct of Facebook*, 4 June 2021.

See also: Autorité de la concurrence and Bundeskartellamt, *Competition law and data*, cited *supra*, at p. 19; 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), cited *supra*, at point 43 and art 6 lett a).

[16] Ibid. at point 43, the Commission highlights the dual role of gatekeepers as gateways for business users and competitors of the same customers, and the unfair benefits they can derive thereof.

[17] Stigler Committee on Digital Platforms, *Final Report*, Stigler Center for the study of the economy and the State, Chicago Booth, September 2019, at p. 74.

3.1.2 The legal framework applicable to the use of non-public proprietary data.

The potential anticompetitive effects deriving from the use by dominant online platforms of third parties' proprietary data – whether directly provided or generated through online activities – to leverage market power on a downstream market have been mostly recognized[18]. The legal framework applicable to this practice, on the contrary, is less clear. Numerous theories have been put forward in this regard: some scholars interpreted the conduct as a form of imposition of unfair trading conditions[19], prohibited by article 102 TFEU letter (a); others pointed out its discriminatory character[20], which would trigger the enforcement of article 102 TFEU letter (c); moreover, the framework of constructive refusal to deal could be applies to the abuse under analysis; finally, it has been observed that the practice could be interpreted as a form of margin squeeze, not centered around price[21]. Furthermore, this analysis cannot forego the consideration that the abuse under analysis can be broken down into two separate conducts, namely the access to non-public proprietary data of third parties and the subsequent use of the collected information to leverage market power.

To begin with, article 102 TFEU letter (a) prohibits dominant undertakings from directly or indirectly imposing unfair trading conditions to their customers[22]. According to the relevant case law, in order to determine the unfairness of a condition,

[18] Among others, see: V.M.K. REVERDIN, *Abuse of Dominance in Digital Markets: Can Amazon's Collection and Use of Third-Party Sellers' Data Constitute an Abuse of a Dominant Position Under the Legal Standards Developed by the European Courts for Article 102 TFEU?*, Journal of European competition law & practice, vol. 12, issue 3, 2021.

[19] See: Digital Competition Expert Panel, *Unlocking digital competition*, Report, 13 March 2019, at pp. 46-47.

[20] See among others: Autorité de la concurrence and Bundeskartellamt, *Competition law and data*, cited *supra*, at pp. 18-19; A. ADAMS, *A Monopoly as vast as the Amazon: how Amazon's proprietary data collection is a violation of the treaty on the functioning of the European Union*, cited *supra*.

[21] I. GRAEF, *Differentiated treatment in platform-to- business relations: EU competition law and economic dependence*, cited *supra*, at p. 452 and ff; F. BOSTOEN, *Online platforms and vertical integration: the return of margin squeeze?*, Journal of antitrust enforcement, vol. 6, issue 3, at pp. 355-381.

[22] Article 102 TFEU, paragraph 2: "*Such abuse may, in particular, consist in: (a) directly or indirectly imposing unfair purchase or selling prices or other unfair trading conditions*".

a balance of all the commercial interests of the parties involved must occur[23]. In particular, it is necessary to examine whether the practice adopted by the incumbent exceeds what is absolutely necessary to pursue the object of its service[24]. Therefore, in order to assess if the conduct of a platform requiring its business users to surrender their non-public, proprietary data constitutes an unfair trading condition, competition authorities will have to verify whether this practice is absolutely necessary for the incumbent to pursue the object of its service. This analysis will have to consider the interests of the platform, as well as that of third parties operating through it. The framework provided by letter (a) appears to be particularly well-suited to address the phase of the abuse under analysis involving the collection of rivals' data. This conduct, in fact, is carried out through the imposition of pertinent terms of use of the intermediary service: business users are required to accept the condition according to which the platform can access their information and track their activities. According to the relevant caselaw on letter (a) of article 102 TFEU, if these data are not necessary to the service, the condition could be deemed to be unfair and, therefore, abusive.

A second interpretation of the conduct under analysis includes it among discriminatory practices[25]. In that regard, letter (c) of article 102 TFEU prohibits

[23] In C-127/73, *Belgische Radio en Televisie e société belge des auteurs, compositeurs et éditeurs v. SV SABAM e NV Fonior*, 27 March 1974, ECLI:EU:C:1974:25, the EU Court of Justice dealt with a dominant undertaking managing copyrights imposing unfair clauses to authors. At points 8 and ff. of its judgement, in order to determine whether the incumbent was imposing unfair conditions to its members or third parties, the Court stated that all relevant interests had to be considered. In particular, the economic interests of the incumbent in relation to its service and those of the authors. See also: Court of Justice, T-139/98, *Amministrazione Autonoma dei Monopoli di Stato (AAMS) v Commission of the European Communities*, 22 November 2001, ECLI:EU:T:2001:272, at point 79; European Commission, case n. COMP D3/34493 - *DSD*, 21/04/2001, at point 112: The Commission stated that "*unfair commercial terms exist where an undertaking in a dominant position fails to comply with the principle of proportionality*" with reference to the various interests involved.

[24] Court of Justice, C-127/73, *Belgische Radio en Televisie e société belge des auteurs, compositeurs et éditeurs v. SV SABAM e NV Fonior*, cited *supra*, at points 11 and 15; Court of Justice, J.C. C-55 and 57/80, *Musik-Vertrieb membran GmbH and K-tel International v GEMA - Gesellschaft für musikalische Aufführungs- und mechanische Vervielfältigungsrechte*, 20 January 1981, ECLI:EU:C:1981:10, at points 36 and ff.

[25] See, in particular: I. GRAEF, *Differentiated treatment in platform-to- business relations: EU competition law and economic dependence*, cited *supra*; A. ADAMS, *A Monopoly as vast as the Amazon: how Amazon's proprietary data collection is a violation of the Treaty on the Functioning of the European Union*, cited *supra*.

dominant operators from applying different conditions to similar transactions in order to put other trading parties at a competitive disadvantage[26]. According to the relevant case law, the latter provision can be applied to situations in which an undertaking in a dominant position exerts its market power to discriminate among rivals and leverage its dominance[27]. This legal framework could be applied to a dominant platform granting access to non-public data to its own business and not to competitors. In this case the discriminatory treatment concerns the incumbent's subsidiary compared to its rivals. The main criticism that was raised against this interpretation, relates to the qualification of the downstream business of the parent company as *"another trading party"*. According to its wording, in fact, article 102 TFEU letter (c) would apply only to conducts discriminating among rivals and not to self-favoring practices[28]. Although this interpretation is in line with the wording of the provision, the Court of Justice did apply letter (c) to discriminatory conducts that resulted in the favoring of several customers, among which the incumbent's subsidiary[29]. Accordingly, the provision

[26] Article 102 TFEU, paragraph 2: "*Such abuse may, in particular, consist in: (...) (c) applying dissimilar conditions to equivalent transactions with other trading parties, thereby placing them at a competitive disadvantage*".

[27] In the Deutsche Ban case, for instance (See: Court of Justice, C-436/97 P, Order of the Court, Deutsche Bahn AG v Commission of the European Communities, 27 April 1999, ECLI:EU:C:1999:205, at point 10; Court of Justice, T-229/94*, Deutsche Bahn AG v Commission of the European Communities*, 21 October 1997, ECLI:EU:T:1997:155, at point 13; European Commission, case n. IV/33.941 – HOV SVZ/MCN, 23.4.1994, 29 March 1994, at point 34–57), a German rail operator was fined for having applied more favorable railway tariffs on the downside market to certain customers, among which its own subsidiary. Moreover, in its preliminary ruling in the Case C-242/95 (Court of Justice, C-242/95, *GT-Link A/S v De Danske Statsbaner (DSB*), 17 July 1997, ECLI:EU:C:1997:376, at point 35 and ff.), the Court of Justice clarified that an undertaking holding a dominant position exempting from the payment of duties its own ferries, as well as some of its trading partners' ferry services, can constitute an abuse of dominance "*in so far as such exemptions entail the application of dissimilar conditions to equivalent services*", which would be the case "*if it was clear that the total amount of the duties ordinarily payable by those partners for the use of the public undertaking's port facilities for a given period was higher than the amount ordinarily payable by that undertaking for the port services which were supplied to it over the same period in its trading partners' ports*".

[28] See: I. GRAEF, *Differentiated treatment in platform-to- business relations: EU competition law and economic dependence*, cited *supra*, at p. 474. According to the author, the requirement laid down by the provision under analysis might explain why the Commission did not rely on article 102 TFEU (c) in the Google Shopping decision. Article 102 (c) would better apply to the so-called 'pure secondary line differentiation', i.e. when an undertaking discriminates among trading parties operating in a market where it is not active. On the contrary, 'pure primary line differentiation', i.e. conducts consisting in an undertaking that is vertically integrated favors its own subsidiary compared to non-affiliated businesses.

[29] See above note 26 and the case law therein. In cases T-229/94 and C-242/95, cited *supra*, the Court of Justice ruled on the application of letter (c) of article 102 TFEU to dominant undertakings that

under analysis should be considered applicable to the abusive use of non-public data of third parties by a dominant online platform and, more specifically, the above-mentioned second phase of this practice.

Thirdly, the abusive use of third parties' non-public, proprietary data could be interpreted as a form of constructing refusal to deal[30]. Unlike "pure" refusal to deal, constructing refusal does not require an express refusal to supply, nor does it necessitate for the service/product to qualify as indispensable under the conditions laid down by the Court in *Bronner*[31]. On the contrary, constructive refusal to deal might take the form of "*unduly delaying or otherwise degrading the supply of the product or involve the imposition of unreasonable conditions in return for the supply*[32]". In accordance with this definition, the abusive use of business customers' non-public data by an online platform might represent a constructive refusal. In particular, the collection of proprietary information could be construed as a degradation of the service supplied. An intermediary platform granting a higher protection of business users' sensitive data, in fact, would likely be considered qualitatively superior.

Finally, the conduct under analysis could be interpreted as a form of margin squeeze[33]. As it is well known, margin squeeze occurs when a dominant undertaking

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were applying discriminatory conditions in favor of their own subsidiaries, albeit also a few customers. This case law does not seem to rule out the applicability of the provision laid down in letter (c) to cases in which the discriminatory conduct only favored the incumbent's subsidiary.

[30] European Commission, *Guidance on the Commission's enforcement priorities in applying Article 82 of the EC Treaty to abusive exclusionary conduct by dominant undertakings* (OJ C 45, p. 7–20), 24/2/2009, at 79.

See also: V.M.K. REVERDIN, *Abuse of Dominance in Digital Markets: Can Amazon's Collection and Use of Third-Party Sellers' Data Constitute an Abuse of a Dominant Position Under the Legal Standards Developed by the European Courts for Article 102 TFEU?*, cited *supra*, at p. 186 and ff. The author analyzes if the essential facility doctrine could be applied to a similar behavior (referring in particular to Amazon's case, see below para 3.1.3), or whether the reasoning adopted in Microsoft's case would be preferrable. Moreover, the author discusses whether the conduct under analysis could be addressed under the theory of constructive refusal.

[31] Court of Justice, Case C- 7/97, *Oscar Bronner GmbH & Co. KG v. Mediaprint Zeitungs- und Zeitschriftenverlag GmbH & Co. KG and others*, 26 November 1998, ECLI:EU:C:1998:569.

[32] European Commission, *Guidance on the Commission's enforcement priorities in applying Article 82 of the EC Treaty to abusive exclusionary conduct by dominant undertakings,* cited *supra*, at 79.

[33] I. GRAEF, *Differentiated treatment in platform-to- business relations: EU competition law and economic dependence*, cited *supra*, at p. 452 and ff; F. BOSTOEN, *Online platforms and vertical integration: the return of margin squeeze?*, cited *supra*, at pp. 355-381; V.M.K. REVERDIN, *Abuse of Dominance in Digital Markets: Can Amazon's Collection and Use of Third-Party Sellers' Data*

charges a price for its service or product on the upstream market that does not allow an equally efficient competitor to operate profitably in the downstream market, compared to the price charged by the incumbent to end consumers[34]. Margin squeeze is a well-established form of abusive practice and it has been largely enforced in the telecommunication sector[35], seeking to protect and incentivize the entrance of providers in the downstream market. According to the relevant case law, margin squeeze occurs when two conditions are fulfilled: first, the behavior of the incumbent must prevent "as efficient competitors" from surviving in the downstream market long-term (the so-called "as efficient competitor test"); secondly, the creation of (at least potential) anti-competitive effects must be proven. In the case of online platforms, where the price is not necessarily the most important parameter[36], other conditions might become the object of a margin squeeze and allow a platform to outcompete business users[37]. In relation to the use of non-public proprietary data by vertically integrated platforms, antitrust authorities should evaluate whether this strategy makes it impossible for as-efficient business customers to survive long-term on the downstream market[38]. Employing margin squeeze to deal with the abuse under analysis has the advantage of providing a higher legal certainty to undertakings. To assess whether their conduct is abusive, an online platform could evaluate whether it would be able to operate under the conditions imposed on its business users[39].

Constitute an Abuse of a Dominant Position Under the Legal Standards Developed by the European Courts for Article 102 TFEU?, cited *supra*, at p. 192 and ff.

[34] Ibid., at p. 80 and ff.

[35] Court of Justice, T-271/03, *Deutsche Telekom v Commission*, 10 April 2008, ECLI:EU:T:2008:101; Court of Justice, Case C-280/08 P, *Deutsche Telekom v Commission*, 14 October 2010, ECLI:EU:C:2010:603; Court of Justice, C-52/09, *Konkurrensverket v TeliaSonera Sverige AB*, 7 February 2011, ECLI:EU:C:2011:83; Court of Justice, T-336/07, *Telefónica v Commission*, 29 March 2012, ECLI:EU:T:2012:172; Court of Justice, C-295/12 P, *Telefónica v Commission*, 10 July 2014, ECLI:EU:C:2014:2062; European Commission, cases n. COMP/C-1/37.451, *Deutsche Telekom*, 21 May 2003; European Commission, case n. COMP/38.784, *Wanadoo España v Telefónica*, 4 July 2007.

[36] In margin squeeze involving price, what is relevant is the margin between the cost of the service provided upstream and the price of the incumbent's product downstream.

[37] I. GRAEF, *Differentiated treatment in platform-to-business relations: EU competition law and economic dependence*, cited *supra*, at pp. 477-478.

[38] F. BOSTOEN, *Online platforms and vertical integration: the return of margin squeeze?*, cited *supra*, at p. 377 and ff.

[39] Ibid.

Moreover, applying margin squeeze would provide the Commission with a well-established tool to evaluate undertakings' conducts on the market. Finally, this legal framework appears to be suitable to address the conduct under analysis in its entirety, since business users would be prevented from profitably operate in the downstream market long-term not simply because they surrendered their non-public information to the platform, but because such information is used to outcompete them.

In conclusion, several legal frameworks would be suitable to address the conduct of the use of non-public proprietary data. Such abuse could be interpreted as an imposition of an unfair trading condition followed by a discriminatory use of information, as well as a constructive refusal to deal or a margin squeeze not centered around price. The first two theories would allow for the unpacking of the practice, which steps might be considered by antitrust authorities as independent abuses, provided the respective conditions are met. Constructing refusal and margin squeeze, on the other hand could be applied to the entirety of the conduct, as the condition imposed to users to provide the platform with proprietary data and the use of such information to outcompete them, would constitute either a degradation of the service or the a form of margin squeeze.

3.1.3 A tale of two platforms: Amazon and Facebook's use of business users' data.

As mentioned above, the use of business customers' non-public data by online platforms was the object of several investigations carried out by European competition authorities. In particular, in 2018 the *Bundeskartellamt* initiated a procedure against Amazon for the infringement of article 102 TFEU, in relation to the conditions imposed by the platforms on its sellers in the German market[40]. Among the conducts investigated by the German authority, there were the terms and conditions regarding

[40] J. FURMAN, *Unlocking digital competition: report of the digital competition expert panel*, Digital competition expert panel, March 2019, at p. 48.

the platform's ability to use informational material on sellers' products[41]. Moreover, a statement of objections was sent in 2020 to Amazon by the European Commission in relation to the platform's use of non-public data of its independent sellers[42]. Finally, in 2021 the EU institution opened an investigation on Facebook's use of advertisers' data to compete with them in markets where the platform is active, in particular the one of classified ads[43]. In light of the analysis carried out so far, the present paragraph will further discuss Amazon and Facebook's conducts.

To begin with, both the *Bundeskartellamt* and the European Commission, albeit to different extents, investigated Amazon's practice in relation to sellers' data[44]. In a nutshell, Amazon allegedly abused its dominant position as a marketplace to grant a competitive advantage to its retail business, by gathering and relying on sellers' non-public data to determine its business strategy[45]. The information that was collected by the marketplace included the number of ordered and shipped products, revenues, visits to different offers, shipping, past performances and other consumer claims on sellers' products. According to the European Commission, Amazon holds a dual role as a marketplace, where sellers may offer their products to consumers, and as a retailer

[41] Bundeskartellamt, press release, *Bundeskartellamt initiates abuse proceeding against Amazon*, 29 November 2018.

[42] European Commission, press release, *Antitrust: Commission sends Statement of Objections to Amazon for the use of non-public independent seller data and opens second investigation into its e-commerce business practices*, 10 November 2020.

On the topic of e-commerce and antitrust see also: European Commission, *Report from the Commission to the Council and the European Parliament*, Final report on the *E-commerce Sector Inquiry*, Brussels, COM(2017) 229 final, 10 May 2017; L.M. KHAN, Amazon's antitrust paradox, The Yale law journal, vol. 216, 2017, pp.711-805; C. FRATEA, Electronic commerce and the fashion industry: new challenges for competition law coming from the digital single market, UNIO EU law journal, vol. 5, no. 2, 2019, pp. 15-33; A. ADAMS, *A Monopoly as vast as the Amazon: how Amazon's proprietary data collection is a violation of the treaty on the functioning of the European union*, cited *supra.*

[43] European Commission, press release, *Antitrust: Commission opens investigation into possible anticompetitive conduct of Facebook*, 4 June 2021.

[44] While the *Bundeskartellamt* has closed its investigation following the offering by Amazon of a series of commitments, the European Commission has recently sent Amazon a Statement of Objections.

[45] Bundeskartellamt, press release, *Bundeskartellamt initiates abuse proceeding against Amazon*, 29 November 2018. See also: L. KHAN, *Amazon's antitrust paradox*, cited *supra*, at p. 780 and ff.; A. ADAMS, *A Monopoly as vast as the Amazon: how Amazon's proprietary data collection is a violation of the treaty on the functioning of the European Union*, cited *supra*, at p. 569 and ff.; M. GASSLER, *The Austro-German proceedings against Amazon and its online marketplace*, Journal of European competition law & practice, 2019, vol. 10, n. 9.

operating on its own platform[46]. As a marketplace, Amazon became an unavoidable trading partner for numerous sellers wishing to reach consumers over the internet[47]. Given its position, the platform can amass large quantities of non-public data of independent retailers, which are then aggregated and used by the marketplace's subsidiary to adopt strategic decisions[48]. As a result, Amazon's retail business was allegedly able to avoid the normal risk of competition and gain market power[49] to the detriment of competitors, i.e. independent sellers[50]. Given these premises, the conduct could fall into the four legal frameworks mentioned above[51].

[46] European Commission, press release, *Antitrust: Commission sends Statement of Objections to Amazon for the use of non-public independent seller data and opens second investigation into its e-commerce business practices*, 10 November 2020.

[47] N. DUNNE, *Fairness and the challenge of making markets work better*, Modern law review, vol. 84, issue 2, 2021, at p. 251; J. FURMAN, *Unlocking digital competition: report of the digital competition expert panel*, cited *supra*, at p. 30 and ff; L. KHAN*, Amazon's antitrust paradox*, cited *supra*, at p. 781.

[48] V.M.K. REVERDIN, *Abuse of Dominance in Digital Markets: Can Amazon's Collection and Use of Third-Party Sellers' Data Constitute an Abuse of a Dominant Position Under the Legal Standards Developed by the European Courts for Article 102 TFEU?*, cited *supra*, at p. 185 the author explains that, over time, Amazon collects enough data on third party sellers to evaluate whether it is advantageous to invest in the items sold by them. Subsequently, the marketplace might start offering the main item sold by third party sellers at a lower price and with a better positioning on its site, thereby damaging the visibility of its competitors. As a consequence of this strategy, third party sellers might face consistent losses or, in the worst case scenario, be forced out of the market.

[49] For instance, by analyzing independent sellers' data, Amazon can focus its offers on the best performing products and exclude its competitors. See: L. KHAN, *Amazon's antitrust paradox*, cited *supra*, at p. 780 and ff.

[50] European Commission, press release, *Antitrust: Commission sends Statement of Objections to Amazon for the use of non-public independent seller data and opens second investigation into its e-commerce business practices*, 10 November 2020.

[51] On the one hand, if the marketplace's conduct were to be considered as an imposition of unfair trading conditions, the Commission would have to assess whether the amassing of sellers' data is absolutely necessary in order for Amazon to pursue the object of its service. On the other hand, if the practice under analysis were to be categorized as a discriminatory abuse, in the meaning of article 102 TFEU letter (a), the main obstacle to overcome would be to justify considering the undertaking's subsidiary as 'another trading party'. As mentioned above, these frameworks are apt to cover part of the abuse under analysis: in particular, the first and third solution would easily apply to the conduct of imposing to allow access to sellers' non-public information by the platform, in return for the use of the marketplace; the application of article 102 TFEU (a), instead, appears suitable to address the practice of providing access to aggregated proprietary data only to Amazon's subsidiary and not to other sellers operating on the platform. Nonetheless, the Commission could categorize the conduct of the platform as a constructive refusal to deal, interpreting the collection and use of proprietary data as a degradation or an unfair condition attached to the supply of Amazon's service. The conduct under analysis could also be considered as a form of margin squeeze. As already mentioned, margin squeeze has traditionally been centered around the parameter of price, but in the digital market it could be employed through the imposition of other conditions. If this interpretation were to be adopted, antitrust authorities would have to apply the as-efficient-competitor test and demonstrate the anticompetitive effects (even just potential)

A second platform that is under investigation by the European Commission for the use of business consumers' data, is the social network giant Facebook. The Commission is assessing whether the platform infringed article 102 TFEU by using data collected from advertisers to outcompete them in markets in which Facebook operates as an advertiser itself, especially in the sector of online classified ads[52]. Like in Amazon's case, Facebook holds a double role as a social network and a provider of an online classified ads service, namely Facebook Marketplace[53]. The authority is investigating whether the online platform holds a dominant position in the markets of social networks and/or online advertising. In particular the Commission will have to verify if Facebook's position allowed it to hinder competition in the advertising market. If that were to be assessed, the gatekeeper could have infringed article 102 TFEU by using data collected from providers of online classified ads operating on Facebook to gain a competitive advantage. Similar to Amazon's case, the legal frameworks applicable to this practice are several and, based on the choice of the Commission, different conditions will have to be met in order to find an abuse[54].

3.2 Combining end users' data: an introduction.

created on the market. The application of margin squeeze's theory of harm would provide legal certainty to undertakings who would be able to independently determine the legality of their practices and it appears suitable to address the conduct under analysis in its entirety. Finally, the Commission could decide to replicate the line of action adopted in the Google Shopping case and consider the practice as an independent abuse falling into the general category of leveraging conducts. In the latter case, Amazon's conduct could be characterized by the competitive importance of data for sellers and the effects of the use of such information by Amazon to outcompete them.

[52] European Commission, press release, *Antitrust: Commission opens investigation into possible anticompetitive conduct of Facebook*, 4 June 2021.

[53] On which users are able to buy and sell goods from each other.

[54] Although competition law and the Court's case law provide a variety of well-established legal frameworks that could be applied to these cases, article 102 TFEU paragraph 1 grants antitrust authorities the possibility to identify "new" forms of abuse of dominance. As it will be discussed below (see below paragraph 4.2.1 and ff.), this was the choice that the Commission opted for in the *Google Search (Shopping)* case, and it might be adopted in these cases as well. Nonetheless, in order to protect the principle of legal certainty, the application of a pertinent, well-established framework appears to be preferrable.

Online platforms do not only collect information from business users, they also gather massive amounts of data from end users. As it is well known, most platforms provide their services to consumers without asking them to pay a monetary price. Nonetheless, in order to navigate digital services, users accept surrender their data, which are gathered and analyzed for the purpose of monetizing them. The massive collection of users' information is responsible for the improvement and personalization of online services. Personalized services present several advantages for both business users, which will likely benefit from a deeper understanding of end consumers' preferences, and end users, who will enjoy a service more in line with their interests. Considering a search engine, for example, a larger dataset and a better profiling of individuals will lead to a more accurate selection of results in relation to each user's query. Nonetheless, a massive data collection can also be problematic for the competitive structure of the market[55], to the point of becoming abusive under competition law.

The anticompetitive outcomes of online platforms' massive data collection emerged in 2019, when the German antitrust authority (the "*Bundeskartellamt*") prohibited Facebook from forcing users to allow the platform to collect data resulting from their activities on third party websites[56]. The *Bundeskartellamt* considered the platforms' conduct to be an abuse of dominance, rather than a privacy violation. As a matter of fact, due to its dominant position on the relevant market, Facebook put users in a "take it or leave it" situation which made their consent to the platform's terms "not effective"[57]. In 2020, however, the Federal Court of Justice (the "*Bundesgerichtshof*") observed that the core of the conduct consisted in the fact that users were deprived of any choice in relation to the terms of the service[58]. This case started a debate on the

[55] See above Part 1.

[56] Bundeskartellamt, *press release*, *Facebook*, *Exploitative business terms pursuant to Section 19(1) GWB for inadequate data processing,* 15 February 2019.

[57] Ibid.

[58] *Bundesgerichtshof bestätigt vorläufig den Vorwurf der missbräuchlichen Ausnutzung einer marktbeherrschenden Stellung durch Facebook*, pressemitteilungen, nr. 080/2020, 23 juni 2020.

possibility of qualifying certain practices pertaining to data collection and combination, as abuses of dominance under competition law.

The following paragraphs will explore exploitative abuses of dominance in data collection. We will discuss the scope of application of data protection and competition law, as well as their intersections (see *infra* 3.2.1). After establishing the extent to which users' privacy can be relevant for antitrust enforcement, we will analyze which legal framework is better suited to address abuses in data collection and combination (see *infra* 3.2.2). Finally, the different approaches adopted by the German and Italian antitrust authorities in the cases involving Facebook and WhatsApp will be discussed, with specific focus on the scope of application of consumer protection and antitrust law (see *infra* 3.2.3).

3.2.1 Excessive data collection through data combination and third party tracking: a matter of privacy or competition?

As mentioned above, data collection is strictly related to the quality of core platform services, insofar as personalization leads to a better experience for users[59]. Nonetheless, a high level of data protection is often considered to be a qualitative element of online services as well[60]. Therefore, data protection concerns may emerge in antitrust cases. However, exploitative practices linked to data collection are also relevant for the purposes of privacy protection as well. As a result, a debate emerged on the limits beyond which illicit practices concerning data collection can be construed as abuses of dominance or privacy violations. As it will be observed below, in fact, excessive data collection and data combining practices may be relevant under both the GDPR and article 102 TFEU.

[59] AGCM, AGCOM e Garante per la protezione dei dati personali, *Indagine conoscitiva sui big data*, 10 febbraio 2020, at p. 91.

[60] See above paragraph 2.3. See also, among others: F. COSTA-CABRAL and O. LYNKSEY, *Family ties: the intersection between data protection and competition in EU law*, Common market law review, vol. 54, 2017, at p. 20; OECD, *Quality consideration in zero-price economy*, note by the European Union, 28 November 2018, at p. 15 and ff.; AGCM, AGCOM e Garante per la protezione dei dati personali, *Indagine conoscitiva sui big data*, cited *supra*, at p. 91.

To begin with, online platforms can collect users' information from several sources, first of all by observing their activities on core platform services. For example, Google collects information on its users when they are navigating Google search, launching queries, browsing results, etc. Moreover, providers having built an ecosystem, can combine the data gathered on users on a given service with those collected on other services, in order to create more exhaustive profiles. For instance, besides its search engine, Google can collect users' information throughout all the services of its digital environment, among which its electronic emailing service ("Gmail"), its comparison shopping service ("Google Shopping"), its video sharing platform ("YouTube"), and so on. A third way in which providers of core platform services can gather data on individuals is by tracking them on third party websites or applications. The collection of data generated on or volunteered to services outside a provider's ecosystem is generally accomplished by means of so-called "trackers"[61]. Data combining and third party tracking have strong implications on the acquisition and maintenance of market power in data-driven markets. These practices, in fact, allow providers to improve targeting and personalization – by granting a deeper knowledge on users' interests, political orientation, medical information, and so on[62] –, as well as to trigger network effects and raise entry barriers. In light of the above, it appears clear that requiring users to agree to practices of data combination and third party tracking has heavy implications on the competitive structure of the market as

[61] The term tracker is used to indicate the technological tool used by websites to harvest personal data from several first-party sources across the internet and through various devices.

On this topic see, among others: V.H.S.E. ROBERTSON, *Excessive data collection: privacy considerations and abuse of dominance in the era of big data*, cited *supra*, at pp. 162-163. In her article, the author observed that only a few large platforms are able to deploy a pervasive tracking of users' activity on different apps and websites. According to R. BINNS ET AL., *Third party tracking in the mobile ecosystem*, ACM WebSci'18, 2018, at p. 27, Google is currently the largest tracker on applications, followed by Microsoft, Facebook and Twitter. As for the practice of tracking on third parties websites, according to J. PURRA and N. CARLSSON, *Third-party tracking on the web: a Swedish perspective*, Conference paper, 2016, IEEE, at p. 31, the main provider is Google, followed by Facebook and Twitter.

[62] V.H.S.E. ROBERTSON, *Excessive data collection: privacy considerations and abuse of dominance in the era of big data*, cited *supra*, at p. 164.

well as on their privacy[63]. Individuals' consent to the collection of personal data, in fact, is regulated by the GDPR[64]. Against this background, it is debated whether excessive data collection and combination should be addressed under privacy or competition policy[65].

Competition law and data protection are both concerned with the protection of individuals' welfare and the power asymmetry that characterizes the relationship between undertakings and consumers[66]. Nonetheless, their scope of application differs greatly[67]. As it is well-known, while the goals of competition law relate to the maintenance of the competitive structure of the internal market and the protection of consumers' welfare, data protection law regulates individuals' right to privacy[68]. This does not, however, imply that privacy matters cannot be considered in antitrust cases. Users, in fact, often see higher levels of data protection as a qualitative feature of

[63] On the interaction between privacy and competition law see, among others: S. YAKOVLEVA ET AL., *Kaleidoscopic data-related enforcement in the digital age*, Common market law review, vol. 57, 2020, at pp. 1461–1494.

[64] Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data (General Data Protection Regulation) (OJ L 119, pag. 1-88), 4/05/2016, at article 6 and ff.

[65] On the debate over the intersection between privacy policy and competition policy see, among others: European data protection supervisor (EDPS), Opinion 8/2016, *On the coherent enforcement of fundamental rights in the age of big data*, 23 September 2016; COSTA-CABRAL and O. LYNKSEY, *Family ties: the intersection between data protection and competition in EU law*, cited *supra*; J. CRÉMER, Y.A. DE MONTJOYE, H Schweitzer, *Competition policy for the digital era*, cited *supra*, at pp. 73 and ff.; K. KEMP, *Concealed data practices and competition law: why privacy matters*, European competition journal vol. 16, issue 2-3, 2020; AGCM, AGCOM e Garante per la protezione dei dati personali, *Indagine conoscitiva sui big data*, cited *supra*, at p. 83 and ff. See also M. BOTTA and K. WIEDEMANN, *Eu competition law enforcement vis-à-vis exploitative conducts in the data economy exploring the terra incognita*, Max Plank Institute for Innovation and Competition research paper series, paper n. 18-08, 2018, at 37 and ff. The authors also discuss whether the conduct of data combination and third-party tracking should be pursued under competition policy or consumer protection policy.

[66] COSTA-CABRAL and O. LYNKSEY, *Family ties: the intersection between data protection and competition in EU law*, cited *supra*, at p. 14, the authors define these commonalities as "family ties" among these policies and consumers' protection.

[67] Ibid.; M. BOTTA and K. WIEDEMANN, *Eu competition law enforcement vis-à-vis exploitative conducts in the data economy exploring the terra incognita*, cited *supra*, at p. 37.

[68] Ibid. See also the Charter of Fundamental Rights of the European Union, (OJ C 326, 26.10.2012, p. 391–407), 26.10.2012, article 8: "*Protection of personal data: 1. Everyone has the right to the protection of personal data concerning him or her. 2. Such data must be processed fairly for specified purposes and on the basis of the consent of the person concerned or some other legitimate basis laid down by law. Everyone has the right of access to data which has been collected concerning him or her, and the right to have it rectified. 3. Compliance with these rules shall be subject to control by an independent authority*.".

online services and exercise a choice in deciding among the different options in terms of platforms' privacy policy and profiling practices[69]. In this respect, data protection can provide a useful normative benchmark for the enforcement of competition law. In other words, infringements of or degradations to users' privacy can be regarded as indicators for consumers' exploitation or competition violations[70]. Furthermore, data protection law exercises an external constraint to competition law due to the nature of privacy as a fundamental right. Accordingly, privacy can limit, for example, the content of commitments submitted by undertakings or the investigations led by the Commission[71]. In light of these considerations, a line between the scope of application of data protection law and competition law can be drawn. On the one hand, conducts that are solely related to data protection, for instance cases in which the data subject's consent is invalid, should not – and do not – fall within the scope of antitrust enforcement. On the other hand, abuses which impact users' privacy as a non-price competitive parameter of online services – such as quality, choice and innovation –

[69] The counterargument to the importance of privacy as a qualitative parameter of online services based on the circumstance that most users consent to a heavy collection and analysis of their information in order to use such services cannot be entirely accepted. As pointed out in, among others, S. GAL and D.L. RUBINFELD, *The hidden costs of free goods: implications for antitrust enforcement*, NYU law & economics working papers, research paper n. 14–44, 2015, at p. 9, setting the price of online services to zero can induce users to agree to conditions – such as the privacy conditions imposed by online platforms – that they would not have accepted otherwise. As a result, the rationality of their choices appears distorted. See *above* paragraph 2.6 for an analysis of the approach of the Commission to the importance of privacy as a qualitative parameter of competition in merger control.

[70] COSTA-CABRAL and O. LYNKSEY, *Family ties: the intersection between data protection and competition in EU law*, cited *supra*, at p. 14. As pointed out by the authors, the use of privacy law as a guidance in relation to non- price parameters of competition would not expand the notion of consumer welfare to include concerns outside the scope of application of antitrust law. On the contrary, this use of privacy policy would fit into the nature of competition law enforcement. However, as it was highlighted by V.H.S.E. ROBERTSON in *Excessive data collection: privacy considerations and abuse of dominance in the era of big data*, cited *supra*, at p. 167, the use of privacy as a non-price parameter of competition does not imply that a breach of privacy legislation is necessary in order to find anticompetitive conducts.

[71] COSTA-CABRAL and O. LYNKSEY, *Family ties: the intersection between data protection and competition in EU law*, cited *supra*, at p. 15. In relation to the limits posed to antitrust investigations, and in particular dawn raids, by undertakings' rights, see: G. DI FEDERICO, *Deutsche Bahn: what the Commission can and cannot do in dawn raids*, Journal of European competition law & practice, 5, 2013, at p. 29; G. DI FEDERICO, *The appeal judgement in deutsche bahn ag (C-583/13P): some reflections on the standard of the protection of the rights of defense in antitrust proceedings*, Eurojus, 23/06/2015.

should be addressed under competition law, regardless of whether privacy legislation has been breached.

In conclusion, given the importance of users' information for core platform services[72], the competitive implications of data combination and third party tracking cannot be overstated. While improving the accuracy of personalization, their impact on network effects and entry barriers can foster the accumulation of market power. Hence, these conducts, albeit possibly relevant under privacy legislation, can have significant anticompetitive effects and should be addressed under competition policy.

3.2.2 A controversial theory of harm.

A second issue emerging in relation to practices of data combining and third party tracking – when they constitute an abuse by hindering competition in the internal market – relates to the identification of the appropriate legal framework to address them. On the one hand, requiring users to accept the incumbent collecting and combining their data from different sources – besides the single service – could be construed as a form of "excessive price", provided users' data can be considered as a form of payment for an otherwise "free" online service. On the other hand, the practices under analysis could be interpreted as an unfair trading conditions, insofar as it requires users to provide an unreasonable amount of information. The present paragraph will explore these legal frameworks and their applicability to data combination and third party tracking.

Before exploring the possible configuration of the conduct under analysis, it appears necessary to reflect on the nature of this abuse. Unlike the case discussed above (i.e. the abusive collection of data from business users to outcompete them in downstream markets), which evidently has an exclusionary intent as it directly harms competitors, the abusive practice of third party tracking and data combining directed

[72] See *above* Part 1.

at end users of core platform services falls into the category of exploitative abuses[73]. As it is well known, the latter includes those abuses that harm consumers directly, such as excessive pricing, unfair contractual terms, etcetera[74]. The conduct under analysis aims at putting users in the situation of not being able to refuse gatekeepers' terms if they want to use their service (situation referred to as "take it or leave it"), and exploit them by collecting large amounts of personal data.

Among exploitative abuses, a first legal framework that could be applied to the conduct under analysis is excessive pricing[75]. Online services do not normally require end users to pay a monetary price. On the contrary navigation for them is offered for free in exchange for their personal information, which are analyzed and monetized in several ways. In light of this mechanism, users' data have occasionally been referred to as a form of counter-performance for these "free" services[76]. Based on this line of reasoning, the practice consisting in requiring users to accept to be tracked outside the service, could be considered as an "updated" version of the traditional abuse of excessive pricing[77]. The latter entails a dominant undertaking requiring an unreasonable price for a product, compared to its economic value[78]. According to the Court of Justice, the "excessive" character of a price can be determined through at

[73] V.H.S.E. ROBERTSON, *Excessive data collection: privacy considerations and abuse of dominance in the era of big data*, cited *supra*, at pp. 172 and ff.

[74] As noticed by various scholars (among which I. GRAEF, *Consumer sovereignty and competition law: from personalization to diversity,* Common market law review, vol. 58, 2021, at p. 480) the category of exploitative abuses has been addressed less frequently, having competition authorities concentrated on exclusionary abuses (see: European Commission, *Guidance on the Commission's enforcement priorities in applying Article 82 of the EC Treaty to abusive exclusionary conduct by dominant undertakings,* (OJ C 45, p. 7–20), 24/2/2009 which gives priority to exclusionary conducts). However, as observed by V.H.S.E. Robertson (in *Excessive data collection: privacy considerations and abuse of dominance in the era of big data*, cited *supra*, at p. 172) exploitative conducts have recently regained attention, especially in the pharmaceutical market (ibid., at note 72) and might experience a comeback in the digital market in relation to third party tracking.

[75] Article 102 TFEU, paragraph 2: "*Such abuse may, in particular, consist in: (...) (a) directly or indirectly imposing unfair purchase or selling prices or other unfair trading conditions".*

[76] See A. EZRACHI AND V.H.S.E. ROBERTSON, *Competition, market power and third-party tracking*, World competition, vol. 42, n. 1, 2019, at p. 14 at footnote 49. See also: M. BOTTA and K. WIEDEMANN, *Eu competition law enforcement vis-à-vis exploitative conducts in the data economy exploring the terra incognita*, cited *supra*, at 44.

[77] Ibid.

[78] Court of Justice, c-27/76, *United Brands Company and United Brands Continentaal BV v. Commission*, 14 February 1978, ECLI:EU:C:1978:22, at point 250.

least two methods: (a) by analyzing its cost structure to verify whether the profit margin is excessive[79] and (b) by comparing the prices practiced in different Member States[80]. If the latter method is employed, the price difference has to be significant and persistent to be construed as unfair[81]. The main problems arising in relation to the application of the case law on excessive pricing to data combining and third party tracking are twofold: first of all, the case law on excessive pricing is centered around monetary prices, therefore the relevant tests would have to be adapted to be applied to users' data; second of all, in light of their differences, the comparison of users' information to a price proves to be problematic. As for the first issue, there are two possible ways around the absence of a monetary price for online services. A first solution involves the approximation of the monetary value of data. As discussed above[82], several methodologies have been put forward to assess the economic value of users' data[83]. This operation would allow for the application of traditional tests to assess excessive pricing. A second solution to verify the "excessive" character of an incumbent's data collection could be to rethink the comparison test. Specifically, antitrust authorities could compare the different privacy policies applied by similar services in different member States, in order to verify whether an undertaking imposes on its users a persistent and significantly more pervasive tracking[84]. As for the second

[79] Ibid., at 251-252. At first, the Court of Justice had ruled out the possibility of assessing the excessive character of the price practiced by the incumbent with other methods than the cost-profit test, without considering the complexity of such analysis for antitrust authorities which would need to approximate the costs of production.

[80] Court of Justice, C-177/16, *Autortiesību un komunicēšanās konsultāciju aģentūra/Latvijas Autoru apvienība v Konkurences padome*, 14 September 2017, ECLI:EU:C:2017:689, at point 37 and ff. A similar comparison should take into account appropriate and verifiable criteria, among which "*consumption habits and other economic and sociocultural factors, such as gross domestic product per capita and cultural and historical heritage*" (ibid at point 42). In its ruling, the Court of Justice also clarified that there is no 'minimum threshold' that a given price has to exceed to be considered excessive. Rather, in order to be considered unfair a price has to be appreciably higher than it would be under normal market conditions (ibid at point 55).

[81] Ibid. at point 55.

[82] See above paragraph 2.3.

[83] These methodologies, however, would have to overcome the subjectivity of users' privacy preferences as well as the behavioral implications of the so-called "free-effect".

[84] V.H.S.E. ROBERTSON, *Excessive data collection: privacy considerations and abuse of dominance in the era of big data*, cited *supra*, at p. 177, discusses whether it would be possible for a data collection practice to be excessive in itself. According to the author, a similar option could be

issue, the interpretation of users' information as a counter-performance for the use of core platform services runs the risk of ignoring the (non-monetary) aspects connected to users' information, in particular individuals' right to privacy[85]. This right is protected by the European Charter of Fundamental Rights[86], and its importance could be overlooked if personal data were to be simply reduced to their economic value. Moreover, it has been observed that users are not necessarily aware of the amount of data they surrender. Websites' privacy policies, in fact, are vastly more complex than a monetary price[87]. Finally, although users undoubtedly provide their information to online platforms, they also provide their attention. Online platforms offering services of targeted advertising, for instance, sell users' attention to publishers. Therefore, attention is another indirect form of "payment" that users undertake to navigate online services and should be considered when determining the price paid by end-customers of core platform services[88]. These aspects make the application of the framework on excessive pricing particularly complicated in the case of the abuse under analysis.

A second theory of harm applicable to data combining and third party tracking, consists in the abuse of unfair trading conditions[89]. According to the relevant case law, a trading condition or term is unfair when it exceeds what is absolutely necessary for the undertaking to pursue the objective of its service, having regard to the interests of

possible by relying on different legal instruments as benchmarks, among which the GDPR (Regulation (EU) 2016/679 of the European Parliament and of the Council *on the protection of natural persons with regard to the processing of personal data and on the free movement of such data* 27 April 2016 (GUUE L 119, p. 1-88) 4/05/2016. This method would have to consider, however, that policies other than antitrust do not share the same objectives, hence an anticompetitive conduct connected to users' data will not necessarily have to infringe the GDPR in order to be addressed by competition authorities.

[85] V.H.S.E. ROBERTSON, *Excessive data collection: privacy considerations and abuse of dominance in the era of big data*, cited *supra*, at p. 174.

[86] Charter of Fundamental Rights of the European Union cited *supra*.

[87] AGCM, AGCOM e Garante per la protezione dei dati personali, *Indagine conoscitiva sui big data*, cited *supra*, at p. 89. Moreover, it has been observed that privacy policies of websites are often too long and incomprehensible for users, who, as a result, rarely take the time to read them or have the necessary knowledge to understand them.

[88] V.H.S.E. ROBERTSON, *Excessive data collection: privacy considerations and abuse of dominance in the era of big data*, cited *supra*, at p. 174.

[89] Article 102, paragraph 2: "*Such abuse may, in particular, consist in: (a) directly or indirectly imposing unfair purchase or selling prices or other unfair trading conditions*".

all the subjects involved[90]. Although traditionally enforced in cases involving commercial trading parties, nothing seems to prevent the application of this framework to the abusive imposition to end-consumers of unfair trading conditions by a dominant undertaking[91]. Moreover, privacy policies can easily be interpreted as trading terms or conditions. In light of the relevant case law, in order to determine whether these policies are unfair, the indispensability test has to be applied. In relation to data combining and third party tracking practices, antitrust authorities will have to consider whether the conditions on data collection imposed by a given provider exceed what is necessary to achieve the objectives of its service[92], in light of all the interests at play – namely, the profitability of the platform often based on targeted services[93] and users' right to privacy. Moreover, the unfairness of privacy conditions could be determined in "absolute terms" by adopting the relevant legislation on data protection as a benchmark[94].

Competition authorities seem to be well equipped to tackle the practices of data combining and third party tracking. These conducts could be interpreted as excessive pricing or unfair trading conditions, thereby applying lett. (a) of article 102 TFEU.

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[90] See: European Court of Justice, C-127/73, *Belgische Radio en Televisie e société belge des auteurs, compositeurs et éditeurs v. SV SABAM e NV Fonior*, cited *supra*, at points 11 and 15; .C. C-55 and 57/80, *Musik-Vertrieb membran GmbH and K-tel International v GEMA - Gesellschaft für musikalische Aufführungs- und mechanische Vervielfältigungsrechte*, cited *supra*; T-139/98, *Amministrazione Autonoma dei Monopoli di Stato (AAMS) v Commission of the European Communities*, cited *supra*; European Commission, *DSD*, cited *supra*.

[91] M. BOTTA and K. WIEDEMANN, *Eu competition law enforcement vis-à-vis exploitative conducts in the data economy exploring the terra incognita*, cited *supra*, at p. 58; V.H.S.E. ROBERTSON, *Excessive data collection: privacy considerations and abuse of dominance in the era of big data*, cited *supra*, at p. 178, observing that unfair prices, after all, are merely a subcategory of unfair trading conditions.

[92] Ibid., at p. 179 and ff. The author also observed that, according to Commission (European Commission, *DSD*, cited *supra*), antitrust authorities also have to verify the proportionality of trading conditions. Applying this principle to the practices of data combining and third-party tracking should include the balance between the consistent difference in market power among platforms and users, as well as the circumstance that users also pay in "attention", against the benefit the latter draw from the platform. Moreover, it should be kept in mind that online platforms are prone to tipping and, consequently, users may experience significant lock-in.

[93] As already mentioned, the profitability of an online platform is often based on personalized services offered to business users on a different 'side' of the market. A larger dataset, and a more comprehensive profiling of individuals, can improve these services and increase the platforms' profit. Moreover, large quantities of data can also contribute to the improvement of the quality of services offered on the 'free' side.

[94] Ibid., at pp. 181-183.

Although both theories of harm could in principle be appropriate to deal with the conducts under analysis, the complexities raised by the interpretation of users' data as a price make the legal framework of unfair trading conditions a better option. Accordingly, an analysis of the extent to which data collection is necessary to pursue the object of the service offered, in light of all the interests involved, will have to be carried out.

3.2.3 Excessive data collection, a matter between consumer protection and competition law.

In 2019 the *Bundeskartellamt* adopted a decision prohibiting Facebook from imposing users a pervasive data collection and forcing them to accept to be tracked by the social network even outside the service[95]. The choice that was given to users was to either agree to these terms or stop using the social network. According to the German antitrust authority, this "take it or leave it" condition invalidated individuals' consent and amounted to an abuse of dominance. A similar conduct was implemented by WhatsApp, which "forced" users to agree to the combination of the data collected on the messaging service with those collected on Facebook. The undertaking was sanctioned in 2017 by the *Autorità Garante della Concorrenza e del Mercato* (the Italian antitrust and market authority) under consumer protection law[96]. The focal point of this case was the misleading character of WhatsApp's communication to users, who were led to believe that in order to keep using the service they would have to agree to the above mentioned data combination. These cases are of particular interest due to the different approach adopted by the German and Italian authorities in relation to the applicable field of law.

[95] Bundeskartellamt, *Facebook, Exploitative business terms pursuant to Section 19(1) GWB for inadequate data processing*, case summary, 15 February 2019.

[96] AGCM, press release, *WhatsApp fined for 3 million euro for having forced its users to share their personal data with Facebook*, 12 May 2017.

To begin with, the decision adopted by the *Bundeskartellamt* against Facebook in 2019 was based on section 19(1) GWB. According to the authority, the terms imposed by Facebook in relation to the possibility to gather data on users' activity outside the social network and combine them with those collected inside, violated the GDPR and, being a manifestation of market power, they implemented an abuse of dominance[97]. The *Bundeskartellamt* relied on a particular jurisprudence by the Federal Court of Justice, in which the latter balanced the terms imposed by an incumbent with the constitutional rights of its trading parties[98]. Accordingly, it is possible to assess the abusive character of a conduct adopted by a dominant undertaking in violation of other fields of law. In the case of Facebook, the conduct implemented by the undertaking violated the GDPR, insofar as users' consent could not be considered effective[99]. In this respect, the German antitrust authority found that the mere fact that a practice violates the GDPR does not exclude the possibility to examine it under competition law[100]. Moreover, it was pointed out that the social network did not provide evidence that the processing of the information collected from third parties' websites[101] was necessary to improve or to offer its service[102].

This approach was partially modified by the Federal Court of Justice[103], which clarified that the violation of the GDPR is not relevant for the case at hand. The terms for the use of the social network should be considered abusive if they deprive users of

[97] Bundeskartellamt, *Facebook, Exploitative business terms pursuant to Section 19(1) GWB for inadequate data processing*, cited *supra*. The *Bundeskartellamt* found Facebook to be dominant in the German market for social networks, based, among other evidences, on its shares of monthly and daily active users.

[98] See: Bundesgerichtshof, *VBL-Gegenwert II*, KZR 47/14, ECLI:DE:BGH:2017:240117UKZR47.14.0, 24 January 2017.

[99] In addition, it was also noticed that users are not necessarily aware of the amount of data collected by the social network in relation to their activities online.

[100] Bundeskartellamt, *Facebook, Exploitative business terms pursuant to Section 19(1) GWB for inadequate data processing*, cited *supra*.

[101] Including other digital services owned by Facebook, e.g. Instagram.

[102] According to the *Bundeskartellamt*, to be valid, users' consent to third party tracking and data combining cannot be a prerequisite to navigate the service. Facebook interest in processing data according to its terms of usage, in fact, was considered not to outweigh other interests involved (Art. 6(1f) GDPR).

[103] The Federal Court of Justice delivered its ruling in the context of the annulment of the decision with which the Düsseldorf Higher Regional Court ordered the suspensive effect of Facebook's appeal on the *Bundeskartellamt*'s decision.

any choice in relation to the possibility to link data collected outside the service to those collected within it[104]. This approach appears to be more coherent with the objectives of competition law. While it is possible to use data protection – as well as other fields of law – as a benchmark to assess the abusiveness of a conduct under article 102 TFEU[105], the unlawfulness of a given practice under a different field of law should not have to be tied to its anticompetitive character. Competition law pursues specific objectives that are not necessarily common to other policies. Therefore, the anticompetitive character of a given conduct should be assessed regardless of whether it breaches other provisions. In light of these considerations, the qualification of the conduct as a violation of the GDPR manifesting market power shall have to be revised.

The second decision in relation to data combining and third party tracking practices was adopted by the Italian *Autorità Garante della Concorrenza e del Mercato*. The latter sanctioned WhatsApp for having misled users into agreeing to sharing with Facebook's social network the information gathered by the communication application. Specifically, when presented with the new terms of WhatsApp, users were not showed the option of denying permission to share their data with Facebook, while continuing to use the messaging app. Only by denying their consent, they would have been able to access another page and select the option of using WhatsApp without surrendering their information to Facebook[106]. By "hiding" the latter option, WhatsApp misled its users, forcing them to make a commercial choice[107] that they

[104] *Bundesgerichtshof bestätigt vorläufig den Vorwurf der missbräuchlichen Ausnutzung einer marktbeherrschenden Stellung durch Facebook*, pressemitteilungen, nr. 080/2020, 23 juni 2020. The Federal Court of Justice recalled that, as a dominant undertaking, Facebook has a special responsibility to maintain the still existing competition on the market for social network. The imposition on users to allow for third party tracking and data combining practices severely impacts the structure of the market, by increasing barriers to entry and network effects. Moreover, the conduct deprives users of the possibility to choose the level of personalization of their experience on the service and raises lock-in effects in a way that is relevant under competition law, besides degrading their right to privacy.

[105] See above paragraph 5.2.1.

[106] AGCM, Provvedimento n. 26597, *WhatsApp trasferimento dati a Facebook*, 11 maggio 2017.

[107] The Italian authority recognized the commercial character of users' data, based, among other things, on the European case law on mergers. It was observed that the European Commission, in its decision on the merger of Facebook and WhatsApp, has largely considered the economic value of users' data. Hence, the authority stated that users' choices on this matter can be considered having a commercial nature and, therefore, are susceptible to be analyzed under the Consumer code.

would have not necessarily made otherwise. As a result, the authority sanctioned WhatsApp under articles 20, 24, and 25 of the Italian consumer code.

The decision on the case of WhatsApp presents two particularly interesting points. First of all, it was observed that the undertaking's conduct was also relevant for the application of data protection law. Nonetheless, the authority observed that such overlap does not prevent the analysis of a similar conduct under consumer protection law, insofar as it is relevant for this field as well. Secondly, unlike the German case discussed above, WhatsApp's practice appears to alter the choice of consumers without radically depriving them of different options. Consequently, the undertaking was sanctioned under consumer protection law. On the contrary, Facebook's conduct did not provide alternatives to its users and was tackled under antitrust law. Similar to the ties that connect data protection to competition law[108], the latter is also tied to consumer protection. Specifically, both policies are concerned with increasing and protecting the welfare of consumers. Hence, it appears that, as in the case of data protection, nothing should prohibit the use of consumer protection law as a benchmark in competition analysis. Nonetheless, the lawfulness of a given practice under data protection, consumer protection or other policies should not in itself be the basis for the enforcement of antitrust. Competition law pursues the objective of maintaining a competitive market. Coherently, the focus of competition enforcement must remain the effects of a given conduct on the competitive structure of the internal market.

In conclusion, Facebook and WhatsApp practices, although similar, were sanctioned by – respectively – the German and the Italian authority under different fields of law. It appears that the approach of the *Bundeskartellamt* to the case under analysis erred insofar as it tied the anticompetitive character of the conduct to its unlawfulness under the GDPR. However, the Federal Court of Justice stated that the legitimacy of a conduct under another field of law should not be the focal point of antitrust analysis. Accordingly, the conduct employed by Facebook should not be

[108] COSTA-CABRAL and O. LYNKSEY, *Family ties: the intersection between data protection and competition in EU law*, cited *supra*.

considered as an anticompetitive violation of the GDPR, but rather it could be qualified as the imposition of an unfair trading condition. As for the Italian case against WhatsApp, since the conduct employed by the application was construed as misleading, it was addressed under consumer protection law. Users' authorization of data combining practices, in fact, can be considered a commercial decision, thereby relevant under consumer protection. Consequently, it can be observed that the line between data protection, consumer protection and competition law is a fine one. Nonetheless, even though the three policies share some objectives, they should remain distinct. Data and consumer protection can certainly be used as a benchmark for antitrust analysis, but the anticompetitive character of a given practice should not depend on its lawfulness under other policies.

Conclusive remarks.

As observed above, online platforms often constitute gateways for businesses to reach end users, acting as intermediaries between the two categories. At the same time, large gatekeepers are frequently vertically integrated and compete with their own business users. Due to technological development, dominant online platforms are able to amass vast quantities of non-public, strategic information on their business users and, subsequently, employ it to leverage market power on downstream markets, resulting in the exclusions of their rivals. This specific conduct is increasingly being recognized as abusive by antitrust authorities, as demonstrated by the ongoing procedure against Amazon and the investigation that was recently opened on Facebook's behavior towards advertisers. The legal frameworks that are applicable to this practice are several: the imposition of unfair trading conditions – insofar as the access to such information by the gatekeeper is not absolutely necessary for the platform to reach the object of its service – is a first suitable solution; the abuse under analysis could also be qualified as a discriminatory abuse, under article 102 TFEU letter (c); a third applicable framework is constructive refusal to deal, which can be implemented by making the supply subject to excessive terms or by degrading the

quality of the product or service; finally, this conduct could be considered as a non-price centric margin squeeze, which might grant a higher level of legal certainty. It remains to be seen which interpretation will be adopted by the Commission. The institution, in fact, could apply one of these well-established frameworks, or define a new abuse under paragraph 1 of article 102 TFEU, although this solution could negatively impact the principle of legal certainty

Abusive data collection can also concern end users. In the well-known German decision on Facebook's data combination and third party tracking, the social network giant was accused by the *Bundeskartellamt* of abusively forcing its users to accept exploitative terms of use. This case pointed out the interactions and ties between privacy, consumer protection and antitrust. These policies share the protection of consumers and their welfare, however, they pursue different objectives, and their enforcement should not overlap. To the purposes of antitrust enforcement, in particular data and consumer protection can provide useful benchmarks for competition analysis, but the unlawfulness of conduct under different fields of law should not be relevant for antitrust cases. As for the best-suited theory of harm to address exploitative conducts related to data collection, although in the practices of data combining and third party tracking could be interpreted either as excessive pricing or unfair trading conditions, the complexities that the assimilation of users' data to a mere counter-performance for the use of a "free" service make the application of the category of "unfair trading conditions" preferable. Therefore, antitrust authorities will need to verify the necessary character of the privacy policy imposed by the incumbent on its users, in light of all the interests involved and the object of the service, in order to assess the existence of an abuse.

PART 4

4.1 Restrictive access to data.

Users' data are not only the raw material employed by online platforms to personalize their services, they also represent the engine that powers network and lock-in effects, as well as a significant entry barrier[1]. Moreover, information collected through a given service can often prove to be fundamental to compete in different markets[2]. As a result, dominant online operators with large datasets are able to leverage their position to successfully expand to adjacent markets.

In light of these considerations, an issue that is raised when discussing dominance and market power in the digital sector relates to whether dominant undertakings with massive datasets should be required to share such input with rivals. In particular, the debate revolves around the applicability to large online platforms of a duty to deal, which can be imposed by antitrust authorities as a remedy to an abusive refusal to supply[3]. This solution, however, raises a variety of additional problems in relation to data protection, especially when personal information is involved. Hence, scholars and antitrust authorities developed alternative solutions aiming at increasing users' multi-homing and data circulation. In particular, the right to data portability and the creation of data trustees are the two most relevant tools proposed for these purposes. These solutions are not devoid of problematic aspects, however, they might contribute to

[1] See above, part 1.

[2] AGCM, AGCOM e Garante per la protezione dei dati personali, *Indagine conoscitiva sui big data*, 10 febbraio 2020, at pp. 79-81.

[3] In this respect, in 2020 the Italian antitrust authority started an investigation on Google's conduct in relation to a conduct adopted towards publishers using its advertising services. In particular, Google would have abused its dominant position in denying business customers – in the market of display advertising – access to the necessary tools to decrypt users' Google ID. Consequently, business consumers were denied access to a variety of relevant information on users targeted by the advertisements. Due to vertical integration, Google is also competing along with its business users in the market for display advertising and, through the conduct under investigation would have put its rivals at a competitive disadvantage. If the abuse were to be found, a solution consisting in imposing on Google the obligation to provide the decryption keys would substantially amount to a duty to grant access to users' information.

intensify competition on the digital market by means of allowing users to provide their information to a wider variety of operators.

The following paragraphs will discuss the questions surrounding access to users' data by online providers. First of all, the applicability of the essential facility doctrine to datasets will be investigated. Second of all, solutions aiming at increasing data circulation, namely data portability and data trustees, will be analyzed.

4.1.1 The essential facility doctrine.

In relation to the digital market and, in particular, to online platforms, it is debated whether users' data can be considered an essential facility[4] and, therefore, become the object of a duty to deal[5]. However, privacy related concerns arise when an undertaking shares users' personal data, i.e. that have not been anonymized. After recalling the case law on the essential facility doctrine, the present paragraph will discuss the application of the abuse of refusal to deal to users' data collected by online platforms.

To begin with, refusal to supply constitutes a well-known exclusionary abuse of dominant position that consists in the refusal by a dominant undertaking to supply its essential service or product to rivals operating in a neighboring market. The remedy to this abuse consists in the imposition of a duty to deal or grant access to the facility.

[4] A. EZRACHI and J. MODRALL, *Rising to the challenge – competition law and the digital economy*, Competition law international, vol. 15, no. 2, 2019, at p. 121; G. SCHNEIDER, *Designing pro-competitive research data pools: which EU competition remedies for research data silos in digital markets?*, Yearbook of antitrust and regulatory studies, vol. 21, 2020, at pp. 161-186.

[5] The European Commission, in its *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, Brussels, 15 December 2020, at article 6 (i) and (j) imposes a duty to grant access to gatekeepers' data. In particular, letter (i) provides business users operating on the platform of a gatekeeper with the right to access the data (aggregated and not-aggregated) provided for or generated by those business users of by end users interacting with the respective products or services; as for personal data, the right to access only includes data of the end user in relation to the products or services offered by the relevant business user and/or when the end user opts in to such sharing with a consent in the sense of the Regulation (EU) 2016/679. Letter (j) grants third party providers of online search engines access to anonymized data on ranking, query, click and views generated by end users in relation to free and paid searches on online search engines of the gatekeeper.
These provisions seem to reveal the recognition by the European Commission of the importance of users' data generated online, in order to compete in digital markets, especially in relation to those core platform services offered by gatekeepers.

Given the right of undertakings to choose their trading partners, sanctioning the conduct under analysis is conditional upon a number of prerequisites. These conditions are a means to balance the above-mentioned right with the need to maintain competition on the market that depends on the facility involved[6]. Moreover, subjecting the application of the essential facility doctrine to the existence of a strict set of conditions responds to the need to protect undertakings' incentives to invest and innovate[7]. In fact, an operator would have little motivation to invest in innovation, knowing it would have to share its good or service with competitors. As a consequence, the Court of Justice established that a refusal to deal is abusive if three conditions are met. Firstly, the refusal has to be likely to "*eliminate all competition on the market on the part of the person requesting the service*" [8]. Moreover, it must not be capable to be objectively justified[9]. Finally, the service that is refused must be indispensable to carry out the business of the undertaking requesting access. In particular, the indispensability requirement entails the absence of any real or potential – economically viable[10] – substitute for the facility of the dominant undertaking[11]. Additionally, when licensed products or services are involved, the refusal has to prevent the emergence of a new product[12].

In light of the importance of users' data to operate in the digital sector, the application of a duty to deal concerning gatekeepers' datasets has been widely

[6] Court of Justice, C-7/97, *Oscar Bronner GmbH & Co. KG v. Mediaprint Zeitungs - und Zeitschriftenverlag GmbH & Co. KG and others*, 26 November 1998, EU:C:1998:569, at point 40.

[7] Court of Justice, T-612/17, *Google LLC and Alphabet Inc v. European Commission*, 10 November 2021, ECLI:EU:T:2021:763, at point 217.

[8] Court of Justice, C-7/97, *Oscar Bronner GmbH & Co. KG v. Mediaprint Zeitungs- und Zeitschriftenverlag GmbH & Co. KG and others*, cited *supra*, at point 41; Court of Justice, T-301/04, *Clearstream Banking AG and Clearstream International SA v Commission of the European Communities*, 9 September 2009, ECLI:EU:T:2009:317, at point 147.

[9] Ibid.

[10] In C-7/97, *Oscar Bronner GmbH & Co. KG v. Mediaprint Zeitungs- und Zeitschriftenverlag GmbH & Co. KG and others*, citedd *supra*, at points 43-46 the Court of Justice clarified that, in order for a facility to be necessary for a neighbouring market, other options must not be economically viable. It is not sufficient to demonstrate that other solutions are nota s advantageous.

[11] Court of Justice, J.C. C-241/91 P and C-242/91 P, *Radio Telefis Eireann (RTE) and Independent Television Publications Ltd (ITP) v Commission of the European Communities*, 6 April 1995, ECLI:EU:C:1995:98, at point 53.

[12] Court of Justice, T-201/04, *Microsoft Corp. v Commission of the European Communities*, 17 September 2007, ECLI:EU:T:2007:289, at points 319-333.

discussed among scholars and antitrust authorities[13]. In particular, it was observed that in settings where market concentration is linked to the possession of a large amount of information, the imposition of a duty to share might be reasonable[14]. The same logic should also apply to cases in which data are a competitive advantage for operating in neighboring markets[15]. These cases may involve dominant undertakings controlling access to non-aggregated, individual-level data of one person or machine, or to aggregated users' data of a large quantity of users/machines, that can be useful for various purposes (e.g., training algorithms)[16]. In theory, provided they present the conditions identified by the case law[17], these situations could be addressed by applying the essential facility doctrine[18]. Nonetheless, users' data raise some issues compared to more traditional infrastructures.

i. First of all, users' data are an abundant input which online operators can derive from numerous sources, among which data brokers. This circumstance, together with the possibility for users to multi-home, poses relevant challenges to the demonstration of the indispensability requirement[19]. Nonetheless, it has been noticed that not all information is

[13] In the case T-612/17, Google LLC and Alphabet, Inc. v. European Commission, cited *supra*, the European General Court considered the commonalities between users' traffic derived from Google Search and essential facilities. In particular, it was observed that: i) the traffic generated by the search engine is an indispensable resource for comparison shopping services and that ii) replacing it is not an economically viable option (at points 224-227). Although traffic and data are not comparable, the Court seems to have made a step in the direction of recognizing the importance of users' attention and of online platforms as gateways to this resource.

[14] J. CRÉMER, Y.A. DE MONTJOYE, H SCHWEITZER, *Competition policy for the digital era*, final report, European Commission, Luxembourg: publications office of the European Union, 2019, at p. 99.

[15] Ibid., similar concerns have been addressed by the European Union in relation to the accumulation of data in the hands of a few large platforms through mergers and acquisitions, see above paragraphs 2.5, 2.6, 2.7.

[16] Competition law 4.0, A new competition framework for the digital economy, Federal Ministry for Economic Affairs and Energy (BMWi), September 2019, p. 36.

[17] Namely, the indispensability of the service, the unjustified abuse, as well as its ability to eliminate competition in the market altogether. See: Court of Justice, C- 7/97,*Oscar Bronner GmbH & Co. KG v. Mediaprint Zeitungs- und Zeitschriftenverlag GmbH & Co. KG and others*, cited *supra*, at point 41.

[18] Ibid, at point 37.

[19] M. BOTTA and K. WIEDEMANN, *Eu competition law enforcement vis-à-vis exploitative conducts in the data economy exploring the terra incognita*, Max Plank Institute for Innovation and Competition research paper series, paper n. 18-08, 2018, at 46 and ff; G. COLANGELO, M. MAGGIOLINO, *Big data as misleading facility*, 2017, European competition journal, vol. 13, issue 2, pp. 249-281.

necessarily accessible to every operator and that there are obstacles to multi-homing. Moreover, users' data does not constitute a single category but can be further divided according to their characteristics or the device through which they are collected. In this respect, an undertaking might be found to possess a unique, non-replicable dataset, which could be considered indispensable to compete[20].

ii. Second of all, the indispensability requirement might need to be adjusted according to the type of data for which access has been required. While certain information may be easier to obtain from users more than once, for example their email, other types of data could prove more difficult to attain[21].

iii. Finally, the level of data at which access is requested also plays a role in the analysis and whether or not users' consent is needed. On the one hand, if an undertaking is requested to share individual-level data, two scenarios unfold: (a) if personal data are involved, individuals will have to give their consent, according to the GDPR[22]; (b) if the information concerned is not personal, it has been argued that consent should also be provided when sensitive business information is shared[23]. On the other hand, access might be requested to aggregated data. The indispensability of a particular dataset might be connected to the quantity and variety of information in possession of the dominant undertaking. These aggregated data can be necessary to

[20] European Commission, case n. M.9660 – *Google/Fitbit*, 17/12/2020, at point 520. As mentioned above, in this case the Commission recognized that consumers' health data gathered by Fitbit would only be accessible through the relevant API and refusing to provide such tool to operators would put them at a competitive disadvantage.

[21] J. CRÉMER, Y.A. DE MONTJOYE, H SCHWEITZER, *Competition policy for the digital era*, cited *supra*, at p. 101. The authors distinguish between volunteered and inferred data. While the former could be replicated by asking users to share them again, the latter entails some sort of elaborating process on the part of undertakings and will unlikely be replicable.

[22] Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 *on the protection of natural persons with regard to the processing of personal data and on the free movement of such data* (General Data Protection Regulation) (OJ L 119, p. 1-88) 4/05/2016.

[23] J. CRÉMER, Y.A. DE MONTJOYE, H SCHWEITZER, *Competition policy for the digital era*, cited *supra*, at p. 102.

compete specifically in markets where algorithms are employed. Efficiently training these tools, in fact, requires a large amount of information[24]. If such information is anonymized privacy regulations would not pose problems, if that is not the case the imposition of a duty to share will have to comply with data protection[25].

In conclusion, the importance of users' data to compete in the digital market, could justify the imposition of a duty to deal on dominant undertakings holding essential datasets. In evaluating the indispensability of the facility under analysis, antitrust authorities should distinguish between the different types of data to which access is requested and to their characteristics. Access to individual level information will likely require users to give their consent to the transmission of said data. As for aggregated data, issues in relation to privacy legislations arise only in the case of non-anonymized data.

4.1.2 Data portability and data trustees.

The challenges of applying the essential facility doctrine to gatekeepers' datasets cannot be overstated, especially in relation to the indispensability condition in light of the variety of users' data that can be collected. Moreover, the issues connected to privacy protection contribute to raising the difficulties of applying a duty to grant access to their datasets on large online platforms. A possible alternative solution has been identified in increasing users' control over the information they share with providers, thereby promoting multi-homing. To this end, the GDPR established the

[24] This explains the ratio of article 6 (j) of the EU Commission's proposal (*Proposal for a regulation of the European Parliament and of the Council on contestable and fair markets in the digital sector* (Digital markets act), cited *supra*) search engines are a blatant example of markets in which aggregated data can represent an indispensable facility to compete efficiently. The ranking of results according to their relevance to a given query, in fact, is based to the behavior of users. Although access to aggregated information does not allow for a personalization of search results based on the single user, it may contribute to allow new search engine, general or specific, to enter and be competitive on the market.

[25] J. CRÉMER, Y.A. DE MONTJOYE, H SCHWEITZER, *Competition policy for the digital era*, cited *supra*, at p. 104; Competition law 4.0, A *new competition framework for the digital economy*, cited *supra*, at p. 37.

right to data portability, in order for individuals to be able to switch more easily to different providers. Moreover, the establishment of data trustees was suggested. These entities could grant data pools in accordance with the data subjects' consent.

The right to data portability is provided for by article 20 of the GDPR[26]. According to this provision, a user is entitled to demand a data processor to transmit his/her personal data in a machine-readable form, and, in certain circumstances, to transfer those data to another controller[27]. The right to data portability aims at reducing lock-in effects that characterize the digital market, and core platform services in particular. Moreover, by decreasing the costs of switching providers, article 20 of the GDPR increases multi-homing[28]. However, the provision raises a number of issues. First of all, the type of data in relation to which the right under discussion can be exercised is unclear. According to the wording of the GDPR, a user is entitled to exercise his or her right to data portability in relation to data that have been provided to the platform. While volunteered data certainly fall in this category, the applicability of the provision to observed[29] and inferred information is debated[30]. Additional issues arise when the

[26] Regulation (EU) 2016/679, *General Data Protection Regulation*, cited *supra*, at article 20: "*1.The data subject shall have the right to receive the personal data concerning him or her, which he or she has provided to a controller, in a structured, commonly used and machine-readable format and have the right to transmit those data to another controller without hindrance from the controller to which the personal data have been provided, where: (a) the processing is based on consent pursuant to point (a) of Article 6(1) or point (a) of Article 9(2) or on a contract pursuant to point (b) of Article 6(1); and (b) the processing is carried out by automated means. 2. In exercising his or her right to data portability pursuant to paragraph 1, the data subject shall have the right to have the personal data transmitted directly from one controller to another, where technically feasible. 3. The exercise of the right referred to in paragraph 1 of this Article shall be without prejudice to Article 17. That right shall not apply to processing necessary for the performance of a task carried out in the public interest or in the exercise of official authority vested in the controller. 4. The right referred to in paragraph 1 shall not adversely affect the rights and freedoms of others*".

[27] Ibid.

[28] Competition law 4.0, A new competition framework for the digital economy, cited supra, at p. 38. On data portability see also: N. ANCIAUX ET AL., *Empowerment and 'big personal data': from portability to personal agency*, Global privacy law review, vol. 2, issue 1, 2021, pp. 16-30.

[29] On the inclusion of observed data in those covered by article 20 of the GDPR, see: J. KRÄMER, P. SENELLART and A. DE STREEL, *Making data portability more effective for the digital economy: economic implications and regulatory challenges*, 2020, Center for regulation in Europe (CERRE), at p. 20; OECD, *Data portability, interoperability and digital platform competition*, Competition Committee Discussion Paper, 2021, pp. 17, at 39.

[30] J. CRÉMER, Y.A. DE MONTJOYE, H SCHWEITZER, *Competition policy for the digital era*, cited *supra*, at p. 83; Competition law 4.0, A new competition framework for the digital economy, cited

information required is linked to personal data of another subject. A similar situation is likely to occur in relation to services like social medias, given their purpose of facilitating social interactions. The transmission of personal information referrable to a different data subject clearly collides with privacy regulation, and it is not imaginable to require a processor to separate data of different individuals. Moreover, data portability does not imply ongoing real-time access. In other words, the transmission of data that a subject can request is limited to the information held by the processor at the moment of the request[31]. As a consequence, data portability can only be an extremely limited alternative to the imposition of a duty to grant access under competition law, or a similar solution provided for at a legislative level. A final obstacle to data portability relates to the form in which users' data have to be transmitted. The regulation generically refers to a "*structured, commonly used and machine-readable format*"[32]. Hence, an important step to render effective the right to data portability is the clear definition of such a format[33]. By allowing users to more easily transfer their information from a provider to another, the contestability of markets in which economic power is strictly linked to data could indeed increase. However, in light of the criticalities which characterize its successful exercise, as well as the considerations related to real-time transmission, data portability cannot be considered an effective substitute for a duty to share under competition law.

A second tool that has been discussed to counterbalance the vast datasets of a few large operators in the market, as well as the issue surrounding the access to that information, relates to the role of data trustees. These entities would allow for an easier management of users' information by acting on behalf and in the interest of data subjects towards undertakings. The collection of numerous users' information would provide trustees with a higher bargaining power to negotiate data protection policies

supra, at p. 38. As for data assigned to a data subject, collected or generated without the involvement of said subject are not included.

[31] Ibid.

[32] Regulation (EU) 2016/679, *General Data Protection Regulation*, cited *supra*, at article 20, paragraph 1. See also: AGCM, AGCOM e Garante per la protezione dei dati personali, *Indagine conoscitiva sui big data*, cited *supra*, at p. 26-27.

[33] OECD, *Data portability, interoperability and digital platform competition*, cited *supra*, at p. 48.

with providers of online services. Moreover, this tool would allow to provide pool data access at the conditions dictated by data subjects[34].

Although data portability and establishing data trustees would not provide a definitive solution to the issue of access by competitors of large online platforms to relevant datasets, these tools could improve users' control over their information and incentivize users' multi-homing. These effects would contribute to increase market contestability, especially in the digital sector where market power is strictly linked to the possession of large datasets.

4.2 Reducing rivals' data.

Besides excluding rivals by denying them access to an essential set of information, dominant undertakings can weaken competitors by adopting strategies aiming at reducing their rivals' data[35]. In particular, exclusionary conducts may prevent competitors from collecting relevant data from end consumers. This may be a consequence of, for example, the imposition of unfair trading terms or conditions, exclusive contracts or the creation of obstacles to avoid users navigating competing services and providing their information[36]. The analysis of the effects of abuses of dominance on the capability of rivals to gather users' data appears highly complex. Nonetheless, antitrust authorities appear to be more concerned with these strategies, given their relevant for the maintenance of a competitive digital market[37]. In the Google Shopping case, in particular, both the Commission and the General Court observed the importance of data collection and the adverse effects on competitors of

[34] Competition law 4.0, A new competition framework for the digital economy, cited *supra*, at p. 42.

[35] AGCM, AGCOM e garante per la protezione dei dati personali, *Indagine conoscitiva sui big data*, cited *supra*, at p. 112.

[36] Ibid.

[37] See, for example: European Commission, press release, *Antitrust: Commission fines Google €4.34 billion for illegal practices regarding Android mobile devices to strengthen dominance of Google's search engine*, 18 July 2018. In sanctioning Google's tying conduct, the EU antitrust authority pointed out that the abuse affected the capability of other search engine to collect information from users' devices.

the diversion of traffic away from their websites. The same was noticed by scholars in relation to Apple's conduct towards streaming music app developers. Preventing users from accessing rival software applications, in fact, indirectly deprives their providers from collecting relevant users data and hinders their capability to effectively compete with the incumbent.

In the following paragraphs we will discuss the effects of rivals' ability to collect users' information in relation to the conducts of self-favoring and unfair access conditions imposed on developers of software applications operating on app stores[38].

4.2.1 Self-favoring.

Most large online operators enjoy an entrenched and durable position on the market due to the creation of conglomerate ecosystems around a core platform service[39]. In these environments, they act as regulators, establishing the rules for the functioning of their services[40]. In the meantime, they compete along with business customers, which rely on these platforms to access end users. The dual role of regulators and competitors allows large operators to leverage their position into downstream markets[41]. One recent case in which a similar abusive form of leveraging was found by the Commission involved Google and the conduct of self-favoring. In a

[38] The abuses of dominance liable to "reduce rivals' data" are numerous, including tying, bundling, margin squeeze, etcetera. For the purposes of this work, however, only the conducts of self-favoring and unfair conditions to access app stores will be analyzed.

[39] 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), cited *supra*, at p. 1. See above Part 1.

[40] J. CRÉMER, Y.A. DE MONTJOYE, H SCHWEITZER, *Competition policy for the digital era*, cited *supra*, at p. 60. Facebook's Instagram, for example, provides a social network service where a user can share his/her pictures or videos and see the posts and stories published by other users. On Instagram, pictures can be published singularly or together, videos published in the form of "stories" can last up to 15 seconds, whereas videos published as posts can last longer, and so on. It is the gatekeeper – in this case Facebook – to establish the rules that govern the functioning of each service – Instagram – that is part of its ecosystem. This is also true for Google, Amazon, Apple, and so on.

[41] N. DUNNE, *Fairness and the Challenge of Making Markets Work Better*, Modern law review, 2021, vol. 84, issue 2, at p. 251; P. ALEXIADIS AND A. DE STREEL, *Designing and EU intervention standard for digital platforms*, Robert Shuman center for advanced studies, EUI working papers RSCAS 2020/14, 2020, at p. 6.

nutshell, the incumbent used its generic search engine to grant a better positioning to its own offerings in the market for comparison shopping services, while simultaneously demoting rivals' results[42], thereby hindering competition. A similar conduct was employed by Amazon in relation to its BuyBox, which is currently under investigation by the European Commission.

The abuse under analysis, recently confirmed by the General Court, will be discussed in the following paragraphs. First we will discuss the abuse of self-favoring, starting by analyzing the decision of the Commission (see *infra* 4.2.1). Secondly, the characteristics of this new abuse, according to the judgement of the General Court, will be examined, including its relationship with the essential facility doctrine and the obligation to provide equal treatment (see *infra* 4.2.3, 4.2.4 and 4.2.5). Thirdly, in light of the judgement on the Google Shopping case, Amazon's conduct in relation to its Buybox will be explored (see *infra* 4.2.6). Finally, we will consider the consequences of self-favoring on users' traffic and on undertakings' access to data (see *infra* 4.2.7).

4.2.2 The Commission's decision in Google Shopping.

The conduct of self-favoring first emerged in 2017, when the Commission adopted a decision sanctioning Google's discriminatory ranking of results showing comparison shopping services on its search engine (Google Search)[43]. According to the decision, Google granted its own comparative shopping service a preferential treatment compared to rival comparative shopping services. The results generated by Google Search in response to a relevant query that showed the dominant company's comparison shopping service were displayed more prominently and in a different format compared to generic results. Competing comparative shopping services, on the

[42] Because of its problematic effects, self-favoring has been sanctioned by antitrust authorities under article 102 TFEU. Moreover, the Commission included such conduct in its Digital Market Act proposal, prohibiting gatekeepers from implementing such conduct. See 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), cited *supra*, at article 6 (d).

[43] European Commission, case n. AT.39740, *Google Search (Shopping)*, 27 June 2017.

contrary, only appeared as generic results (the classic blue links). Moreover, Google Search's algorithm – known as "Panda" – would systematically demote rivals' results to less visible pages.

After identifying the relevant markets – specifically the market for general search engines and the market for comparative shopping services[44] – the Commission sanctioned the practice as an abusive form of leveraging. In other words, Google leveraged its dominant position as a general search engine, in order to replicate it in the adjacent market of comparative shopping services. Demoted to less visible positions in the list of Google Search's results, competitors suffered a consistent decrease in the number of visits by internet users (the so-called "traffic"), hampering their ability to survive on the market. On the contrary, the popularity of Google's comparison shopping service increased as a result of the practice.

The conduct sanctioned by the Commission, which became known as self-favoring, has been at the center of a lively debate[45]. On the one hand, it has been argued that prohibiting the conduct under analysis would deprive undertakings of the advantages derived from legitimately "winning" on the market, disincentivize

[44] Specifically, Google was found to be dominant in the market for general search engines and a key gateway for business users to reach end users.

[45] See among others: J.T. LANG, *Comparing Microsoft and Google: The Concept of Exclusionary Abuse*, World competition, vol. 39, no. 1, 2016, pp. 5–28; P. MANZINI, *Google e l'antitrust*, rivista eurojus.it, 04/05/2016; T. HÖPPNER, *Duty to treat downstream rivals equally: (merely) a natural remedy to Google's monopoly leveraging abuse*, European competition and regulatory law review (CoRe), Issue 3, 2017, pp. 208-221; V. FALCE and M. GRANIERI, *Searching a rationale for search neutrality in the age of Google*, in *Concorrenza e comportamenti escludenti nei mercati dell'innovazione*, (a cura di) G. COLANGELO and V. FALCE, Bologna, Il Mulino, 2017; L. CALZOLARI, *Preliminary comments on the Google case: bridging the transatlantic digital divide by widening the antitrust one*, I quaderni di SIDI blog, 2017-2018, vol. 4-5, p. 461-463; G. MASSAROTTO, *From Standard Oil to Google: how the role of antitrust law has changed*, World competition, vol. 41, n. 3, 2018, pp. 395–418; C. OSTI, *Discrimination in the light of EU competition law: a guide for the perplexed*, in AIDA, Annali italiani del diritto d'autore, XXVII, 2018, p. 218 ss; I. GRAEF, *Differentiated treatment in platform-to- business relations: EU competition law and economic dependence*, Yearbook of European law, vol. 38, n. 1, 2019, pp. 448–499; M.A. SALINGER, *Self-preferencing*, Report on the Digital Economy by The global antitrust institute 10, 2020; P. IBÀÑEZ COLOMO, *Self-preferencing: yet another epithet in need of limiting principles*, World competition, vol. 43, n. 4, 2020, pp. 428-437; C. BERGQVIST, *Discrimination and self-favoring in the digital economy*, 4 February 2020; N. DUNNE, *Fairness and the challenge of making markets work better*, cited *supra*, pp.230-264.

investment and neutralize the efficiencies linked to vertical integration[46]. Furthermore, the legal qualification of self-favoring as an abuse has been criticized for being generic and lacking clear boundaries. Indeed, favoring oneself or a controlled company compared to competitors is a common element to numerous abusive behaviors, among which, for instance, margin squeeze and tying[47]. On the other hand, given the role of large ditigal operators as access points to the online world as well as end users, the importance of ensuring that their conduct does not alter competition in digital markets cannot be overstated. In this respect, discriminatory, exclusionary conducts employed by a company like Google, which is an unavoidable business partners and an important gateway to end users, have dangerous implications on the competitive structure of the digital market[48].

4.2.3 A new form of abuse.

The decision of the Commission in the Google Shopping case was appealed in front of the General Court, which delivered its judgement on the 10th of November 2021[49]. The Court clarified numerous aspects of the abuse of self-favoring, which was confirmed as a new abuse of dominance falling into the category of leveraging.

First of all, the Court recalled that an undertaking holding a dominant position in the internal market has a responsibility not to hinder effective and fair competition[50].

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[46] P. AKMAN, *The theory of abuse in Google Search: a positive and normative assessment under EU competition law*, Journal of law, technology and policy, n. 2, 2017, at p. 301 ff. See also: European Commission, *Guidelines on the assessment of non-horizontal mergers under the Council Regulation on the control of concentrations between undertakings*, (OJ C 265, p. 6–25), 18/10/2008, at 13-14.

[47] P. IBÀÑEZ COLOMO, *Self-preferencing: yet another epithet in need of limiting principles*, cited *supra*. The author pointed out that mixed bundling, for example, could easily be qualified as self-favoring: it is implemented to leverage one's market power to an adjacent market and it involves applying a more favorable price for the joined purchase of different products offered by the undertaking.

[48] See on this: N. DUNNE, *Fairness and the challenge of making markets work better,* cited *supra*, at p. 251 ff.; . CRÉMER, Y.A. DE MONTJOYE, H SCHWEITZER, *Competition policy for the digital era*, cited *supra*, at p. 49 ff.

[49] Court of Justice, T-612/17, *Google LLC and Alphabet Inc v. European Commission*, cited *supra*.

[50] Court of Justice, C-322/81, *Nederlandsche Banden-Industrie-Michelin v Commission*, 9 November 1983, ECLI:EU:C:1983:313, at point 57; See also: Court of Justice, T-83/91, *Tetra Pak v Commission*, 6 October 1994, ECLI:EU:T:1994:246, at point 114; T-228/97, *Irish Sugar v Commission*,

The scope of this obligation is not fixed, on the contrary, it is defined in light of the specific circumstances of each case. In this respect, Google Search was found to be an important gateway to the internet, therefore it has a stricter obligation not to hinder competition [51]. Moreover, in light of the general principle of equal treatment, discriminating among similar situations can breach this responsibility.

As for the qualification of Google's abuse, the Court pointed out that the practice under analysis is twofold: Google relied on its dominant position as a general search engine (i) to grant preferential treatment to its subsidiary (self-favoring) and (ii) to downgrade results featuring competing comparative shopping services within Google Search pages[52]. In light of the above, the Court found that the incumbent engaged in a form of leveraging to extend its dominant position in the downstream market. From the judgement, it appears clear that the practice under analysis is based on the double role of the incumbent which, on the one hand, offers a core platform service to business customers and, on the other hand, competes along with them. The possibility for Google to modify the rules of its search engine, which is an important gateway for businesses to reach their end users[53], allows it to bend the rules in its favor. As underlined by the Commission[54], in the digital market business integration is not rare

7 October 1999, ECLI:EU:T:1999:246, at point 112; T-203/01, 30 September 2003, *Michelin v Commission*, ECLI:EU:T:2003:250, at point 97.

[51] Court of Justice, T-612/17, *Google LLC and Alphabet Inc v. European Commission*, cited *supra*, at point 183.

[52] Ibid., at point 187.

[53] J. CRÉMER, Y.A. DE MONTJOYE, H SCHWEITZER, *Competition policy for the digital era*, cited *supra*, at pp. 60-63; P. ALEXIADIS AND A. DE STREEL, *Designing and EU intervention standard for digital platforms*, cited *supra*, at pp. 6-9.

[54] In its *Proposal for a Regulation of the European Parliament and of the Council on contestable and fair markets in the digital sector* (Digital Markets Act), cited *supra*, at p. 1., the European Commission recognized that a few large platforms are acting as online gateways between business users and final users. These dominant undertakings enjoy an entrenched and durable position often due to the creation of conglomerate ecosystems around the main core platform service. The strong tendency of gatekeepers to expand to various and diverse businesses is due, among other things, to the economies of scale and scope that characterize the digital sector. See: P. MANZINI, Equità e contendibilità nei mercati digitali: la proposta di Digital Market Act, post di Aisdue, III (2021), aiusdue.eu., at pp. 33-37.

for large providers[55]. This circumstance significantly increases the chances to abusively expand to adjacent markets[56].

In addition, the Court pointed out that Google's conduct constitutes a specific abuse compared to the general category of leveraging. In particular, the practice was correctly identified by the Commission on the basis of three specific circumstances: i) the vital importance of user traffic for comparative shopping services; ii) the impact that ranking has on users' behavior on search engines – specifically individuals tend to focus their attention on the first few results of the first page; iii) the negative impact on rivals of the deviation of users' attention towards the service offered by the incumbent[57]. In this respect, the Commission did not merely identify a leveraging abuse, but found a specific conduct that was based on relevant criteria[58].

The practice identified in the case under analysis constitutes a new form of – exclusionary – abuse of dominance that does not fall into existing legal frameworks. This two-fold conduct, in conclusion, consists in a discriminatory treatment falling into the generic category of leveraging.

4.2.4 Self-favoring and the 'essential facility' doctrine.

[55] For instance, Alphabet Inc. is a multinational that collects numerous companies active in various market, such as search engines, comparison shopping services, digital maps, online advertising, and so on. Amazon has a marketplace and operates as a seller. Facebook holds numerous platforms in the markets of social networks, instant messaging and advertising. Microsoft operates in the market of operating systems, but it also owns the search engine Bing and the professional social network LinkedIn.

[56] The proposal for the adoption of the Digital markets act (*Proposal for a Regulation of the European Parliament and of the Council on contestable and fair markets in the digital, cited supra*) includes the *ex ante* prohibition of self-favoring. A regulatory solution could, indeed, contribute to the prevention of the negative impact that this conduct may have on the contestability and fairness in the digital market, which competition law can only remedy *ex post*. Moreover, it would provide a higher degree of legal certainty, as well as avoid the costs of monitoring the implementation of the remedial measures imposed by antitrust authorities. See on this: P. IBÀÑEZ COLOMO, *Self-preferencing: yet another epithet in need of limiting principles*, cited *supra*, at p. 440; P. CARO DE SOUSA, *What shall we do about self-preferencing?*, Competition policy international, 24 June 2020.

[57] Court of Justice, T-612/17, *Google LLC and Alphabet Inc v. European Commission*, cited *supra*, at points 169-174.

[58] Ibid., at point 175.

An interesting aspect concerning the conduct of self-favoring relates to its relationship with the abuse of refusal to supply. As mentioned above, the latter occurs when an undertaking in a dominant position refuses to enter into commercial relations with third parties without an objective justification[59]. When the refusal concerns the access to a product or a service which is "essential" to produce another product or service, its legality under article 102 TFEU is assessed by applying the test developed by the Court of Justice in the Bronner judgement[60]. The conditions established therein – i.e. the indispensability of the service, the unjustified nature of the refusal, as well as its ability to eliminate competition in the market altogether – aim at balancing the right of companies to choose their commercial partners, with the need to preserve competition in the markets that depend on the essential facility involved.

Although the General Court acknowledged that Google's practice concerned the conditions of access to its search engine, in this case the doctrine of essential facilities was found to be inapplicable[61]. As a matter of fact, in order to find a refusal to supply, the incumbent's refusal must be expressed and be sufficient to produce anti-competitive effects autonomously. These requirements distinguish this abuse from

[59] In its appeal, Google maintained that the Commission should have applied the Bronner conditions, since Google conducts related to the access to its search engine. Moreover, as a consequence of the decision, Google would have been imposed a duty to treat rivals equally. This remedy, it has been argued, resembles the 'duty to share' imposed in the case of an abusive refusal to deal.

See in this regard: R. NAZZINI, *Google and the (ever-stretching) boundaries of article 102,* Journal of European competition law and practice, vol. 6, 2015, pp. 301-314; J.T. LANG, *Comparing Microsoft and Google: the concept of exclusionary abuse*, cited *supra*; P. AKMAN, *The theory of abuse in Google Search: a positive and normative assessment under EU competition law*, Journal of law, technology and policy, Vol. 2, 2017, pp. 301-374; P.I. COLOMO, *Self-preferencing: yet another epithet in need of limiting principles*, cited *supra*, pp. 417-446.

[60] Court of Justice, C- 7/97, *Oscar Bronner GmbH & Co. KG v. Mediaprint Zeitungs- und Zeitschriftenverlag GmbH & Co. KG and others*, cited *supra*, at point 41. See above paragraph 3.1.1.

[61] Court of Justice, T-612/17, *Google LLC and Alphabet Inc v. European Commission*, cited *supra*, at points 230-240.

See in this regard: T. HÖPPNER, *Duty to treat downstream rivals equally: (merely) a natural remedy to Google's monopoly leveraging abuse*, European competition and regulatory law review (CoRe), Issue 3/2017, pp. 208-221; E. AGUILERA VALDIVIA, *The scope of the 'special responsibility' upon vertically integrated dominant firms after the Google Shopping case: is there a duty to treat rivals equally and refrain from favouring own related business?*, World competition 41, n. 1, 2018, pp. 43-68; J. CRÉMER, Y.A. DE MONTJOYE, H SCHWEITZER, *Competition policy for the digital era*, cited *supra*, pp. 65-68; P. ALEXIADIS AND A. DE STREEL, *Designing and EU intervention standard for digital platforms*, cited *supra*.

different conducts which can be interpreted as "implicit" refusals to supply, since they aim at making market entry more difficult. Such conducts include, for example, margin squeeze or the abusive application of dissimilar conditions to equivalent transactions[62]. As for the conduct employed by Google, self-favoring does not consist in an express refusal to deal, capable of autonomously eliminating competition. Moreover, according to the Deutsche Telekom judgment[63], the circumstance that an undertaking is already providing its service to third parties – albeit at discriminatory conditions – makes the essential facility doctrine inapplicable.

That being said, the General Court specified that Google Search has certain characteristics akin to those of an essential infrastructure[64]. In particular, it was recognized that (i) the traffic generated by the search engine is an essential resource for comparative shopping services[65] and that (ii) replacing it is not an economically viable option for competitors[66]. Therefore, while ruling out the application of the essential facility doctrine to Google's self-favoring conduct, the judgement seems to leave the door open to the qualification of certain services offered by large digital platforms– or certain aspects of those services – as essential infrastructures.

[62] Article 102 TFEU letter (c).

[63] Court of Justice, C-152/19 P, *Deutsche Telekom AG v. European Commission*, 25 March 2021, EU:C:2021:238, at points 50-51. In this case, the Court decided on the application of unfair terms and conditions to the unbundling offers of an undertaking. In its reasoning, it clarified the limits of the indispensability test defined in Bronner. In particular, the Court considered that the obligation to conclude new contracts with competitors is particularly detrimental to undertakings' freedom of contract and right to property. The situation is different when an undertaking grants access to an infrastructure but makes that access subject to unfair conditions or terms. In these circumstances, the Bronner requirements do not apply because a duty to treat rivals equally is not as detrimental as a duty to share.

[64] Court of Justice, T-612/17, *Google LLC and Alphabet Inc v. European Commission*, cited *supra*, at points 224-227.

[65] In particular, the Commission found users' traffic to be extremely important in this case, for at least three reasons: 1) merchants do not provide comparison shopping services with data about their products if they do not collect enough visits from users; 2) users traffic impacts the revenue that websites collect through commissions or advertisements; 3) traffic allows websites to collect more data. European Commission, Case AT.39740 - *Google Search (Shopping)*, cited *supra*, at point 444 ff.

[66] Ibid., at point 539: "*the traffic diverted by the Conduct, i.e. generic search traffic from Google's general search results pages, accounts for a large proportion of traffic to competing comparison shopping services (…) and cannot be effectively replaced by other sources of traffic currently available to comparison shopping services*".

4.2.5 The obligation to provide equal treatment.

In the judgement under examination, the General Court made two additional considerations on the nature of Google Search that deserve further analysis. The first one relates to the characteristics of Google's platform and, specifically, its "open" nature. As for the second observation, the Court established that the search engine has an obligation of equal treatment, which was inferred from the legislation applicable to internet access providers and in relation to roaming.

To begin with, the General Court made some interesting considerations on Google Search. It was pointed out that Google's general results pages constitute an infrastructure that is, in principle, "open", due to the fact that they generate traffic to other websites, including and for the most part third-party websites. This characteristic distinguishes Google Search's pages from infrastructures which value depend on the owners' ability to retain exclusive use[67]. On the contrary, the value of a general search engine lies in its ability to be "open" to third-party sources and display them among its results. Furthermore, it was observed that the diversity of sources enriches the service, its credibility among users, and it triggers network effects and economies of scale[68]. In light of these considerations, the Court infers that a conduct limiting the scope of results generated by a search engine to those featuring its own services is not necessarily rational, unless the dominant position of the incumbent is protected by high barriers to market entry, like in the case under analysis. Therefore, the more favorable treatment granted by Google to its own results, compared to those of rivals, conflicts with the economic model underlying the search engine and presents a certain degree of abnormality[69].

This reasoning seems to corroborate the "essential" nature of Google Search or the existence of a general obligation of equal treatment on the engine. From the openness

[67] Court of Justice, T-612/17, *Google LLC and Alphabet Inc v. European Commission*, cited *supra*, at points 176-177.

[68] Ibid., at point 179, the Court also stated that the success of the search engine derives from its aptitude to show results from – mostly – external sources.

[69] Ibid., at 178-179.

of an infrastructure, in fact, it seems to follow the anti-economical – and intrinsically suspect – nature of any behavior aiming at excluding or discriminating among results. Accordingly, a search engine – as well as other platforms that could be construed as in principle "open" infrastructures[70] – would have to justify any discriminatory or exclusionary behavior.

Second of all, the judgement seems to recognize the existence of an obligation of equal treatment on Google's search engine. At paragraph 180, from the legislation on open internet access, electronic communications[71] and roaming[72], the Court inferred the intention of the EU legislator to impose on those operators a general obligation of equal treatment without discrimination, or interference with traffic[73]. Given its undisputed dominant position in the general search engine market and the connected special responsibility not to hinder effective competition in the internal market, this general obligation of equal treatment cannot be ignored in the analysis of a practice implemented by an operator like Google in the downstream market. The Court goes on by stating that, to this end, it is irrelevant that the EU legislation does not provide in general terms a non-discriminatory access to Google Search's results list, because a system of undistorted competition can only be guaranteed if equal opportunities are ensured among various economic operators. The application of the obligation of equal treatment to the case at hand seems to find its justification in paragraph 183 of the ruling, where the EU Court refers to the role of Google's platform as an internet access point.

[70] It is likely that marketplaces like Amazon, gathering products form a several sellers, might be defined as 'open' infrastructures.

[71] Regulation (EU) 2015/2120 *of the European Parliament and of the Council laying down measures concerning open internet access and amending Directive 2002/22/EC on universal service and users' rights relating to electronic communications networks and services and Regulation (EU) No 531/2012 on roaming on public mobile communications networks within the Union*, 25 November 2015 (OJ L 310, p. 1–18) 26/11/2015; Directive 2002/22/EC *of the European Parliament and of the Council on universal service and users' rights relating to electronic communications networks and services* (Universal service directive), 7 March 2002 (OJ L 108, p. 51–77) 24/4/2002.

[72] Regulation (EU) No 531/2012 *of the European Parliament and of the Council on roaming on public mobile communications networks within the Union*, 13 June 2012, (OJ L 172, p. 10–35), 30/6/2012.

[73] Court of Justice, C-807/18 and C-39/19, *Telenor Magyarország v Nemzeti Média- és Hírközlési Hatóság Elnöke*, 15 September 2020, ECLI:EU:C:2020:708, at point 47.

In light of the reasoning of the General Court, the judgement under analysis stated the "open" nature of Google Search, which by its nature aims at collecting third party websites in order to deliver its service. Moreover, the platform was considered to be a gateway, not just to end consumers, but to the internet. These characteristics entail the existence of an obligation of equal treatment on Google, which can be inferred from its business model as well as the legislation on internet access operators. The considerations of the Court will likely have a strong impact on cases involving discriminatory conducts by platforms that present similar features.

4.2.6 The application of self-favoring to Amazon's buy box.

The considerations of the General Court on the abuse of self-favoring will likely provide a useful guide for the ongoing investigation on Amazon's buybox[74], initiated by the European Commission[75].

In November 2020, the Commission sent a Statement of Objections challenging, among other things, Amazon's selection criteria to designate the winner of its buy box. As detected by the authority, Amazon holds a double role on the market. On the one hand, it operates its famous marketplace, which allows third party vendors to sell their products to end consumers. Moreover, the platform also offers logistic services to its

[74] European Commission, press release, *Antitrust: Commission sends Statement of Objections to Amazon for the use of non-public independent seller data and opens second investigation into its e-commerce business practices*, 10 November 2020.

It should be noticed that the Italian antitrust authority sanctioned Amazon for the amount of over 1 billion euros for having abused its dominant position. Specifically, Amazon favored its logistics by tying them with the access to other services, among which the Prime label. See: AGCM, press release, *Antitrust - Amazon fined over € 1,128 billion for abusing its dominant position*, 9 December 2021.

[75] It should also be noticed that in the decision adopted by the Commission on the merger between Fitbit and Google (European Commission, *Google/Fitbit*, cited *supra*, at point 649) one of the theories of harm that was analyzed related to the possibility for Google to implement self-favoring. In particular, it the Commission examined the possibility for Google to leverage its position as a general search engine into the market for wrist-worn wearables, by favoring Fitbit devices among the results of Google Search, to the detriment of rivals. However, the Commission considered that Google would lack the ability to implement self-favoring in this case, since the sale of wrist-worn wearables mainly takes place in physical stores, via resellers' websites or via the websites of the original manufacturers (points 662-669). Therefore, it was concluded that if Google were to implement self-favoring in favor of Fitbit's devices, the conduct would not produce relevant anticompetitive effects on the market (points 664 and 676-678).

business users. On the other hand, Amazon sells its own products as a retailer on its marketplace. Hence, while providing a service to independent sellers, it also competes with them as a retailer.

In this context, the Commission is currently investigating whether Amazon is favoring its own offers, as well as those of sellers using its logistic and delivery services[76], by discriminating among business users in the selection of the winners of its buy box. The latter is a tool that allows customers to add items from a specific retailer directly into the shopping cart. The Buy Box is displayed prominently compared to other products and generates the majority of sales[77].

The conduct under investigation appears to be akin to Google's self-favoring. First of all, Amazon is an important gateway for online sellers to consumers, being the leading e-commerce platform[78]. Moreover, Amazon's double role allows it to leverage its position as a marketplace in the downstream market for retailers, by employing a discriminatory practice. The latter, in this particular case, allegedly consisted in self-favoring its own retail business, as well as sellers using Amazon's delivery and logistics, by bending the rules governing the assignment of the buy box.

Amazon's conduct has several common elements with the Google Shopping case. On the one hand, both conducts involved a more prominent positioning of the subsidiary of the platform – and in Amazon's case of business users relying on the marketplace for additional services – which has a strong impact on users' traffic. In particular, the buy box generates a relevant portion of users' traffic and of subsequent purchases. On the other hand, both Google and Amazon discriminated against certain business users, specifically competitors of the subsidiary, by decreasing their visibility. Accordingly, if an action will be brought by the Commission against Amazon for the conduct under analysis, it will likely involve the theory of harm that was applied to Google Shopping.

[76] The so-called "fulfilment by Amazon or FBA sellers".

[77] European Commission, press release, *Antitrust: Commission sends Statement of Objections to Amazon for the use of non-public independent seller data and opens second investigation into its e-commerce business practices*, 10 November 2020.

[78] Ibid.

4.2.7 The diversion of traffic and data.

The positioning of products and services online – whether in the form of advertisements, posts or links – strongly impacts users' traffic and attention[79]. Among other things, the diversion of traffic has important implications on business users' ability to collect end users' data[80]. Given the importance of data for the purposes of personalization and the establishment of network effects, the effects of self-favoring on rivals' ability to gather information cannot be overstated. This paragraph will further explore the impact of self-favoring on traffic and its consequences on data collection.

To begin with, although positioning is important in the brick-and-mortar world[81], in the case of online platforms its impact is amplified. As it is well known, the internet offers a wide range of content. Looking for a given product on a marketplace like Amazon, for example, normally produces a substantially larger number of results than the number of products offered by one or more supermarkets. Users of the internet do not browse all products and services resulting from a query[82]. Among the entirety of results, those shown in the first few pages of a given platform will generally get more attention from consumers. On the contrary, results placed lower on the list will often end up being virtually invisible[83]. Hence, a core platform service discriminating by

[79] As noticed by the Commission and the General Court in the Google shopping case, see: European Commission, case n. AT.39740 - *Google Search (Shopping)*, cited *supra*, at point 539; Court of Justice, T-612/17, *Google LLC and Alphabet Inc v. European Commission*, cited *supra*, at points 173-174.

[80] European Commission, Case AT.39740 - *Google Search (Shopping)*, cited *supra*, at points 444 ff.

[81] There is a lot of studying and data mining, for example, behind the placement of products in supermarkets. On this topic see, among others: T. BRIJS ET. AL., *Building an association rules framework to improve product assortment decisions*, Data Mining and Knowledge Discovery, vol. 8, issue 1, 2004, pp. 7–23; M.C. CHEN and C.P. LIN, *A data mining approach to product assortment and shelf space allocation*, Expert systems with applications, vol. 32, issue 4, 2007, pp. 976–986; G. ALOYSIUS and D. BINU, *An approach to product placement in supermarkets using PrefixSpan algorithm*, Journal of King Saud University – computer and information sciences, vol. 25, 2013, pp. 77-87.

[82] For instance, users who launch a query on Google will typically not look at all the pages of results produced by the search engine.

[83] Court of Justice, T-612/17, *Google LLC and Alphabet Inc v. European Commission*, cited *supra*, at point 184.

adjusting the ranking of the links shown in response to a given query alters websites' accessibility[84] and rivals' capability to effectively compete[85]. In other words, self-favoring alters traffic, which is crucial for the functioning of an online business.

Second of all, the reduced visibility of rivals implies that less users will navigate their services[86]. In the Google Shopping case, the Commission highlighted that the diversion of traffic away from competing comparison shopping services strongly affected their ability to be competitive and operate on the market[87]. Specifically, comparison shopping services rely on users' traffic in order to convince merchants to provide them with data about their products[88]. Moreover, traffic enables these services to generate users' reviews, which provide to increase their quality, and it contributes to generating revenue through commissions from merchants or on site advertising[89]. Since Google Search was found to be the source of a large quantity of that traffic, the exclusionary conduct of self-favoring greatly impacted its rivals on the market for comparison shopping services[90]. As mentioned above, the judgement of the General

[84] Strategic positioning is used by social networks as well in order to keep users' attention for as long as possible. By doing so, platforms are able to gather more data on users and target them with more advertisements, which in turn causes an increase in the profits that derive from advertising services.

[85] Court of Justice, T-612/17, *Google LLC and Alphabet Inc v. European Commission*, cited *supra*, at points 184 and 227; CRÉMER, Y.A. DE MONTJOYE, H SCHWEITZER, *Competition policy for the digital era*, cited *supra*, at p. 66; I. GRAEF, *Differentiated treatment in in platform-to- business relations: EU competition law and economic dependence*, cited *supra*, at p. 467.

[86] In the Google Shopping case, the Commission found that on Google Search pages, almost all the clicks go to the first page of results. See on topic: P.T.J. WOLTERS, *Search engines, digitalization and national private law*, European Review of Private Law, vol. 28, n. 4, 2020, at p. 800; GEA internet Project Consulting (IPC), *Eyetracking Search Marketing,* 2009 (http://www.geaipc.com/blog/wp-content/uploads/gea-ipc- eyetracking-search-marketing.pdf); UK Competition and Markets Authority's review of existing literature on "*Online Search: Consumer and Firm Behaviour*", 7 April 2017, paragraph 1.6(c), LoF Response, Annex 21.19.

[87] T. HÖPPNER, *Duty to treat downstream rivals equally: (merely) a natural remedy to Google's monopoly leveraging abuse*, cited *supra*, at p. 223.

[88] A. BUTTÀ, *Google Search (Shopping): an overview of the European Commission's antitrust case*, Italian antitrust review, n.1(2018), vol II, p.53.

[89] I. GRAEF, *Differentiated treatment in in platform-to- business relations: eu competition law and economic dependence*, cited *supra*, at p. 454.

[90] Ibid.

Court went even further by recognizing the similarities of Google Search's pages to an essential facility[91], which are linked to the importance of the traffic they generate[92].

The diversion of traffic also has important repercussions on the access to users' data by online operators. As mentioned above, users' data are generated by individuals navigating the internet. A given website will receive such information by tracking users' activity both inside as well as outside the service, through the employment of technological tools (so-called "trackers"). If users never visit the website, no tracking activity can take place. The diversion of traffic away from rivals' websites, therefore, will influence the amount of information they can access. As a consequence, undertakings affected will have smaller datasets to train and improve their algorithms[93], which will influence the personalization of the services offered[94]. Moreover, by reducing rivals' data, a dominant undertaking is able to reinforce network effects and raise information-related entry barriers[95].

The consequences of self-favoring on rivals' access to users' data are a crucial "side-effect", especially in the digital market. As it was largely explored above, the importance of users' data for online platforms to effectively compete on the market

[91] Court of Justice, T-612/17, *Google LLC and Alphabet Inc v. European Commission*, cited *supra*, at point 224.

[92] Ibid., at point 225 ff.

[93] European Commission, *Google Search (Shopping)*, cited *supra*, at points 444-451. See also: A. BUTTÀ, *Google Search (Shopping): an overview of the European Commission's antitrust case*, cited *supra*, at p. 53.

[94] However, algorithms do not just personalize results to a search, they also significantly personalize the content of services that are not connected to the launch of a query. For example, on social networks they contribute to the personalization of contents showed to the user based on their interests, as well as the results to their searches on the service.

[95] Self-favoring is based on the knowledge provided by data on users' behavior. In Google's case, the abusive practice adopted by the incumbent was based on behavioral studies on users, see: European Commission, Case AT.39740 - *Google Search (Shopping)*, cited *supra*, at point 454. In its decision, the Commission considered users' behavior and quoted several studies indicating that, as far as search engines are concerned, users usually look at the first three to five generic results and tend to ignore the remaining ones, even though the results are not ordered in a neutral way. Among others, the Commission mentioned the following studies: GEA internet Project Consulting (IPC), *Eyetracking cearch marketing,* cited *supra*; UK Competition and Markets Authority's review of existing literature on "*Online Search: Consumer and Firm Behaviour*", cited *supra*.

Moreover, Google was able to increase the traffic towards its service while excluding rivals based on its massive datasets See: A. BUTTÀ, *Google Search (Shopping): an overview of the European Commission's antitrust case*, cited *supra*, at p.55.

cannot be overstated. Although the conduct of self-favoring has been categorized as a discriminatory abuse falling into the wider category of leveraging, its effects on traffic diversion from rivals to Google's service have been attentively considered by both the Commission and the Court. A further step in the analysis of anticompetitive conducts implemented online will hopefully be to recognize the effects caused in relation to rivals' access to users' data.

4.2.8 Anticompetitive conducts on stores for software applications.

In 2021 the European Commission sent a statement of objections to Apple concerning two allegedly abusive conducts adopted by the undertaking in relation to its app store. First of all, the incumbent required developers of applications for streaming music to rely on Apple's in-app purchase mechanism ("IAP") in order to sell their products on the app store. Secondly, the incumbent prohibited developers from informing users of alternative purchasing possibilities. The practices under analysis risk to hinder competition in the market of software applications, as well as reduce users' data available for rivals, in particular in relation to payment information.

To begin with, software application stores represent an important gateway for developers to reach consumers. These intermediation services, in fact, allow users to download software applications on their smart devices. In order to operate on the stores, developers have to accept the conditions laid down by the intermediary. However, as observed by the European Commission, developers normally have less bargaining power than the owners of these stores[96]. This imbalance could result in the implementation of abusive practices, similar to the Apple case.

[96] The Commission's proposal for the adoption of the Digital Markets Act (*Proposal for a Regulation of the European Parliament and of the Council on contestable and fair markets in the digital sector,* cited *supra*) lists app stores among core platform services and, at article 6 letter k), requires gatekeepers not to apply unfair conditions on developers using the store. In particular, the aim of the provision is not to establish a right to access the store, rather to avoid unjustified discrimination. In particular, at point 57, the Commission provides a series of indications to measure the unfairness of the terms of a given application store: "*The following benchmarks can serve as a yardstick to determine the fairness of general access conditions: prices charged or conditions imposed for the same or similar services by other providers of software application stores; prices charged or conditions imposed by the*

As it is well known, Apple is a popular manufacturer of digital devices, as well as the provider of the iOS operative system. In order to offer software applications to its customers, Apple provides its devices with an app store. Developers, including the incumbent, can access the store and sell their applications to iOS users. The store is the main channel through which apps are downloaded on Apple's devices [97]. Sideloading[98], in fact, is particularly complex and only achievable by consumers with the necessary technical skills[99]. Likewise, developers wishing to circumvent the store would encounter technical difficulties and risk repercussions by Apple[100].

The investigation of the Commission focused on the market for music streaming applications and, in particular, it concerned the terms of use imposed on developers operating on the app store. First of all, Apple was found to be dominant in the market for the distribution of music streaming applications via its store. The app store, in fact, is the only gateway to reach users owning devices running on iOS and is controlled by the incumbent. In order to operate on the app store, developers have to accept Apple's conditions, among which the mandatory use of the IAP and the prohibition to inform users of purchasing possibilities outside of apps. These rules were deemed to be hindering competition in the market for music streaming applications, ultimately leading to higher prices paid by users. Moreover, the Commission is concerned by the role of Apple as the necessary intermediary for all IAP transactions.

In the following paragraph the issue of which legal framework could be applied to these conducts will be discussed. Furthermore, we will focus on the effects of the use of the IAP system on developers ability to gather payment data.

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provider of the software application store for different related or similar services or to different types of end users; prices charged or conditions imposed by the provider of the software application store for the same service in different geographic regions; prices charged or conditions imposed by the provider of the software application store for the same service the gatekeeper offers to itself".

[97] European Commission, press release, *Antitrust: Commission sends Statement of Objections to Apple on App Store rules for music streaming providers*, 30 April 2020.

[98] Sideloading is the practice through which users install an app on a device without using the official channel, i.e. the store installed on their devices.

[99] Authority for consumers and markets, *Market study into mobile app stores*, report, 11 April 2019, at p. 45-46

[100] D. GERADIN and D. KATSIFIS, *The antitrust case against the Apple App Store*, TILEC discussion paper n. DP2020-039, at p. 8.

4.2.9 Unfair conditions to reduce developers' data.

As the owner of its app store, Apple can determine the rules applicable in it, as well as the access to the market of music streaming applications for iOS users[101]. The incumbent, however, is also active as a developer of its own applications which are distributed on the store. Therefore, while offering developers access to its store, Apple competes with them in the market for software applications. As observed above, due to strong vertical integration, online platforms controlling large ecosystems often hold a double role as gatekeepers and competitors within their services. Apple, in particular, not only regulates the access to its store in relation to music streaming applications, but also offers its own application, i.e. Apple music.

The practices examined by the Commission concern two obligations Apple imposed on developers operating on its store: (i) to use the IAP system and (ii) not to inform individuals of alternative purchasing possibilities in relation to their product. As for the first condition, the mandatory use of IAP system has several consequences for app developers: they are not able to employ alternative payment systems which may work better; they cannot address app users' problems with the payment, which is managed by the store; they have to surrender a 30% commission on each payment, which results in higher prices for end consumers; and, finally, they are unable to gather payment-related data on users[102]. These issues may have exclusionary effects in the market for software applications and, in the case investigated by the Commission, for music streaming apps.

As for the second conduct investigated, iOS users may subscribe to music streaming services outside the app store, however they cannot be informed of such possibility by developers. This, so-called, anti-steering practice raises antitrust concerns due to the fact that the alternatives to apps purchased in the app store may be

[101] D. GERADIN and D. KATSIFIS, *The antitrust case against the Apple App Store*, cited *supra,* at p. 26.

[102] Ibid., at pp. 13 and 34.

cheaper. As a result, end consumers end up paying higher prices for streaming music services[103].

These conducts could be addressed under the legal framework of article 102 TFEU letter (a), which prohibits the direct or indirect imposition on customers of unfair trading conditions by dominant undertakings[104]. An unfair term or condition must exceed what is absolutely necessary to pursue the object of the service provided by the incumbent[105]. Hence, in order to assess if the conduct of an undertaking requiring business users operating on its app store to only use the IAP system or to avoid informing customers of alternative purchasing possibilities constitutes an unfair trading condition, competition authorities will have to verify whether this practice is absolutely necessary to pursue the object of the service. The analysis will have to balance the interests of the provider of the store against the interest of app developers. This framework seems well-suited to apply to Apple's case. The allegedly abusive practice, in fact, relates to the terms of use of the app store, which undoubtedly fall into the category of trading conditions, and their unfair character should be verified through the application of the necessity test.

Besides the exclusionary effects of Apple's conduct on developers, the imposition of the use of the IAP may result in the restriction of rivals' access to users' data. As mentioned above, payments on the app store are solely managed by Apple, which assumes an intermediary position between developers and end users. As a result, application providers encounter several practical problems, among which the impossibility to issue a refund in case of the cancelation of a subscription or to offer additional relevant services. Moreover, users' payment data get collected by Apple,

[103] European Commission, *Antitrust: Commission sends Statement of Objections to Apple on App Store rules for music streaming providers*, cited *supra*.

[104] Article 102 TFEU, paragraph 2: "*Such abuse may, in particular, consist in: (a) directly or indirectly imposing unfair purchase or selling prices or other unfair trading conditions*".

[105] Court of Justice, C-127/73, *Belgische Radio en Televisie e société belge des auteurs, compositeurs et éditeurs v. SV SABAM e NV Fonior*, 27 March 1974, ECLI:EU:C:1974:25, at points 11 and 15; Court of Justice, J.C. C-55 and 57/80, *Musik-Vertrieb membran GmbH and K-tel International v GEMA - Gesellschaft für musikalische Aufführungs- und mechanische Vervielfältigungsrechte*, 20 January 1981, ECLI:EU:C:1981:10, at point 36 and ff.

while developers do not have access to them[106]. Given the importance of this information, the restriction of competitors' ability to collect payment data may have severe repercussions on their capability of effectively compete on the market. Such effects cannot be overstated and should be included in antitrust analysis.

Conclusive remarks.

Access to users' data is fundamental in order to compete in the digital market. Online platforms use this information for a variety of purposes, namely for personalization, targeting advertisements, training algorithms, quality improvements, and so on. As a consequence, conducts preventing data collection should be a priority for antitrust enforcement in the digital sector.

Dominant undertakings can preclude rivals from gathering the necessary data either by denying access to their datasets or by adopting strategies which have the effect of "reducing rivals' data[107]".

Denying access to an undertaking's asset is not, in principle, considered abusive. The right to choose one's business parties is well-established, and limitations of such right are only acceptable if specific conditions are met. In particular, for the purposes of applying article 102 TFEU to a refusal to supply, in the Bronner case the Court of Justice established the necessary requirements to impose a duty to deal. In relation to users' data, however, privacy considerations cannot be ignored. As a matter of fact, if a duty to deal concerns personal data, it is necessary to obtain users' consent. Moreover, issues may arise also in relation to non-personal, sensitive business information. As a result, the application of a duty to grant access to undertakings' datasets encounters several difficulties and limitations. Alternative solutions aiming at encouraging users to multi-home and to allow undertakings to collect the relevant data include the right to data portability and the establishment of data trustees. Both

[106] D. GERADIN and D. KATSIFIS, *The antitrust case against the Apple App Store*, cited *supra*, at p. 40-41.

[107] AGCM, AGCOM e Garante per la protezione dei dati personali, *Indagine conoscitiva sui big data*, cited *supra*, at p. 112.

solutions require improvements, but they could increase data circulation and, consequently, market contestability.

As for strategies aiming at "reducing rivals' data", those can be implemented through a variety of abuses. As it has been observed, negative effects on competitors' ability to gather users' information spawn from self-favoring, as well as unfair conditions hampering developers operating on app stores. In the case of self-favoring, users' attention is diverted towards the service offered by the incumbent and away from rivals. As a consequence, the latter cannot collect information and their competitiveness is decreased. As for conducts relating to app stores, while exclusionary practices tend to prevent users from downloading rivals' applications, generating effects similar to those of self-favoring, Apple's imposition to use the IAP directly deprives developers from collecting payments information.

The impact of conducts negatively affecting rivals' ability to collect or to access users' information has been increasingly considered. Besides the enforcement of competition law by antitrust authorities, it has been proposed to adopt an *ex ante* regulation in order to increase the contestability of the digital market and grant legal certainty. In particular, in its proposal for the adoption of a digital markets act, the European Commission laid down two provisions pertaining to access to gatekeepers' datasets[108], as well as two provisions prohibiting self-favoring and the imposition of unfair or discriminatory conditions to access and operate through the app store of a gatekeeper[109]. A regulatory solution appears particularly desirable in the case of access to data, considering the inherent difficulties of applying the essential facility doctrine.

[108] The European Commission, in its *Proposal for a regulation of the European Parliament and of the Council on contestable and fair markets in the digital sector* (Digital markets act), cited *supra*, at article 6 letters (i) and (j).

[109] Ibid., at articles 6 letters (d) and (k).

PART 5

5. Price discrimination.

The rise of new technologies and the phenomenon of big data facilitated the adoption, especially in the digital market, of profitable pricing strategies by undertakings. Although market operators always had at their disposal several methods to identify customers' willingness to pay, the massive amount of information that can be gathered on users by online platforms increased the precision of pricing tactics. As a result, the personalization of offers by undertakings which was initially based on general categorizations, may target smaller and smaller groups based on precise characteristics. This evolution led some authors to hypothesize the employment of individualized prices. The present chapter will focus on the phenomenon of differential pricing (or price discrimination[1]), and the impact that the digital market had on this conduct.

First of all, versioning and dynamic pricing will be discussed (see *infra* 5.1.). These practices that aim at setting a price reflecting customers' willingness to pay, by allowing them to select the preferred option. Although these conducts also at "personalize" to some extent the prices offered to customers, as it will be seen below, they can be distinguished from differential pricing.

Secondly, price discrimination will be examined, as well as its effects on the market (see *infra* 5.2, 5.3 and 5.4). Price discrimination is not new and is largely employed in the brick-and-mortar world. The discounts provided by most movie theaters to children and/or senior citizens fall into the category of differential pricing, since the same product – i.e. the ticket for a given movie – is sold at a lower price to

[1] From an economic perspective, the term "price discrimination" or "differential pricing" refers to the practice of selling two similar products, with the same marginal cost, at different prices. In a nutshell, this strategy aims at raising the price for the generality of consumers and lowering it for those groups that would not buy at the higher price, thereby reaching a larger number of customers and increasing profits. See: OECD, *Price discrimination background note by the secretariat*, 29-30 November 2016; Monopolkommission, *Competition policy: The challenge of digital markets*, special report n. 68, 2015.

two groups of costumers which are considered more "price-sensitive". Theaters' "discounts" are transparent, often advertised practices. Moreover, they are generally accepted as they are perceived as fair[2]. However, price discrimination may not always be as transparent and may be perceived as undesirable, especially by those buyers who end up paying more[3].

Third of all, it will be observed how price discrimination can take place online, as well as the specific effects that this practice may create in relation to the digital market (see *infra* 5.5 and 5.6). Price discrimination requires undertakings to gain a deep knowledge on customers. As a result, the most personalized forms of this practice are not generally employed. Nonetheless, the possibility to track and profile users provided by new technologies may have altered operators' incentives and capability of engaging in differential pricing[4].

Finally, it will be analyzed whether price discrimination may infringe article 102 TFEU and which legal framework could be applied to this conduct (see *infra* 5.7 and 5.8).

5.1 Versioning and dynamic prices.

Before analyzing price discrimination, other pricing strategies will be considered. As a matter of fact, undertakings may adopt different practices aiming at setting a price for a given product/service based on its perceived value rather than its cost and that do not require the same amount of information on customers. Specifically, two widespread price related practices are versioning [5] and dynamic pricing. These

[2] The same can be said for other cases which adhere to people's shared sense of fairness (e.g. discounts for children or the elderly or university fees that vary according to the income of the students. See: Executive office of the President of the United States, *Big data and differential pricing*, February 2015, p. 4.

[3] OECD, *Executive summary of the roundtable on price discrimination held at the 126th meeting of the competition committee of the OECD*, DAF/COMP/M(2016)2/ANN5/FINAL, 2016, at p.2.

[4] OECD, *Big data: bringing competition policy to the digital era*, background note by the secretariat, 27 October 2016, DAF/COMP(2016)14, at p. 11; OECD, *Data driven innovation for growth and well-being*, interim synthesis report, October 2014, at p.7.

[5] It should be noted that the categorization of versioning appears controversial, in fact sometimes it is considered a form of second-degree price discrimination (see for example OECD, *Perdsonalised*

practices do not fall into the category of differential pricing due to the fact they do not entail setting a different price for different customers. While versioning consists in the creation of different versions of a given product or service, which are then sold at different prices, dynamic pricing entails a variation of the price based on the changes in the supply and demand curves. These strategies will be discussed in the present paragraph.

To begin with, as mentioned above versioning is based on the creation of several versions of a product which are sold at different prices. This strategy is often linked to quality features of the product and is intended to provoke less price sensitive consumers to purchase the more expensive, "higher quality" version of the good, instead of the cheaper "standard quality" version. Opposite to third degree price discrimination, the aim of this practice is to encourage customers to self-select the group they belong to. The book industry provides a clear example of versioning. As a matter of fact, books are normally found in both hardcover, which is usually more expensive, and paperback, the cheaper version. As a result, consumers with a higher reservation price will be more inclined to buy the hardcover version, while those who are more price sensitive will more likely purchase the paperback. By engaging in versioning, undertakings are able to serve a larger number of consumers and make higher profit. This practice has been largely used for *information goods*[6] due to their

pricing in the digital era, cited *supra*; G. WAGNER and H. EIDENMÜLLER, *Down by algorithms? Siphoning rents, exploiting biases, and shaping preferences: regulating the dark side of personalized transactions*, The University of Chicago law review, vol. 86, 2019, at p. 585, the authors include in the category of second-degree discrimination the practice of charging different prices depending on qualitative features of the product, which can include some forms of versioning) while other authors do not include it in price discriminatory practices (see for example M. ARMSTRONG, *Price discrimination*, University library of Munich, Germany, MPRA paper, 2006, at pp. 2-6, the author does not include versioning in the possible forms of price discriminatory practices; Executive office of the President of the United States, *Big data and differential pricing*, cited *supra*, at p. 5, where it is mentioned that versioning might be replaced by personalized pricing seems not to categorize versioning as a form of price discrimination).

[6] Information products are those products which market value is derived from the information they contain. Producing information goods implies high fixed costs (e.g. in the production of a book those would be the cost of buying the manuscript, paying for the editing, ect.), but a small variable reproduction costs (printing another copy of the book has a small cost). The fixed costs of information goods are usually sunk costs, i.e. not recoverable. On the other hand, the cost of producing one more copy of an information product does not increase as the number of copies do. In fact, the reproduction of information products can be automated (e.g. printing copies of a book or a cd) and the cost per unit

characteristics [7] (i.e. high fixed costs and relatively small variable cost of reproduction). Versioning is also employed in the sector of transportation[8]. In this case, the differences are mainly qualitative: first class tickets generally imply more room and sometimes include complementary services. Cheaper solutions, on the contrary, aim at serving more price sensitive costumers. Versioning is largely employed in the digital market as well. It is common, in fact, to find free as well as premium versions of online services[9]. For example, software applications for smart devices often provide a free version and a paid one, that does not include advertisements or offers additional functionalities[10].

A second pricing strategy employed by undertakings is dynamic pricing. This approach consists in varying the prices of a given product/service based on the changes in supply and demand, without differentiating among customers[11]. This practice can be based on changes affecting the demand and supply curves over time. The latter is the case, for instance, of a supermarket lowering the price of products about to expire[12]. Another example of dynamic pricing relates to airplane's tickets. As a matter of fact, airlines usually sell tickets at a higher cost as the chosen departure date approaches. As mentioned above, in general this practice can be distinguished from differential

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does not change relevantly whether the copies made are one thousand, one million or ten. See: C. SHAPIRO and H.R. VARIAN, *Versioning: the smart way to sell information*, Harvard business review, Novermber-December Issue, 1998; H.R. VARIAN, *Versioning information goods,* working paper, University of California, March 1997.

[7] Informational goods have high fixed costs and relatively small variable cost of reproduction.

[8] Both airlines and trainlines provide several types of seating, from first class to economy.

[9] Providing a free version to users may prove particularly useful in order to form an initial consumer base, which may later be targeted with follow-up products, as expansions and/or upgrades. Moreover, offering a free version of an online service allows to attract users' attention and divert it from rivals' products. See: C. SHAPIRO and H.R. VARIAN, *Versioning: the smart way to sell information*, cited *supra*.

It should also be pointed out that online operators may engage in versioning also by degrading the quality of a given product or service and apply to this low-quality version a cheaper price. For instance, provider often offer a service for free and progressively show more and more advertisements, which can only be removed by purchasing the "premium version".

[10] Online services present the characteristics of informational goods, in particular they require a small – if not null – cost to be duplicated. Therefore, versioning is a particularly profitable strategy.

[11] OECD, *Personalised pricing in the digital era*, cited *supra*, at p. 9. It was observed, however, that in this case the product could be considered different. Near expiration date food, in fact, might acquire a different taste needs to be consumed quicker.

[12] A.EZRACHI and M.STUCKE, *Virtual competition*, Harvard University Press, 2016, at p. 87; M. ARMSTRONG, *Price discrimination*, cited *supra*, at p. 5.

pricing strategies. Nonetheless, it cannot be ruled out that some forms of dynamic pricing may amount to price discrimination, especially when the changes in the demand and supply are based assumptions over consumers' reservation prices[13].

5.2 Differential pricing or price discrimination.

Price discrimination or differential pricing can be implemented in various ways and the price may be more and more "personalized". This practice can be employed by dividing consumers into categories and offer each one a different price, by offering discounts to consumers, by allowing consumers to choose between options and trying to nudge the towards one of them, and so on. In general, scholars divide price discrimination in three categories: *first degree*, *second degree* and *third degree* price discrimination. The first category consists in charging each consumer the maximum price that he/she is willing to pay for a good or service and it is generally referred to as *first degree price discrimination*. In order to employ first degree price discrimination, however, undertakings need to know each consumer's reservation price, which makes this conduct highly difficult to engage in. A second – more feasible – type of price discrimination consists in charging a different price based on the quantity of the good or service purchased by each consumer[14]. This category is referred to as *second degree price discrimination* and includes practices such as quantity discounts and bundling. Finally, *third degree price discrimination* occurs when customers are divided into groups on the basis of observable features and then a different price is set for each group. In this case, customers' reservation price is inferred from the characteristics of each group[15]. Whereas first degree price

[13] Ibid., at p.88; M. ARMSTRONG, *Price discrimination*, cited *supra*, at p.5.

[14] Some authors also include the different price charged based on the quality of the product purchased, see for example G. WAGNER AND H. EIDENMÜLLER, *Down by algorithms? Siphoning rents, exploiting biases, and shaping preferences: regulating the dark side of personalized transactions*, cited *supra*, at p. 585. However, quality differences between products seems to better fit the conduct of versioning, see below paragraph 2.

[15] Ibid., at p. 583; M. ARMSTRONG, *Price discrimination*, cited *supra*; Executive office of the President of the United States, *Big data and differential pricing*, cited *supra*, at p. 4.

discrimination presents high challenges, second and third-degree price discrimination are undoubtedly more viable options. The present paragraph will further explore these pricing strategies and their characteristics.

To begin with, *first degree* price discrimination aims at offering a product at a tailor-made price to each consumer based on the value that he/she attributes to that good. In this case consumers find themselves without a choice and face a fixed price reflecting their willingness to pay. For example, if consumer A was willing to pay 50 euros for a chair and consumer B had a reservation price of 30, the furniture shop would sell the chair to A at 50 euros and to B at 30. However, this type of pricing strategy is not easily feasible, considering the enormous amount of information that it would require. In fact, a seller would have no way of knowing the reservation price of each customers unless they were to reveal it themselves.

Secondly, *second degree* price discrimination includes practices such as quantity discounts and bundling. Quantity rebates, which are often justified by cost efficiencies derived from the larger quantity of product sold by the undertaking, do not generally raise issues under EU competition law[16]. On the contrary, according to the relevant case law rebates that are not strictly and solely linked to the volume of the purchase may constitute an abuse of dominant position[17]. As for bundling practices, they include the so-called "pure bundling", which consists in selling two or more products only jointly and in fixed proportion, as well as "mixed bundling", which entails applying a lower price when different items are purchased jointly. This practice may be employed

[16] Court of Justice, T-203/01, *Michelin v European Commission*, 30 September 2003, ECLI:EU:T:2003:250, at point 58; T-286/09, *Intel v European Commission*, 12 June 2014, ECLI:EU:T:2014:547, at point: "*If increasing the quantity supplied results in lower costs for the supplier, the latter is entitled to pass on that reduction to the customer in the form of a more favorable tariff (Opinion of Advocate General Mischo in Portugal v Commission, cited above, at ECR I-2618, point 106). Quantity rebates are therefore deemed to reflect gains in efficiency and economies of scale made by the undertaking in a dominant position*".

[17] See: Court of Justice, C-413/14 P, *Intel v European Commission*, 6 September 2017, ECLI:EU:C:2017:632; T-286/09, *Intel v European Commission*, 12 June 2014, ECLI:EU:T:2014:547, at points 76-78; T-155/06, *Tomra v European Commission*, 9 September 2010, ECLI:EU:T:2010:370, at point 209; T-203/01, *Michelin v European Commission*, cited *supra*, at point 73; C-85/76, *Hoffmann-La Roche v European Commission*, 13 February 1979, ECLI:EU:C:1979:36, at point 90; T-286/09 RENV, *Intel Corp. v. European Commission*, 26 January 2022, ECLI:EU:T:2022:19.

by dominant undertakings to leverage their position in connected markets. From these examples emerges an important feature of second-degree price discrimination, namely that it is an *anonymous* practice[18]. The prices, in fact, are not determined based on the individual consumer or its willingness to spend, but rather on objective criteria like the quantity of products, the circumstance that different goods are purchase jointly, and so on. In this case customers decide whether to acquire more of a given good and they are aware of the standard price. It is worth noting that the qualification of *second degree price discrimination* as differential pricing is controversial due to the fact that, in this case, it is not the same product sold at a different price, rather it is the quantity purchased to determine the discount. If the discounts were only offered to some clients and not to others, then the conduct would fall into the category of differential pricing.

Finally, in the case of *third degree* price discrimination the price is tailored to reach a group of consumers and it is set based on observable characteristics of the group. This category includes, for instance, the case of a museum offering a discount to students based on the general assumption that, not having an income, they are more price sensitive and would not purchase at full price. The result of grouping customers is a less precise personalization. In this example students still living with their parents would be in the same cluster of those who have to rent a room or a house. This pricing strategy is more feasible, since it requires less information than *first degree* price discrimination. Nevertheless, the necessary knowledge to engage in this practice is still consistent.

5.3 The obstacles to differential pricing.

As mentioned above, the adoption of differentiated pricing strategies by undertakings presents several challenges, first and foremost in relation to the amount of information that is required to successfully engage in this practice. Moreover, in a competitive market differential pricing will be unlikely to take place, since rivals could

[18] As defined by M. ARMSTRONG in its paper *Price discrimination,* cited *supra,* at p. 9.

easily attract customers charged above the cost of the product/service. Finally, the phenomenon of arbitrage and the possibly negative reaction of customers also constitute obstacles to price discrimination.

Differential pricing requires undertakings to acquire a deep knowledge of their customers, in particular in the case of *first* and *third degree* discrimination. Nonetheless, it should be noticed that while determining each consumer's reservation price entails an extremely large amount of precise information, third-degree price discrimination can be employed on the basis of more generic data. Due to the advent of new technologies and the big data phenomenon the ability of undertakings to gather information about customers has progressively increased. As a consequence, market players are able to better "guess" how consumers will respond to different pricing strategies. Taking fidelity cards as an example, while granting customers numerous discounts and special offers, they are an incredible source of information on those consumers. By using these cards, people provide all sorts of information – among which their eating habits, how often they shop, whether they have a family or not – to stores, which them profile them[19]. Customers' profiling allows undertakings to make predictions on their behavior which would not be possible without new technologies. Nonetheless, although the feasibility of first and third degree price discrimination has increased, it finds a limit in privacy regulation. As a matter of fact, data protection is, on the one hand, the first obstacle undertakings need to overcome and, on the other,

[19] A case involving the American market Target is quite illustrative of the importance of undertakings' ability to track customers. In particular, the American store observed what pregnant women – who had disclosed their state to the store – were acquiring through their baby-shower registry and Target's computers, by analyzing the buying patterns, started to make educated guesses on which customers were likely to be pregnant based on the products they were purchasing. Moreover, Target could estimate pregnant women's due date within a small window. The accuracy of Target's algorithms got so precise that the Times reported a case in which the store knew about a girl's pregnancy before her family. See: A.EZRACHI and M.STUCKE, *Virtual competition*, cited *supra*, at p. 93; C. DUHIGG, *How companies learn your secrets*, The New York Times magazine, 16th February 2012. Target's interest in knowing which women were pregnant lied in the fact that when a family has a child it is the moment when their shopping habits are in flux. Target wanted to get new moms to shop exclusively there and captivating them during their pregnancy was the optimal strategy to do so. The idea was to get them to purchase baby products at Target knowing that once they did that, they would have started to buy every other product they needed simply because it was there, and it was a practical choice. Therefore, by estimating the due date, Target could send them coupons at critical times in order to get them to change their shopping habits in favor of the store.

the main shield to safeguard consumers from being charged the highest amount they are willing to pay for a product or service.

A second obstacle to differential pricing relates to the degree of competition in the market involved. In fact, if an undertaking were to price discriminate in a strongly competitive market, rivals would likely react by alluring those consumers that would have to pay more under the discriminatory pricing strategy. What emerges from this consideration is that it requires a certain degree of market power for a firm to efficiently price discriminate and not lose customers.

Price discriminatory strategies may also be rendered inefficient by the practice of arbitrage. The latter occurs when a subject takes advantage of the price difference among different markets or consumer categories. In fact, consumers who pay less for the same good may decide to resell it at a competitive price to those who would are charged more. Arbitrage has the potential to refrain undertaking from differential pricing by rendering it inefficient, therefore it constitutes a third obstacle to the practice.

Finally, market operators adopting price discriminatory practices will still have to deal with customers' hostility. Differential pricing may be perceived as unfair by those consumers who are charged more and, as a result, negatively impact undertakings' reputation. Therefore, aside those types of price discrimination that appeal to a shared sense of fairness and raise few objections, undertakings will have to avoid provoking a negative reaction in the general public in order to efficiently price discriminate.

All these obstacles are perhaps capable to explain why price discrimination has been rarely employed in the past, with a few exceptions that mainly adhere to the general sense of fairness. Nonetheless, as it will be observed below, the dynamics of the digital market may increase the frequency with which undertakings resort to this practice. The development of new technologies might have granted undertakings the possibility to better discriminate in relation to prices. Specifically, online platforms and applications whose businesses rely on the collection and monetization of users' data may be in an advantageous position to employ information to engage in differential pricing.

5.4 The controversial effects of differential pricing.

Before discussing the impact of new technologies on differential pricing, the present paragraph will explore the outcomes of this practice. The effects of price discrimination are controversial. If, on the one hand, some consumers end up better off since they benefit from a lower price, others end up paying more and losing their surplus to sellers. Many scholars observed that price discrimination can create efficiencies, increase the overall welfare and, in some cases, be perceived as fair. However, differential pricing may also allow dominant undertakings to shut the relevant market, exclude rivals and seize consumers' surplus.

To begin with, a first positive consequence of differential pricing lies in the possibility for undertakings to serve more customers. As a matter of fact, at least some of the consumers who would not have been able to afford the product or service at full price, will be able to purchase it by paying it less[20]. Differential pricing has the potential of allowing (almost) everyone to be buy the product/service and of reaching consumers that otherwise would have been excluded. Returning to the museum example, charging students less allows them to visit an exhibition that not all of them would have been able to afford at full cost.

Moreover, price discrimination can lead to the adoption of more efficient prices. Charging every consumer the precise amount that he/she is willing to pay for a product, provided it covers the cost of production, would undoubtedly lead undertakings to increase their profit. Secondly, by reaching customers that would have been precluded otherwise, also implies a higher number of transactions for the undertaking, which in turn can lead to an increase in output[21]. Thirdly, engaging in the practice under analysis may allow undertakings to recover some of their fixed costs, especially in markets with

[20] M. ARMSTRONG, *Price discrimination*, cited *supra*, at p. 6; Executive office of the president of the United States, *Big data and differential pricing*, cited *supra*, at p. 4-7; I. GRAEF, *Algorithms and fairness: what role for competition law in targeting price discrimination towards end consumers?*, Columbia journal of European law, vol.24, 2018 , at pp.544-545;

[21] However, it is worth pointing out that this specific effect requires sufficiently precise data, in the absence of which undertakings run the risk of setting prices above customers' reservation prices and subsequently losing them.

high fixed costs and low marginal cost [22]. In order to verify the positive effects of price discrimination of efficiency, it has been suggested to adopt the variation in undertakings' output as an indicator [23]. In fact, a fall in output would be the consequence of an incorrect identification of customers' reservation price[24].

One final potential positive effect of price discrimination relates to innovation. In particular, it was suggested that the possibility to successfully engage in differential pricing might encourage firms to invest the additional profit in innovation[25]. In light of these positive effects, it is argued that a general prohibition of the practice under analysis is not be auspicial[26].

As for negative effects stemming from differential pricing, by charging consumers according to their reservation price, a market operator could gain consumers' surplus[27]. In such a case, price discrimination may have a positive effect on an overall welfare, resulting detrimental for consumers. This is more likely in markets where economic power is held by a few operators and where users are locked in, as competition constitutes an obstacle to differential pricing[28].

A second undesirable outcome of price discrimination relates to exclusionary effects. A producer, for instance, may adopt a discriminatory pricing strategy towards its commercial customers to prevent them from switching to a competitor[29]. A similar

[22] M. ARMSTRONG, *Price discrimination*, cited *supra*, at pp. 7-12;

[23] OECD, *Price discrimination*, cited *supra*, at p. 10: "*This means that one clear test for identifying the impact of discrimination on consumers is to ask whether the discrimination significantly increases output or not. The test is one-sided since the conclusion remains ambiguous if discrimination does significantly increase output*".

[24] Ibid, if the price set for the group of consumers that were willing to pay more for the product/service exceeds what some of them are actually willing to pay, the undertaking would lose the latter group, thereby decreasing its output.

[25] Ibid., at p. 12.

[26] Ibid., at p. 9. It is suggested that: "*it is advisable for agencies to start with a default, but rebuttable, presumption that any given price discrimination scheme has a benign or beneficial impact on consumers. In this section, we briefly explore the literature on when price discrimination is good for consumers, and when it is not*".

[27] The difference between the amount the consumer is willing to pay for a given product and its actual price.

[28] I. GRAEF, *Algorithms and fairness: what role for competition law in targeting price discrimination towards end consumers?*, cited *supra* , at pp.541-544.

[29] OECD, *Executive summary of the roundtable on price discrimination*, cited *supra*, at p. 4.

conduct could fall into the prohibition laid down by article 102 TFEU if it were to be employed by a dominant undertaking[30].

Finally, differential pricing may raise entry or expansion barriers. New entrant, in fact, will likely not have a sufficiently strong customer base to offer competitive prices compared to those practiced by an established operator. Moreover, this competitive disadvantage can grow to the point of preventing new entrants from reaching a sufficient scale to be efficient[31].

In conclusion, the practice under analysis has controversial effects in the market. If, on the one hand, differential pricing may positively impact undertakings' efficiency, output and incentives to innovate, it also may lead to consumers' exploitation and rivals' exclusion. All these effects should be carefully analyzed by antitrust authorities on a case by case basis.

5.5 Price discriminating through online platforms.

The amount of users' information collected by operators in the digital market has consistently increased, due to the advent of the internet. Online platforms have a deep knowledge of their users, stemming from their personal relations, their taste in books or music, their search history, and so on. These data and increasingly sophisticated algorithms facilitate the personalization of market operators' pricing strategies, by allowing more accurate guesses of users' willingness to pay. Through the analysis of users' information, algorithms may set prices that are based on characteristics that are considered to reveal customers' reservation prices[32]. In light of these considerations,

[30] I. GRAEF, *Algorithms and fairness: what role for competition law in targeting price discrimination towards end consumers?*, cited *supra*, at p. 543.

[31] A. EZRACHI and M.E. STUCKE, *Virtual Competition: the promise and perils of the algorithm-driven economy*, cited *supra*, at pp. 118-119.

[32] In discussing the feasibility of differential pricing strategies by online operators, it should be borne in mind that to make accurate guesses on users' reservation prices, online platforms need to acquire a massive amount of data. As a result, at times market operators turn to data brokers. Another important requirement is an algorithm that can perform the necessary calculations. In fact, if differential pricing strategies are based on too little data or on inefficient algorithms, undertakings risk to drive consumers away by setting prices that are too high. Additionally, undertakings also risk to excessively reduce profit by setting low prices.

the present paragraph will explore the impact of new technologies on price discrimination and how undertakings operating in the digital market engage in differential pricing[33].

To begin with, to employ *third degree* price discrimination, online platforms use various information. Users do not generally reveal their willingness to pay, it is for online platforms to infer this information from other data. For example, Uber used the geographic location of customers as a parameter to discriminate on prices. Uber's algorithm, in fact, does not just adjust prices based on the real-time proportion between demand and supply, as it claims, it also takes into account other information – in this case the geographic location of the user in need of a car – to make a guess on its willingness to pay. Some locations are associated to higher income and deemed indicative of a higher reservation price. Therefore, people departing from a given place linked by Uber's algorithms to a higher willingness to pay might face higher prices[34]. Coupons.com also personalizes its offers. After categorizing users based on geographic and demographic data, the operator personalizes its pricing strategies based on users' history, in particular previously clicked offers, queries, activated coupons and so on. The objective is to predict users' willingness to pay based on collected information, in order to personalize offers as much as possible[35]. Consumers' chosen operating system and/or browser may also impact the prices showed to them. In particular, it was observed that individuals using iOS rather than alternative operating

[33] It should be noted that undertakings' capability to employ second degree price discrimination did not relevantly change due to the big data phenomenon. This type of pricing strategy is generally linked to the quantity of product purchased by customers, rather than the specific characteristics of individuals. The main aspect impacted by new technologies relates to the way in which discounts are framed and it will be discussed below.

[34] O. BAR-GILL, *Algorithmic price discrimination*, The University of Chicago law review, vol. 86, 2019, at p. 225; L.M. KHAN, *Amazon's antitrust paradox*, The Yale law journal, vol. 126, 2017, at p. 789; S.D. KOMINERS, *Uber's new pricing idea is good theory, risky business*, Bloomberg, June 2017 (https://perma.cc/2T8E-J5K8).

[35] A. EZRACHI and M.E. STUCKE, *Virtual Competition: the promise and perils of the algorithm-driven economy*, cited *supra*, at p. 91.

systems were showed different prices when navigating online[36], based on the assumption that they were willing to pay more for products/services[37].

Even though the big data phenomenon has greatly increased undertakings' capability to trace users, the quantity and quality of data are still not sufficient to engage in *first degree* price discrimination. As a result, to identify users' individual willingness to pay, undertakings still have to rely on assumptions[38]. However, new technologies and behavioral economics facilitated *behavioral discrimination*. Due to big data and big analytics undertakings operating online can detect which factors induce users to buy and at which moment they are more likely to spend more on a product or service rather than less. In other words, online operators can exploit individuals' biases, misperceptions, emotions and so on, thereby molding the demand and reducing consumer surplus[39]. This kind of personalization realistically cannot regard each single consumer, however, clusters of users are becoming more and more narrow, as data analytics progresses[40]. Behavioral discrimination comprises various

[36] O. BAR-GILL, *Algorithmic price discrimination*, cited *supra*, at p. 226; A. HANNAK ET AL., *Measuring price discrimination and steering on E-commerce websites*, proceedings of the 2014 Conference on internet Measurement Conference 305, November 2014 (reporting, among other observations, that Home Depot shows different products depending on whether the user is browsing through his phone or not and on which operating system he/she has);

[37] Other types of information that may be useful to engage in third degree price discrimination may be derived from users' purchase history. For instance, starting from customers' history, Allstate's algorithm considered the likelihood of a potential customer to compare prices before purchasing insurance to personalize its strategy. See: A. EZRACHI and M.E. STUCKE, *Virtual Competition: the promise and perils of the algorithm-driven economy*, cited *supra*, at p. 91.

[38] In order to make accurate assumptions on users' behavior and on their reactions to a given price, behavioral studies are pivotal. As a matter of fact, it was observed that neoclassical theories on human behavior are simplistic and based on the model of a rational consumer. However, there are numerous factors that influence individuals' behavior, to the point that people rarely have a fixed reservation price to purchase a given product/service. As a matter of fact, as studies on behavioral psychology and economics advanced, it emerged how consumers' decisions are not mainly driven by rationality as they stem from irrational factors. As a matter of fact, humans' decision-making process is full of errors and are guided by biases. See: R.H. THALER and C.R. SUNSTEIN, *Nudge,* Penguin books, 2008-2009, at p. 7.

[39] A. EZRACHI and M.E. STUCKE*, Virtual Competition: the promise and perils of the algorithm-driven economy*, cites *supra*, at p. 101; O. BAR-GILL, *Algorithmic price discrimination*, cited *supra*, at pp. 228 and 245; G. WAGNER and H. EIDENMÜLLER, *Down by algorithms? Siphoning rents, exploiting biases, and shaping preferences: regulating the dark side of personalized transactions*, cited *supra*, at p. 583.

[40] It has been observed that the perspective of engaging in more and more efficient differential pricing strategies is likely to further increase online operators' competition for users' data. As it is well known, the new frontier for data collection lies in artificial intelligence combine with smart objects way beyond computers, tablets and phones. For example, the gathering of data on people's lives even when

strategies, among which the use of decoys[41], the so-called steering[42], drip pricing[43] and, finally, framing strategies[44].

i. One method to engage in behavioral discrimination relates to the use of decoys, which is based on the identification and exploitation of consumers' biases. In an experiment involving the offer of popcorns at the movie theater, National Geographic provided an example of how decoys work. In the experiment, popcorns were offered in sizes. In the first scenario movie goers were offered the choice between a small portion of popcorns at 3$ and a large portion at 7$, and almost everyone purchased the small portion explaining that 7$ for popcorns was too much. In the second scenario consumers could choose between three sizes, the small size at 3$, a medium size at 6,50$ and the large at 7$. In this case, the number of people purchasing the large size increased consistently. The decoy in this example was the medium size, which made the cost of the large portion look more favorable – since it was only 0.5$ more than the medium – and pushed them towards the more expensive choice. The use of decoys aims at alluring consumers towards a given choice, taking advantage of the irrationality of consumers.

ii. A second strategy that can be employed to the purpose of behavioral discrimination is steering, which relates to the way in which choices are

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they are not using their computer or phone is one of the outcomes of digital assistants. Larger platforms that developed digital assistants have access to a whole new set of information, they know people's habits much better because the "house butler" collects information and provides answers directly, thereby reducing the need to use the platform and show other contents. See M. STUCKE and A. EZRACHI, *Is your digital assistant devious?*, The university of Tennessee, research paper #304, 2016 and *Virtual Competition: the promise and perils of the algorithm-driven economy*, cited *supra*.

[41] This conduct entails employing an additional offer which purpose is to make another offer appear more reasonable. In other words, undertakings aim at nudging customers towards a specific offer, by adding a different choice for the sole purpose to make the first one more appealing.

[42] This practice consists in showing different offers in response to a query based on users' presumed willingness to pay.

[43] This strategy is employed by presenting an initial "low" price to which fees are added at a later moment.

[44] Framing strategies aim at presenting a higher price in a way that makes it acceptable in the eye of customers.

presented. For instance, based on the data collected, the results generated in response to a user's query may be shown in a different order. If the user is deemed to have a higher reservation price, more expensive options are going to be presented first. On the contrary, if the same individual is presumed to be less willing to pay for a given product, cheaper options are going to be presented first in the list.[45].

iii. A third method to implement behavioral discrimination is drip pricing. This practice is based on the consideration that in chaotic situations it is easier to persuade individuals to do something they may have not done otherwise. In other words, complexity weakens rationality. The same is true for markets[46]. In particular, the more complex pricing schemes are, the more undertakings are able to influence consumers' choices. In the case of drip pricing, a product or service is initially offered at a lower price and then additional charges are applied[47]. Adding more and more parameters to the price structure allows undertakings to leverage consumers' behavioral biases and errors. Besides its exploitative effects towards consumers, this conduct also reduces effective competition by making it harder for customers to compare all offers available on the market[48].

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[45] A. EZRACHI and M.E. STUCKE, *Virtual Competition: the promise and perils of the algorithm-driven economy*, cited *supra*, at pp. 107-108, reporting, among others, the example of Orbitz (a travel website) which was steering OS X users towards more expensive hotels by placing them higher among the search results; Executive office of the President of the United States, *Big data and differential pricing*, February 2015, p. 11, specifying that in the case of steering, platforms use information about potential buyers, but not at the individual level, like it happens in third degree discrimination, and that it can be done without the user knowledge; M. BOTTA and K. WIEDEMANN, *To discriminate or not to discriminate? Personalised pricing in online markets as exploitative abuse of dominance*, European journal of law and economics, vol. 50, issue 3, 2020, at p. 384.

[46] R.H. THALER and C.R. SUNSTEIN, *Nudge,* cited *supra*, at p. 96: "*When we face a small number of well-understood alternatives, we tend to examine the attributes of all the alternatives and then make trade-offs when necessary. But when the choice set gets large, we must use alternative strategies, and these can get us in trouble*".

[47] A. EZRACHI and M.E. STUCKE, *Virtual Competition: the promise and perils of the algorithm-driven economy*, cited *supra*, at p. 110, reporting other pricing strategies adopted by undertakings to exploit behavioral biases and errors (offering a "sale" off of an inflated regular price; offering a special deal limited in the number of goods available; offering a deal that has a time limit, etc.).

[48] Ibid., at p.108: to add complexity and exploit customers, additional parameters may relate not only to price, but also to qualitative features.

iv. Finally, consumers' biases and errors may be exploited by "framing" offers in particular ways. This practice entails framing differential pricing not in terms of a general increase in prices, but rather in terms of a discount offered to some consumers. This is a well-known strategy that is vastly employed in the brick and mortar world to reduce the sense of unfairness which would stem from a clear-cut price discrimination practice. In online markets as well, operators can frame their regular offers as "special offers", only available for a limited period of time. This way, less aware consumers can be nudged into purchasing the product. The difference between framing practices online and offline lies in the circumstance that on the internet each person only sees the offer as it is presented to him/her. In other words, users are less able to compare and information asymmetries are higher. The internet has the potential to isolate individuals into their own "bubbles" where they are not necessarily aware of the degree of personalization of their experience.

In conclusion, new technologies opened the possibility to better price discriminate, since the amount and quality of information gathered on potential and actual consumers is consistently increasing. Although *first degree* price discrimination remains not feasible, the accuracy of clustering and *third degree* differential pricing have definitely improved. Moreover, identifying and exploiting biases has become a more and more viable option, paving the way towards a more efficient behavioral discrimination. This practice also benefits from the high degree of personalization that characterizes users' experience on the internet.

5.6 The effects of personalized pricing and behavioral discrimination on the internet.

In addition to the generic effects of the practice under analysis, when employed over the internet price discrimination can have specific effects linked to the structure and characteristics of the digital market. As for the positive effects, static and dynamic

efficiency can increase as a result of differential pricing, due to the characteristics of the digital market[49]. Nonetheless, price discrimination may generate feedback loops that lock consumers in a personalized experience created on the basis of their past choices, as well as impact fairness and users' trust. Differential pricing may also result in an alteration of the structure of the digital market, leading to a more concentrated environment. The present paragraphs will analyze these effects.

As for the positive consequences of differential pricing, these include the increase of static efficiency, a decrease in prices – provided certain conditions are met –, the recovery of some fixed costs and a positive impact on dynamic efficiency. First of all, price discrimination in the digital market may increase static efficiency. In fact, an undertaking may be incentivized to lower prices for those consumers who would not be able to afford its products/services at full price, leading to a subsequent increase in output. In this case the total welfare would increase, although at least part of the consumer surplus would be transferred to the firm and customers who would end up paying more would be left worse-off. Secondly, the practice under analysis may contribute to redistribute wealth, depending on the degree of competition present in the market. If a monopolist were to practice price discrimination it would likely result in a redistribution of wealth in its favor. On the contrary, in a competitive environment, undertakings would likely more aggressively for consumers, eventually driving prices down[50]. Thirdly, price discrimination might allow online operators to recover the fixed costs they had to sustain to enter and survive in the market. Finally, differential pricing may have a positive impact on dynamic efficiency, resulting in incentives to innovate. This is especially important in digital markets, which tend to be highly innovative and dynamic, and market power is typically gained "*through means of innovation and differentiation*" [51].

[49] The digital market has similar features to those characterizing information goods. Moreover, this sector is particularly centered around innovation. See above para 3.

[50] OECD, *Personalised pricing in the digital era*, cited *supra*.

[51] Ibid., at p. 21.

As mentioned above, besides the positive effects of differential pricing, this practice raises various concerns. A first drawback stemming from the use of algorithms to exploit users' biases and errors, target them with personalized advertisements or to personalize prices, relates to lock-in effects and feedback loops. In order to personalize services, offers, ads, and so on, algorithms observe users' past choices to shape their future ones. As a result, consumers may find it difficult to find different options and get out of their "bubble"[52]. Moreover, users may not even be aware of the entirety of this phenomenon, due to the informational asymmetry that characterize the digital market. Nonetheless, it should be considered that individuals also have the possibility to shop offline and to use means to protect themselves from profiling, counterbalancing this negative effect of differential pricing online.

A second relevant concern raised by price discrimination online relates to fairness. On the internet each user's experience is personalized, hence individuals may not be aware of different options. As a result, fairness considerations should be considered in evaluating the practice. According to several surveys and studies, most users do not generally perceive differential pricing as fair or ethical[53]. Public reaction may be a powerful restraint for undertakings who wish to practice price discrimination, since consumers' perception greatly impacts firms' reputation.

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[52] This condition may be exacerbated by the growing use of personal digital assistats which is likely going to increase the lock-in of users. See G. WAGNER and H. EIDENMÜLLER, *Down by algorithms? Siphoning rents, exploiting biases, and shaping preferences: regulating the dark side of personalized transactions*, cited *supra*, at pp. 598-603. The authors observed that the algorithms that target users with offers – and that are at the core of online platforms, digital assistants and smart objects – are designed by the other side of the relevant transaction.

On price discrimination based on geographic data, see also: J. HOJNIK, *Tell me where you come from and I will tell you the price: ambiguous expansion of prohibited geographical price discrimination in the EU*, Common market law review, vol. 56, 2019, pp. 23–60.

[53] OECD, *Personalised pricing in the digital era*, cited *supra*, at p. 24: "*a survey to 1500 households in the US, where a vast majority of 91% of the respondents revealed strong objections to retailers charging different prices for the same product using personal information, against 8% who had a positive response. In comparison, the recent 2018 survey by the European Commission to over 20 thousand consumers revealed an equally small share of respondents seeing personalized pricing as having primarily benefits, though a much larger share of individuals with a neutral position*"; A. EZRACHI and M.E. STUCKE, *Virtual Competition: the promise and perils of the algorithm-driven economy*, cited *supra*, at p. 123, reporting the results of a couple of studies which found that price discrimination is perceived by many consumers as "ethically wrong".

Third of all, differential pricing may have exclusionary effects on the market involved. Specifically, when implemented towards business customers, price discrimination may be detrimental for competitors who are offered a higher price. In the digital market, this concern might arise, for example, in relation to e-commerce platforms charging different prices to business users. Moreover, price discrimination may also increase barriers to entry or expansion. As a matter of fact, new entrants may not have a sufficiently solid consumer base to compete with established undertakings by personalizing prices[54].

Finally, the effects of online differential pricing on privacy cannot be overstated. As discussed above, to engage in price discrimination or behavioral discrimination, online market operators require a massive amount of information on users. These data can be collected in a variety of ways: through online services, websites, applications, by using cookies[55] or by buying data from data brokers[56] and so on. The knowledge extracted from this information can be then used by market operators to engage in differential and behavioral pricing. It has been observed that the possibility to employ the practice under analysis may have the effect of provoking providers of online services to degrade their level of data protection[57]. The alleged degrading effect of differential pricing on users' privacy protection is particularly problematic since market power in the digital market is in the hands of a few large platforms and users face several obstacles to switching providers[58].

The phenomenon of price and behavioral discrimination, especially when employed over the internet -through algorithms that make educated guesses on users' tastes and past choices, exploiting biases, errors and misperceptions, based on the data collected and their analysis- is unlikely stop. Consumers' possibly negative reaction

[54] Ibid., at p. 119.

[55] Cookies are small text files that are placed by a website on a user's computer. Cookies then signal the website every time the user visits that site. This way the website knows which pages the user visited, whether he/she is currently logged in, etc.

[56] Data brokers are are subjects that collect users' data in order to resell them to customers.

[57] A. ODLYZKO, *Privacy, Economics, and price discrimination on the internet [extended abstract]*, 27th July 2003, Digital technology center, University of Minnesota, at pp. 2-5.

[58] Among which the above-mentioned switching costs, lock-in effects and network effects make it more difficult for users to switch services.

may be avoided through an intelligent framing and the adoption of complicated price schemes. Moreover, as browsing online becomes a more and more personalized experience, users will not necessarily be aware that they are being discriminated against. Consumers may even get used to this practice as they did to versioning, which is very common in the digital market[59], to personalized discounts and coupons, etc. While competition in the market may counteract these drawbacks, this practice may be more problematic in sectors, like the digital one, where a few large operators hold the majority of market power. In light of these considerations, the question arises whether price and behavioral discrimination fall into article 102 TFEU.

5.7 The EU case law on discriminatory pricing conducts: rebates.

In the United States of America price discrimination is prohibited as an antitrust violation, provided that certain circumstances are met. Specifically, the Robinson-Patman Act of 1936 bans price discrimination when it lessens competition, creates a monopoly or when it "*injure(s), destroy(s), or prevent(s) competition with any person who grants or knowingly receives the benefit of the discrimination, or with the customers of either of them*"[60]. In particular, there are two possible lines of injury linked to price discrimination: the primary and the secondary line. The former relates to the harm that can be caused to competitors of the undertaking implementing the discriminatory practice. The secondary line of injury consists in the repercussions that the conduct under analysis might cause on customers of the undertaking engaging in differential pricing[61]. The Act does not apply to discriminatory pricing strategies

[59] Numerous applications offer a "free" less-qualitative version and a "paid" version that allow users to benefit from more features. For instance, this practice has been employed by Spotify – that offers a free version with advertisements and a limited number of times in which users can skip tracks – as well as Amazon – which offer a prime version that grants faster delivery, access to a streaming platform, a number of free e-books and so on.

[60] The Robinson-Patman Act, 1936, Section 2(a). See: Federal Trade Commission site, The Robinson-Patman Act: annual update, April 2, 1998 (https://www.ftc.gov/public-statements/1998/04/robinson-patman-act-annual-update#N_4_).

[61] Federal Trade Commission site, The Robinson-Patman Act: annual update, April 2, 1998 (https://www.ftc.gov/public-statements/1998/04/robinson-patman-act-annual-update#N_4_); Federal

towards end consumers. Nonetheless, this provision has rarely been enforced and most actions brought under this act have been filed by private plaintiffs[62]. On the contrary, in the European Union differential pricing is not expressly prohibited. However, discriminatory pricing conducts have been addressed under article 102 TFEU. As a result of the enforcement of article 102 TFEU, a consistent case law was created on several practices that fall into the category of differential pricing. In particular, present paragraph will analyze the EU case law on rebates.

As mentioned above, discounts fall into the category of second-degree price discrimination. Through its case law, the Court of Justice identified different types of rebates[63]: firstly, quantity rebates include discounts linked to the volume/quantity of the product purchased; second of all, fidelity/exclusivity rebates, which are designed to build customers' loyalty; finally, a third type of rebates is linked to a purchasing target. These categories will be further analyzed below.

To begin with, quantity rebates include discounts lined to the quantity of product purchased and, according to the European Court of Justice, are generally legal. In the "*Suiker Unie" UA and Others v. Commission*[64] case, the Court clarified that quantity discounts are "*exclusively linked with the volume of purchases from the producer concerned*" [65]. Moreover, in the *Hoffmann La-Roche*[66] judgement it was stated that quantity rebates are legitimate in so far as they are linked to the volume of purchases. In the *Michelin II*[67] case, the Court of Justice expanded on the reason why quantity rebates are lawful. Paragraph 58 of the judgement under analysis observed that increasing the quantity of products supplied often results in a drop of the costs of

Trade Commission site, Price Discrimination: Robinson-Patman Violations, (https://www.ftc.gov/tips-advice/competition-guidance/guide-antitrust-laws/price-discrimination-robinson-patman).

[62] A. EZRACHI and M.E. STUCKE, *Virtual Competition: the promise and perils of the algorithm-driven economy*, cited *supra*, at p. 128.

[63] Court of Justice, T-286/09, *Intel v. Commission*, cited *supra*, at points 75-78.

[64] See: Court of Justice, J.C. 40 to 48, 50, 54 to 56, 111, 113 and 114/73, "*Suiker Unie" UA and Others v. Commission of the European Communities*, 16 December 1975, ECLI:EU:C:1975:174.

[65] Ibid., at point 518.

[66] Court of Justice, c-85/76, *Hoffmann La-Roche & Co AG v. Commission of the European Communities*, cited *supra*, at point 90.

[67] See: Court of Justice, T-203/01, *Manufacture française des pneumatiques Michelin v. Commission of the European Communities*, cited *supra*.

production, which can be passed on by the undertaking to the customer. Therefore, quantity rebates reflect a cost reduction enjoyed by the dominant undertaking that is passed on to the customer. This line of thought was confirmed by the Court in *Intel*[68].

The second category of discounts identified by the Court of Justice consists in loyalty/exclusivity rebates. These discounts are based on the condition that customers get all or most of their supplies from the incumbent[69]. According to the case law of the Court, fidelity rebates are incompatible with the objective of undistorted competition within the internal market. Unlike quantity rebates, this practice is not based on a transaction that justifies the connected burden or benefit, rather it is intended to deprive customers of other sources of supply and deny competitors access to the market[70]. Nonetheless, the Court recognized the possibility for undertakings to justify their conduct by proving the existence of "*exceptional circumstances which may make an agreement between undertakings in the context of article 85 [now article 101 TFEU] and in particular of paragraph (3) of that article, permissible*" [71].

In relation to fidelity debates, the Court of Justice has analyzed both the standard of proof in relation to the effects of this conduct as well as the applicable legal framework.

As for the burden of proof, in 2010 the Court of Justice observed that in order to consider the practice abusive, the Commission should "*consider whether [it] is intended to restrict or foreclose competition on the relevant market or is capable of doing so*" [72]. On the contrary, the analysis of its actual effects on the market was not

[68] Court of Justice, T-286/09, *Intel Corp. v. European Commission*, cited *supra*, at point 75.

[69] See: Court of Justice, J.C. 40 to 48, 50, 54 to 56, 111, 113 and 114/73, "*Suiker Unie" UA and Others v. Commission of the European Communities*, cited *supra*; Court of Justice, c- 85/76, *Hoffmann La-Roche & Co AG v. Commission of the European Communities*, cited *supra*; Court of Justice, T-155/06, *Tomra v. European Commission*, cited *supra*.

[70] Court of Justice, c-85/76, Hoffmann La-Roche & Co AG v. Commission of the European Communities, cited *supra*, at point 7.

[71] Ibid., at point 90. Moreover, in the *Intel* case the Court further clarified that such justification could consist in advantages in terms of efficiency which also benefit consumers, see: Court of Justice, C-413-14 P, *Intel v. European Commission*, cited *supra*, at point 140.

[72] Court of Justice, T-155/06, *Tomra v. European Commission*, cited *supra*, at point 125.

deemed to be necessary[73]. In its judgement on the *Intel* case[74], however, the Court changed the burden of proof necessary to enforce article 102 TFEU in relation to fidelity rebates. By referring to the *Post Denmark* precedent[75], the Court of Justice stated that if, during the administrative procedure, the undertaking submits evidence that its conduct is not capable of restricting competition and produce a foreclosing effect, the Commission needs to assess the existence of a strategy aiming at excluding competitors at least as efficient as the dominant undertaking[76]. The application to fidelity rebates of the as efficient competitor test had the effect of raising the burden of proof for antitrust authorities[77].

As for the legal framework applicable to fidelity rebates, in the *Suiker Unie* case, the Court the identified two relevant provisions to the practice under analysis, namely letters (b) and (c) of article 102 TFEU[78], but it did not clarify which one was applicable.

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[73] Ibid., at point 219.

[74] See: Court of Justice, C-413-14 P, *Intel v. European Commission*, cited *supra*.

[75] Court of Justice, C-209/10, *Post Danmark A/S v. Konkurrencerådet*, 27 March 2012, ECLI:EU:C:2012:172, at point 29.

[76] In the recent judgement adopted by the Court of Justice, T-286/09 RENV, *Intel Corporation Inc. v European Commission*, 26 January 2022, ECLI:EU:T:2022:19, at point 522, this interpretation was confirmed. In particular, the EU Court stated that "*although a system of rebates set up by an undertaking in a dominant position on the market may be characterised as a restriction of competition, since, given its nature, it may be presumed to have restrictive effects on competition, the fact remains that what is involved is, in that regard, a mere presumption and not a per se infringement of Article 102 TFEU, which would relieve the Commission in all cases of the obligation to examine whether there were anticompetitive effects*".

[77] The Court stated that the "*balancing of the favorable and unfavorable effects of the practice in question on competition can be carried out in the Commission's decision only after an analysis of the intrinsic capacity of that practice to foreclose competitors which are at least as efficient as the dominant undertaking*". Court of Justice, C-413-14 P, *Intel v. European Commission*, cited *supra*, at point 140.

It is worth noting that only two years prior to the Intel judgement, when questioned on the application of the as-efficient-competitor test to cases involving rebates, in a preliminary judgement the Court expressly stated that the test simply reflects the Commission's approach to the choice of cases to pursue. The as-efficient-competitor test is not required by article 82 EC (now 102 TFEU). See: Court of Justice, C-23/14, *Post Danmark A/S v. Konkurrencerådet*, 6 October 2015, ECLI:EU:C:2015:651, at points 51-58.

[78] Article 102 TFEU: "(b) the limitation of production, markets or technical development to the prejudice of consumers; (c) *applying dissimilar conditions to equivalent transactions with other trading parties, thereby placing them at a competitive disadvantage*".

In particular, the Court observed that two costumers purchasing the same amount of product would have ended up paying a different price based on whether they were also purchasing from other producers. Given that SZV's customers competed with each other, the judgement seems to imply that the ones paying a higher price were put at a 'competitive disadvantage'. However, the Court's reasoning on this point appears incomplete and did not go further than implying the existence a competitive

Later on, in the Hoffmann La Roche judgement, the Court appeared to have qualified fidelity rebates as a conduct applying dissimilar conditions to equivalent transaction, thereby confirming the application of article 102 TFEU letter c).

Finally, as mentioned above, the third category of discounts includes those in which "*the grant of a financial incentive is not directly linked to a condition of exclusive or quasi-exclusive supply from the undertaking in a dominant position, but where the mechanism for granting the rebate may also have a fidelity-building effect*" [79]. In order to verify whether these rebates violate article 102 TFEU, it is necessary to consider all the circumstances of each case, among which the rules and criteria governing the discounts, the extent of the dominant position of the incumbent and the competitive conditions of the market involved[80]. Finally, the Court established that it must be verified that the practice tends to exclude or restrict "*the buyer's freedom to choose his sources of supply, to bar competitors from access to the market, or to strengthen the dominant position by distorting competition*" [81].

In conclusion, the case law of the Court outlined the following system: quantity rebates are generally considered legal; the lawfulness of loyalty rebates depends on their intrinsic capacity to harm at least as-efficient competitors; finally, as for discounts falling into the third category, their legality has to be determined in light of all the circumstances of each case.

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disadvantage. In the case under analysis, the Court seemed to be more inclined towards the application of letter (b) of article 102 TFEU. In fact, the Court observed that the conduct had the effect of restricting other producers' opportunities to compete on the market, thus causing a limitation of the market to the prejudice of consumers. According to this interpretation, the practice of the incumbent would fall under the above mentioned provision.

[79] Court of Justice, T-286/09, *Intel Corp. v. European Commission*, cited *supra*, at point 78.

[80] In particular, in 2015 the Court clarified that the circumstance that need to be analyzed, in order to determine whether rebates falling in the "third category" are abusive, include the extent of the dominant position of the undertaking concerned and the particular conditions of competition prevailing on the relevant market. See: Court of Justice, C-23/14, *Post Danmark A/S v. Konkurrencerådet*, cited *supra*.

[81] Court of Justice, T-286/09, Intel Corp. v. European Commission, cited *supra*, at point 78.

5.8 The EU case law on discriminatory pricing conducts: price related abuses.

Although the European Union does not prohibit differential pricing, when implemented by a dominant undertaking and provided it has – at least potential – anticompetitive effects in the internal market, this practice may fall under article 102 TFEU. Abusive pricing strategies[82], in particular, can be addressed under article 102 letters (a) and (c). While the former provision prohibits dominant undertakings from imposing, directly or indirectly, unfair purchase or selling prices, the latter sanctions the application of dissimilar conditions to equivalent transactions with other trading parties, when these conditions place them at a competitive disadvantage. While to implement the conduct prohibited by letter (a) it is necessary to verify the unfairness of the prices and/or trading conditions applied by the undertaking, letter (c) requires a comparison between the conditions applied to more than one transaction and for the discriminatory conduct to cause a competitive disadvantage to some customers compared to others.

Despite its wording[83], the jurisprudence of the Court of Justice on letter (c) clarified that the competitive disadvantage is an additional and independent requirement. Moreover, the Court appears to have progressively widened undertakings' possibilities to justify their discriminatory conducts. As for unfair prices, this conduct consists in pricing products excessively with respect to their economic value. In order to evaluate when a price is excessive, antitrust authorities have to compare it to the cost of production of the product/service, which, however, is rarely known. Therefore, the Court has increasingly expanded the methods that can be employed to prove the excessive character of a price. The present paragraph will examine the EU case law on letters (a) and (c) of article 102 TFEU.

[82] With the exclusion of rebates, which were analyzed in the previous paragraph.

[83] Letter c) employs the term "thereby", which seems to suggest that the competitive disadvantage is merely a consequence of the discriminatory abuse.

The first judgement concerning anticompetitive practices falling into the categories of price discrimination and unfair prices is the well-known *United Brands Company* ("UBC") case[84]. On the one hand, UBC was employing a discriminatory pricing strategy towards its customers on the basis of their nationality. On the other hand, the undertaking was accused of applying unfair prices, which were deemed to be excessive in relation to the economic value of its product. As for the first practice, the EU Court found that UBC applied discriminatory prices to equivalent transactions[85], since the difference in the price at which its products were sold did not reflect a difference in the costs endured by the undertaking[86]. In light of these circumstances, the discriminatory conduct was not justified and violated letter (c) of article 102 TFEU. The EU Court, in particular, recognized that UBC placed some distributors at a competitive disadvantage[87]. As for the second conduct[88], the Court of Justice clarified

[84] See: Court of Justice, c-27/76, *United Brands Company and United Brands Continentaal BV v. Commission*, 14 February 1978, ECLI:EU:C:1978:22.

[85] Ibid., at points 224-225: "*These price differences can reach 30 to 50% in some weeks, even though products supplied under the transactions are equivalent (...). In fact the bananas sold by UBC are all freighted in the same ships, are unloaded at the same cost in Rotterdam or Bremerhaven and the price differences relate to substantially similar quantities of bananas of the same variety, which have been brought to the same degree of ripening, are of similar quality and sold under the same "Chiquita" brand name under the same conditions of sale and payment for loading on to the purchaser's own means of transport and the latter have to pay customs duties, taxes and transport costs from these ports*".

[86] UBC, in particular, was selling its product to distributors in different member states at a price that was based on its predictions on the market conditions concerning end consumers. However, since UBC only sold to distributors, the discriminatory practice was based on conditions relevant to a stage in which the incumbent was not involved. As a matter of fact, only sellers and distributors bore the risks related to the sales to end consumers. As a result the interplay between demand and supply was not applied at a stage where it really manifested. See: Court of Justice, c-27/76, *United Brands Company and United Brands Continentaal BV v. Commission*, cited *supra*, at points 232-234.

[86] Court of Justice, c-27/76, *United Brands Company and United Brands Continentaal BV v. Commission*, cited *supra*, at points 232-234.

[87] Court of Justice, c-27/76, *United Brands Company and United Brands Continentaal BV v. Commission*, cited *supra*, at points 232-234.

[88] As mentioned above, the Commission also considered the prices applied by the incumbent to be unfair. In particular, the institution pointed out their excessive character compared to the *economic value* of the product sold. This conclusion was based on the comparison between the different prices applied by UBC in the internal market. In particular, the allegedly unfair, higher prices applied by the undertaking towards some distributors, were considered to be excessive in relation to the lowest prices applied in the internal market – which, however, still yielded profit.

that in order to prove the excessive character of a price, the EU antitrust authority can, inter alia, compare the price to the cost of production of the good[89].

In a later judgement[90], the EU Court further clarified the conditions that have to be met to apply letter (c) of article 102 TFEU and, in particular, the creation of a competitive disadvantage. The case was brought in front of the Court of Justice by *British Airways*, which was sanctioned by the Commission for the employment of discriminatory performance reward schemes [91]. In relation to the competitive disadvantage required by the provision under analysis, the EU Court clarified that the discriminatory behavior implemented by the dominant undertaking has to aim at hindering the competitive position of some business partners compared to others, having regards to all the circumstances of the case. Nonetheless, the Court affirmed that it is not necessary to prove "*an actual quantifiable deterioration in the competitive position of the business partner taken individually*" [92]. Hence, it is sufficient to prove the tendency of the discriminatory conduct to hinder the competitive position of some of the trading partners involved.

In 1989, the Court of Justice delivered a ruling on a case concerning the imposition of unfair prices[93]. The case involved an undertaking holding a *de-facto* monopoly in the market for the management of copyright in musical works in France. The incumbent applied different tariffs based on the nationality and the economic nature of the establishments of its customers. In this judgement, the EU Court included among the elements that may be used to verify the unfairness of a given trading condition the

[89] Furthermore, the EU Court stated that it is necessary to establish whether a price is unfair in itself or compared to competing products.

In the case under analysis, the Court found that the proof of the unfairness of the prices practiced by UBC put forward by the Commission was insufficient and, therefore, annulled the correspondent part of the decision. Court of Justice, c-27/76, *United Brands Company and United Brands Continentaal BV v. Commission*, cited *supra*, at points 249-252.

[90] See: Court of Justice, C-95/04 P, *British Airways plc v Commission of the European Communities*, 15 March 2007, ECLI:EU:C:2007:166.

[91] According to the Commission, these schemes were applied to reward travel agencies that would sell a certain amount of British Airways' tickets, in order to exclude competitors in the market of air transport. See: ibid., at point 11.

[92] Ibid., at points 144-145.

[93] See: Court of Justice, c-395/87, *Ministère public v Jean-Louis Tournier,* 13 July 1989, ECLI:EU:C:1989:319.

comparison between the different tariffs applied by the incumbent to customers in different Member States[94]. Nonetheless, it was recognized that the undertaking involved may provide an objective justification for its conduct linked to the dissimilarities characterizing the transactions involved[95].

In its judgement on the *Kanal* case[96], dated 2008, the Court of Justice further clarified its case law on unfair and discriminatory pricing strategies. First of all, the EU Court confirmed that the imposition of prices that are excessive compared to the economic value of the product may constitute an abuse of dominance[97]. In the case under analysis, however, the Court considered that the incumbent applied prices that reflected a balance between the interests of all parties involved[98]. Nonetheless, according to the judgement, the legitimacy of a similar conduct also depends on the inexistence of an alternative, more efficient method to balance the interests involved[99]. As for the application of discriminatory prices[100], the EU Court reaffirmed that a similar practice may amount to an abuse if it results in the application of different conditions to equivalent transactions, placing some customers at a competitive

[94] It should be noticed that in this judgement, the Court does not clarify whether the conduct employed by the incumbent falls in one of the letters listed by article 86 EEC (now 102 TFEU).

[95] Court of Justice, c-395/87*, Ministère public v Jean-Louis Tournier*, cited *supra*, at point 46. In the case under analysis, the Court clarified that the incumbent could provide objective justifications linked to objective and relevant dissimilarities between copyright management in the Member State concerned and copyright management in the other Member States.

[96] See: Court of Justice, C-52/07, *Kanal 5 Ltd and TV 4 AB v Föreningen Svenska Tonsättares Internationella Musikbyrå (STIM) upa.*, 11 December 2008, ECLI:EU:C:2008:703.

In particular, this case involved a dispute between STIM – an association with a de facto monopoly over the Swedish market of copyright-protected music available for broadcasting on television – and two television channels, namely Kanal 5 and TV 4. In this context, three questions were referred to the Court of Justice by a Swedish judge: firstly, whether the application by STIM of different royalties based on the revenue and amount of music broadcasted by customers constituted an abuse of dominance; secondly, whether the existence of a more precise method to identify the amount of protected music employed by customers had an effect on the classification of STIM's conduct; finally, whether the fact that STIM calculates the royalties differently for commercial and public broadcasting companies constitutes an abuse.

[97] Ibid., at point 28.

[98] Namely, music composers and television broadcasting companies.

[99] Ibid., at point 40. This reasoning appears quite complex. Linking the legitimacy of a given conduct to the inexistence of a viable alternative may generate confusion.

[100] In this case, one of the complaints was that the royalties payed by public channels were lower than the ones payed by private ones.

disadvantage, unless the conduct can be objectively justified[101]. In this case, in particular, the fact that certain transactions involved public counterparts led the Court to consider the difference in the prices applied legitimate. Consequently, it appears that in order to justify the application of different prices, dominant undertakings may advance the different nature – public or private – of the parties involved[102].

In 2017, the EU Court delivered a ruling concerning the methods that may be employed by antitrust authorities to prove the excessiveness of the prices practiced by dominant undertakings[103]. Besides the comparison between the price of a product and the cost of its production, antitrust authorities can compare the prices practiced by the incumbent in different member States[104] or for different user segments[105], on a consistent basis. This method may take into account even a limited number of member States, provided that the selection is based on "*objective, appropriate and verifiable criteria*"[106], which may include, inter alia, consumption habits and other economic

[101] Court of Justice, C-52/07, *Kanal 5 Ltd and TV 4 AB v Föreningen Svenska Tonsättares Internationella Musikbyrå (STIM) upa*., cited *supra,* at points 47-48. The Court of Justice clarified that "*the task and method of financing of public service undertakings*" may give rise to an objective justification, thereby validating, to some extent, the differences in trading conditions based on the public or private nature of a customer.

[102] The case under analysis leaves room to argue whether the justifications that undertakings can put forward in cases involving discriminatory prices, may only relate to circumstances that result in the inexistence of the conditions required by letter (c) of article 102 TFEU – for example the equivalence of the transactions affected – or can also be economic justifications – for instance those provided for by article 101 paragraph 3.

[103] See: Court of Justice, C-177/16, *Biedrība "Autortiesību un komunicēšanās konsultāciju aģentūra - Latvijas Autoru apvienība" Konkurences padome*, 14 September 2017, ECLI:EU:C:2017:689.

The case involved a dispute between Akka/Laa, a collective management organization handling copyright for musical works, and the Latvian Competition Council. The latter fined Akka/Laa for having applied unfair fees for the use of musical works in Latvia. The decision was appealed, and the case arrived in front of the Latvian Supreme Court, which stayed the process and referred several questions to the European Court of Justice.

[104] It should be pointed out that the dominant undertaking may justify the difference by advancing on objective dissimilarities among the States considered.

[105] For example, shops and service centers of a specific surface areas, if there are indicators that they are affected by excessive fees.

[106] Court of Justice, C-177/16, *Biedrība "Autortiesību un komunicēšanās konsultāciju aģentūra - Latvijas Autoru apvienība" Konkurences padome*, cited *supra*, at point 41. "*Therefore – continued the Court – there can be no minimum number of markets to compare and the choice of appropriate analogue markets depends on the circumstances specific to each case*".

and socio-cultural factors[107]. The Court also clarified that to be excessive, the rates have to be "appreciably higher" that those practiced elsewhere, considering the circumstances of each case. Moreover, the difference in the prices practiced by the incumbent has to be significant and prolonged[108].

In 2018, the Court of Justice further clarified its case law on the concept of "competitive disadvantage" [109]. The EU Court stated that, in order to meet the requirements laid down by letter (c) of article 102 TFEU, the discriminatory conduct employed by the incumbent has to tend to distort competition[110], which does not automatically follow the mere disadvantage of a customer with respect to others that benefitted from more favorable conditions. Nonetheless, it is not necessary to provide proof of an actual, quantifiable deterioration of competition, being sufficient to evaluate if the conduct is capable of producing, a competitive disadvantage. In *MEO*, the EU Court seems to have increased the requirements necessary to find a competitive disadvantage. It is not enough to demonstrate that some customers were put at a disadvantage compared to others by the discriminatory conduct, rather the tendency of the conduct to hinder competition must be proven, in light of all the circumstances of the case. The latter include: "*the undertaking's dominant position, the negotiating power as regards the tariffs, the conditions and arrangements for charging those tariffs, their duration and their amount, and the possible existence of a strategy aiming to exclude from the downstream market one of its trade partners which is at least as efficient as its competitors*" [111]. While in the *British Airways* case the EU Court already stated that the circumstances of the case must be taken into account, in order to prove

[107] Ibid., at point 42: "*such as gross domestic product per capita and cultural and historical heritage*". However, if the comparison includes member States where living standards differ, the competition Authority has to take into account the PPP index (i.e. the purchasing power parity index).

[108] Episodic or temporary differences cannot be regarded as abusive.

[109] See: Court of Justice, C-525/16, *MEO v. Serviços de Comunicações Multimédia SA*, 20 December 2017, ECLI:EU:C:2018:270.

The case involved MEO, an entity providing a paid television signal transmission service and television content, and GDA, a non-profit cooperative managing the rights of artists and performers. According to MEO, GDA abused its dominant position by applying discriminatory conditions to equivalent transactions. The case was referred to the Court of Justice by a Portuguese judge.

[110] Ibid., at point 25.

[111] Ibid., at point 31.

the existence of a competitive disadvantage, the more favorable treatment of some customers compared to others was central[112]. In *MEO*, on the contrary, this factor appears to be less relevant compared to the tendency of the conduct to hinder competition[113].

Finally, in 2020 the Court of Justice delivered a ruling further clarifying the methods through which the unfairness of the prices applied by the incumbent, in violation of article 102 TFEU letter (a), can be assessed[114]. First of all, the EU Court recalled that the imposition by a dominant undertaking of prices that do not have any reasonable connection to the economic value of the product/service may constitute an abuse of dominance[115]. Moreover, the excessive character of a price has to be determined in light of all the relevant circumstances of each case. To determine if a price is excessive[116], in this judgement the EU Court clarified that antitrust authorities may also compare the price applied at the present time to the prices practiced in the past by the incumbent in the same relevant market, for the same product/service[117].

In conclusion, the imposition of discriminatory or unfair prices by a dominant undertaking may be considered abusive under article 102 TFEU. On the one hand, letter (a) of the article prohibits dominant undertakings from applying unfair conditions. A price is considered unfair when it is "excessive", i.e. when it has no reasonable relation with its economic value. In order to assess this requirement,

[112] Court of Justice, C-95/04 P, *British Airways plc v European Commission,* cited *supra*, at point 143.

[113] Court of Justice, C-525/16, *MEO v. Serviços de Comunicações Multimédia SA*, cited *supra*, at point 31. In addition, it should be noticed that among the circumstances that competition authorities should considered when applying article 102 TFEU letter (c) there is the existence of a strategy of the undertaking aiming at excluding a trade partner from the downstream market that is at least as-efficient as its competitors. This particular circumstance appears to be connected to the Intel case (see: Court of Justice, C-413-14 P, *Intel v. European Commission*, cited *supra*, at point 139).

[114] See: Court of Justice, C-372/19, *Belgische Vereniging van Auteurs, Componisten en Uitgevers CVBA (SABAM) contro Weareone.World BVBA e Wecandance NV*, 25 November 2020, ECLI:EU:C:2020:959.

[115] Ibid., at point 28.

[116] Ibid., at point 31. The Court also recalled the methods already established by its case law, among which the comparison between the price and the cost of production. In this case, if the disproportion is excessive, it must be verified whether the price is unfair in itself or compared to competing products or services.

[117] Ibid., at 32.

antitrust authorities can compare the price of the product to the cost of production, to the prices practiced by the incumbent for the same product on the same relevant market in the past, and to the different prices applied in other member States or to different segments of users on a consistent basis. On the other hand, letter (c) of article 102 addressed the imposition of discriminatory prices. This provision prohibits dominant undertakings from applying different conditions to equivalent transactions, thereby putting (some) customers at a competitive disadvantage. According to the Court, in evaluating the equivalence of the transactions involved, antitrust authorities should consider their object, the quality and the cost of the products/service. As for the competitive disadvantage, the EU Court clarified that the abusive conduct must tend to hinder competition among customers, having regards to the whole of the circumstances of the case. While the mere disadvantage caused to a customer compared to others is not sufficient to prove the capability of the conduct to distort competition, it does not seem necessary to prove the existence of an actual, quantifiable deterioration of competition.

5.9 The application of article 102 TFEU to price discrimination over the internet.

In general, the EU case law on unfair and discriminatory prices appears to be applicable to price related conducts implemented on the internet, as long as the above-analyzed conditions are met. Hence, a dominant platform applying unfair or discriminatory prices could be sanctioned under article 102 letter (a) or (c). Nonetheless, some issues arise in relation to, first of all, the employment of discriminatory and unfair practice towards end consumers. Secondly, the numerous forms of behavioral discrimination that can be adopted online may prevent antitrust authorities from identifying a single framework. Thirdly, the possible relevance of these conducts for privacy and consumer protection policies raise the question on the opportunity for competition law to be enforced. Finally, the detection of these

conducts, in particular by end users can be especially difficult online, which in turns risks to harm competition. These aspects will be further discussed below.

First of all, while applying discriminatory prices towards business customers may generate exclusionary effects [118], price discrimination towards end consumers constitutes an exploitative abuse. In light of this consideration, the application of letter (c) of article 102 TFEU might be problematic, since customers might not suffer a competitive disadvantage. Nonetheless, the application of this provision to the implementation of price discrimination towards end users should not be ruled out. Even this exploitative practice, in fact, may generate exclusionary effects, in particular in relation to entrants[119]. On the contrary, the application of letter (a) of article 102[120] to conducts directed at end users does not appear to raise issues[121].

Secondly, besides "straightforward" price discrimination, the application of article 102 TFEU to behavioral price discrimination raises issues as to which might be the suitable legal framework. Behavioral discrimination may be employed in numerous ways, which prevents the identification of a single applicable framework. Moreover, this practice does not appear to necessarily fall into any letter of article 102 TFEU. As a result, different forms of behavioral discrimination should be analyzed on a case by case basis in order to verify whether they meet the conditions required by the first paragraph of the article under analysis. This type of practice may result in the appropriation of consumers' surplus and reinforce the position of the incumbent on the market, therefore, their importance cannot be overstated[122].

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[118] That is the wording of the provision: "(*c) applying dissimilar conditions to equivalent transactions with other trading parties, thereby placing them at a competitive disadvantage*".

[119] Moreover, it is worth noting that the list of conducts of article 102 TFEU is merely illustrative. Hence, a discriminatory price practiced by an undertaking towards end consumers could be sanctioned as an abuse of dominance even without the application of letter (c). The same logic can be applied to unfair pricing strategies employed by dominant online platforms towards end users.

[120] Article 102 TFEU letter (a): "*directly or indirectly imposing unfair purchase or selling prices or other unfair trading conditions*".

[121] I. GRAEF, *Algorithms and fairness: what role for competition law in targeting price discrimination towards end consumers?*, cited *supra*, at pp. 541-559.

[122] Behavioral discrimination is also often perceived as unfair. Nonetheless, it is worth mentioning that there is room to argue that as time goes by consumers might more end up accepting this practice. See on this: A. EZRACHI and M.E. STUCKE, *Virtual Competition: the promise and perils of the algorithm-driven economy*, cited *supra*, at p. 130.

It has been argued that behavioral discrimination could be more efficiently tackled by data and consumer protection. On the one hand, since this practice is based on users' data, privacy protection may play a major role in the prevention and sanctioning of the forms of behavioral discrimination that infringe privacy regulations[123]. On the other hand, this practice may also constitute an unfair and/or misleading conduct which can be sanctioned under consumer protection law [124]. Nonetheless, the possible implications on the competitive structure of the internal market require the intervention of competition authorities, which cannot be excluded.

A final problem that arises with regard to price discrimination and behavioral discrimination online – especially towards end-users – relates to its detection. Due to the pervasive personalization of the majority of websites and internet services, end users may not necessarily be aware that they are being discriminated against. Given that contents available to each user are often tailored to him/her tastes and preferences, individuals may not find out that the price they are paying for a service or a product is different from that paid by someone else. This issue contributes to increase the risks that these conducts may raise in relation to the competitive structure of the market. It is, in fact, less likely that users will change provider – thereby redirecting the demand towards competitors – as a result of the implementation of price/behavioral discrimination if they are not aware of it.

In conclusion, discriminatory and unfair pricing strategies employed by online platforms appear to fall under the provisions of letter (a) and (c) of article 102 TFEU.

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[123] Executive Office of The President of The United States, *Big Data And Differential Pricing*, cited *supra,* at pp. 17-18; I. GRAEF, *Algorithms and fairness: what role for competition law in targeting price discrimination towards end consumers?*, cited *supra*, at pp. 550-551, observing how the obligations laid down by the GDPR for processors and controllers provide a relevant protection for users: for example article 21(2) of the regulation which gives the data subject the right to object to the processing of personal data for direct marketing purposes.

[124] Ibid., at pp. 551-552, the author reported that, although personalized pricing does not as such breach EU consumer protection law, "*a breach may occur when personalized pricing is combined with certain commercial practices*"; European Commission staff working document, *Guidance on the implementation/application of Directive 2005/29/EC on unfair commercial practices*, 25 May 2016, SWD(2016) 163 final, at p. 135, reporting as an example of possible breach the use of personal information gathered through the internet to "*exert undue influence, e.g. a trader finds out that the consumer is running out of time to buy a flight ticket and falsely claims that only a few tickets are left available. This could be in breach of Article 6(1)(a) and Annex I No 7 UCPD*".

While the case law of the Court on these conducts is generally solid, cases involving discriminatory prices applied to end users seem to lack. Nonetheless, it seems conceivable to apply letter (c) of the article under analysis even in similar circumstances, especially considering that these conducts may generate exclusionary effects even if they fall into the category of exploitative abuses. Moreover, antitrust authorities may also sanction abuses not falling into the list of conducts of the second paragraph article 102 TFEU, provided the conditions required by the first paragraph are met. This constitutes the most suitable solution, in particular, for abusive behavioral discrimination. The latter, in fact, may be realized in several ways, that cannot be captured by a standardized framework. As a result, the enforcement of article 102 TFEU in cases involving behavioral discrimination online will likely require a case-by-case analysis. The importance of enforcing competition law in cases when dominant undertakings employ these conducts, however, cannot be overstated. The digital market is particularly prone to a centralization of market power, which risks being intensified through abusive price-related behaviors. This circumstance is even more problematic considering that users might be unaware of discriminatory practices employed online, given the pervasive personalization of their experience.

Conclusions

The ever-growing importance of the digital market for the economy is undeniable. The recent pandemic contributed to highlight the indispensability of core platform services to maintain social relationships, to work from home, as well as for the purposes of entertainment and shopping. These services are commonly offered to users for free and they are centered around the collection and processing of data, the vital element of the digital sector. The accumulation of users' information, however, contributes to the centralization of market power in the hands of a few large operators. As a result, in the past few years, the European Commission took action to prevent the elimination of competition from the digital market. Accordingly, the enforcement of merger control and article 102 TFEU in this sector increased consistently. Given the strong link between market power and users' information, data-driven mergers and data-related abuses gained a central role for the purposes of antitrust enforcement. On the one hand, in fact, the acquisition of undertakings in possession of large datasets by online operators may strengthen the position on the market of the merged entity. On the other hand, data-related unilateral conducts may reach the objective of abusively collecting rivals and users' information or prevent competitors from accessing this crucial input. Moreover, large datasets also allow undertakings to engage in conducts that are directly harmful to consumers, first of which differential pricing strategies. In light of these considerations, this work investigated the relationship between data and market power in the digital sector and analyzed whether EU competition law is well-equipped to address data-driven mergers and data-related abuses of dominance. In exploring these issues, in particular, we identified as the main actors of this market, operators providing core platform services.

In general, although the specificities of this fast-changing sector have a strong impact on antitrust analysis, EU competition law is well-equipped to face these challenges. As explored in Part 1, the digital market presents certain characteristics that foster market concentration and the creation of winner-takes-all dynamics. Economies of scale and scope linked to the accumulation of users' data, as well

network effects typical of multi-sided providers, led to the majority of market power being held by a few large providers. Most of these operators built entire ecosystems around a main core platform service and act as gateways between business and end users. These circumstances have an undeniable impact on the definition of the relevant market and on the assessment of dominance.

Defining the relevant market is a crucial, initial step of antitrust analysis, as it provides the boundaries for the assessment of dominance and grants a deeper understanding of the market involved. As discussed in Part 1 of this work, the definition of the relevant market for online services requires to address four aspects: the multi-sided structure adopted by the majority of online platforms, the absence of a monetary price for the use of most core platform services, the presence of digital conglomerates and the opportunity to identify a market for users' data. To begin with, when dealing with multi-sided platforms, antitrust authorities must determine whether multiple markets should be defined and assess the relation existing among them. In order to do so, they may rely on two criteria: the level of homogeneity of competition conditions in all the different sides and the occurrence of a transaction on the platform. Secondly, while most of the elements relied upon by antitrust authorities to define the relevant market are applicable to online operators, the SSNIP test requires some adjustments. Due to the absence of a monetary price for most online services, in fact, this test cannot be applied to "free" markets as it is. As a result, several scholars suggested to rethink the test in order to base it on different parameters, among which quality (the so-called SSNDQ test). While still relying on the numerous qualitative elements that are available for the purposes of market definition, we observed that the Commission recently applied the SSNDQ test, specifically in its decision on Google Android[1]. A third issue that emerged in relation to the definition of the relevant market in the digital sector involves the existence of large ecosystems. Similar to single core platform services, digital ecosystems compete against each other. Depending on the circumstances of the specific case, antitrust authorities should assess whether it is

[1] European Commission, case AT.40099 – *Google Android*, 18/07/2018, at point 286.

necessary to identify a relevant market for a single service and/or an ecosystem-specific market that highlights the peculiar competitive conditions of the services included, as a whole. Finally, some authors suggested to define a specific market for data. Although this operation presents several challenges, especially in cases in which information is only employed as an input, it would provide authorities with a deeper understanding of the structure of the digital market, within which users' data play a central role.

As for the assessment of dominance, in light of the characteristics of the digital market, some aspects relied upon to measure market power may not prove as informative as they are in traditional markets. In particular, market shares based on the volume of sales are not as instructive in the case of online platforms. Nonetheless, this indicator can still be employed with minor adjustments, for example by basing market shares on the number of active users of a given platform over a predetermined period of time. Other elements, among which entry and expansion barriers, are particularly useful to the assessment of dominance in this sector. The digital market, in fact, is subject to strong network and lock-in effects, as well as barriers to entry related to users' data and to digital ecosystems. These circumstances should be taken into careful consideration for antitrust analysis to be accurate.

Overall, European antitrust rules are well-suited to define the relevant market and assess the existence of dominance in the digital market and specifically in relation to online services. This conclusion was reached by the European Commission as well, in its evaluation of the notice on market definition[2].

Part 2 of this work addressed the application of merger control to data-driven acquisitions. Due to the competitive advantage linked to the accumulation of users' data, an effective control of similar operations constitutes a crucial tool to preserve competition in the digital market. These mergers may contribute to the creation or the strengthening of dominant positions, they may negatively impact the level of data

[2] European Commission, *Evaluation of the Commission Notice on the definition of relevant market for the purposes of Community competition law of 9 December 1997*, Staff working document, SWD(2021) 199 final, 12 July 2021.

protection offered to consumers by online services and may affect the width of users' choice. In general, the European Commission largely recognized the competitive advantages linked to users' data, especially in the market for online advertising. However, the EU case law on data-driven mergers is characterized by a general lack of analysis of the free side of core platform services. While considered by users an increasingly important aspect, data protection is regrettably ignored by the EU institution, which kept a firm separation between privacy and competition concerns. By the same token, merger control often disregarded the disadvantages caused to end-consumers' choice by the ever-growing personalization of the internet. As explored above, this approach undermines the very function of the control on data-driven mergers and is especially dangerous in the case of operations involving the Internet of Things. This technology, in fact, allows operators to reach a deeper level of information, as the boundaries between consumers' online and offline lives get thinner and thinner. An exhaustive control would, instead, be beneficial for the competitive and pluralistic structure of the digital sector.

Besides merger control, data-related unilateral conducts adopted by dominant undertakings may also have a negative impact on the contestability of the digital market. Due to the importance of information, abuses of dominance related to this input have been found to have disruptive effect on the maintenance of competition in the market, leading to the enforcement of antitrust by the EU and national authorities. These practices can be grouped into three different categories: firstly, abuses related to data collection; secondly, abuses that impact the possibility for rivals to access users' data; finally, conducts based on the use of consumers' information, specifically those directed at the adoption of differential pricing strategies. In providing an analysis of data-related abuses, this work investigated whether the EU case law on article 102 TFEU could be applied to these conducts.

First of all, anticompetitive conducts in relation to data collection may constitute exclusionary as well as exploitative abuses. As for exclusionary practices, these include conducts aiming at leveraging the incumbent's market power from one market to another, through the use of rivals' non-public information. Dominant online

operators holding the double role of regulators and competitors in the same market, may require their rivals to surrender non-public, proprietary data and use them to gain a competitive advantage[3]. As explored in Part 3, these conducts can be addressed by antitrust authorities under four well-established legal frameworks. A first framework consists in the imposition of unfair trading conditions. In this case, according to the relevant case law, antitrust authorities will have to assess whether the information required by the incumbent is absolutely necessary to reach the object of its service. The abusive use of rivals' proprietary data could also be construed as a discriminatory conduct, prohibited by article 102 TFEU letter (c). While according to its wording, the latter provision should be applied to discriminatory treatments of *other trading parties*, its application to a more favorable treatment of an operator's subsidiary should not be ruled out. Accordingly, the Commission did applied letter (c) to cases in which a dominant undertaking favored some of its customers as well as its subsidiary, compared to other trading parties. A third applicable framework relates to the category of constructive refusal to deal. This abuse can be implemented by making the supply of a given service or product subject to excessive terms or by degrading its quality. Unlike refusal to deal, in this case the prof of the essential nature of the infrastructure of the incumbent is not necessary. Finally, the conduct under analysis could be considered as a type of margin squeeze. This solution grants a higher level of legal certainty, since the incumbent may autonomously verify if it could profitably operate under the same conditions imposed on its rivals. While applying an existing legal framework to this conduct would be a preferrable option, granting a higher level of legal certainty, the European Commission might also define a specific abuse, as it did in the Google Shopping case. Accordingly, the use of rivals' non-public data by a dominant, digital platform could be qualified as a leveraging abuse, characterized by the use of information.

[3] See: European Commission, press release, *Antitrust: Commission sends Statement of Objections to Amazon for the use of non-public independent seller data and opens second investigation into its e-commerce business practices*, 10 November 2020; European Commission, press release, *Antitrust: Commission opens investigation into possible anticompetitive conduct of Facebook*, 4 June 2021.

As for exploitative abuses in data collection, these practices are directed at end consumers and aim at forcing them to surrender larger quantities of information[4]. This form of abuse highlights the ties existing between privacy, consumer protection and antitrust. While all these policies safeguard users and their welfare, they pursue different objectives, and their enforcement should not overlap. To the purposes of antitrust enforcement, data and consumer protection can be employed as benchmarks, but the unlawfulness of anticompetitive conducts under other fields of the law should not be relevant for antitrust cases. As for the legal framework applicable to exploitative data collection, the most suitable option seems to be the category of 'unfair trading conditions'. Accordingly, antitrust authorities will have to assess the unnecessary character of the privacy terms imposed by the incumbent, in light of all the interests involved and the object of the service.

Part 4 of this work discussed the issue of conducts that prevent competitors from accessing users' information. The impossibility to acquire this input impacts rivals' capability to personalize their services and impair their ability to survive on the market. As a result, a lively debate emerged around the possibility to apply a duty to grant access to gatekeepers' datasets. In this regard, it was observed that, in theory, the essential facility doctrine is applicable to platforms' datasets and, therefore, a duty to grant access could be imposed as a remedy to a refusal to supply. Nonetheless, privacy considerations arise in relation to users' data. In particular, in order to share personal data, it is necessary to obtain subject's consent. Moreover, additional limitations may occur in case of non-personal, sensitive business information. In light of these considerations, different solutions have been put forward. In particular, the right to data portability and the establishment of data trustees aim at boosting multi-homing and increasing data circulation. Both alternatives require adjustments, however they could contribute to increase market contestability while, at the same time, complying with privacy regulation.

[4] *Bundesgerichtshof bestätigt vorläufig den Vorwurf der missbräuchlichen Ausnutzung einer marktbeherrschenden Stellung durch Facebook*, pressemitteilungen, nr. 080/2020, 23 juni 2020.

In relation to rivals' access to data, Part 4 also investigated the issue of strategies aiming at "reducing rivals' data[5]". Several abuses of dominant position implemented in the digital market, in fact, may have the indirect effect of restricting competitors' access to information. In order to further explore these indirect outcomes, this work considered the case of Google Shopping and the investigation led by the Commission on Apple's conduct in relation to the App store. In the former case, as a result of Google's practice, users' attention was diverted away from rivals, thereby preventing them from collecting information. The General Court recognized users' traffic as a crucial resource for online operators, since it provides them with information that can be used for several purposes. As for the latter investigation, the App store's abusive conditions prevented users from downloading rivals' applications, generating similar effects to those found in Google Shopping in relation to traffic. Moreover, Apple also directly deprived developers from collecting information on users – among which payment information –, impacting their ability to survive on the market for music streaming applications. The negative impact that different abuses may have on rivals' access to users' data are extremely important. A case by case analysis of similar implications raises undeniable difficulties for antitrust authorities, nonetheless it is crucial to assess the entirety of consequences derived from abuses of dominance in the digital market.

Finally, Part 5 of this work discussed discriminatory practices related to prices. In particular, scholars engaged in a lively debate over the impact that new technologies and big data have on undertakings' possibility to engage in price discrimination. While perfect price discrimination remains out of reach, other differential pricing strategies benefitted greatly from technological advances. The most significant practices include third-degree discriminatory pricing and behavioral discrimination. On the one hand, due to new technologies, third-degree discrimination became more accurate. The employment of big data contributed to create smaller, more precise clusters of

[5] AGCM, AGCOM e Garante per la protezione dei dati personali, *Indagine conoscitiva sui big data*, 10 febbraio 2020, at p. 112.

consumers that can be targeted with different offers. On the other hand, the effectiveness of behavioral discrimination – which exploits individuals' biases, misperceptions and emotions to mold their demand and reduce their surplus – undoubtedly benefits from a deeper knowledge of users. These practices are particularly controversial as to their effects on the market, however, as analyzed above, they can generate anticompetitive effects. In this case, the practice of a dominant platform applying unfair or discriminatory prices could fall under article 102 TFEU letter (a) or (c). Although the latter provision has mostly been applied to exclusionary conducts, its enforcement in cases of exploitative ones appears conceivable, especially considering that the same practice may produce negative effects on end consumers as well as the incumbent's rivals. As for behavioral discrimination, given the several ways through which it can be implemented, it is unlikely to be captured by a single legal framework and requires a case-by-case analysis.

Among the challenges raised to competition enforcement by the digital market, this work explored the link between information and market power, with particular reference to digital undertakings offering core platform services. The aim of the analysis was to assess whether EU competition law is well-suited to address data-driven mergers and data-related abuses of dominance. An efficient antitrust enforcement, in fact, is fundamental to maintain a sufficient degree of contestability and competition in the digital market.

As for the preliminary steps of antitrust analysis, we found that the application of some tests and indicators traditionally employed to define the relevant market and to assess dominance require some minor adjustments. Nonetheless, a substantial toolkit remains available to competition authorities to address this sector.

As for the new forms of data-related abuses that emerged in the digital market, especially those inherent to the phase of data-collection or based on the analysis of users' information to engage in price discrimination, most of these practices can be dealt with by applying well-established legal frameworks. Nonetheless, as it is well known, paragraphs 1 of article 102 TFEU allows for the identification of new forms of abuses of dominance. The risk to undermine the principle of legal certainty by

continuously "creating" new abuses, however, should not be disregarded. The advantages in terms of innovation deriving from the possibility for undertakings to predict the legality of their strategies are especially important in this sector. While this consideration does not advocate for the adoption of a *laissez-faire* approach, it does support the careful evaluation of well-established legal frameworks to address (data-related) abuses.

An additional issue raised by the characteristics of the digital market relates to data circulation. The creation of obstacles by dominant operators to the flowing of information may have disrupting effects on competition. While the imposition of a duty to grant access presents several privacy-related problems for non-aggregated data, some alternative solutions are feasible. In particular, data portability and the establishment of data trustees can boost multi-homing and the circulation of information, while at the same time complying with data protection regulations. Moreover, the indirect effects of unilateral anticompetitive conducts on the ability of rivals to access users' information are extremely relevant to the contestability of the digital market. As a result, it seems advisable for antitrust authorities to evaluate the opportunity to include these effects in their analysis, especially in order to identify and apply the appropriate remedies to anticompetitive conducts.

The most problematic aspect of the enforcement of article 102 TFEU in case of data-related abuses consists in the length of antitrust procedures. As a result, the adoption of a legislative regulation appears desirable. In particular, the proposal put forward by the Commission for the adoption of a digital market act, revolves around the *ex-ante* prohibition of a set of conducts that are likely to impair the contestability of the market[6]. The adoption of these practices is prohibited to the so-called gatekeepers (i.e. undertakings that present certain objective characteristics), which act as gateways between business and end users, thereby controlling the access of other digital operators to several markets. A similar solution would prevent the creation of

[6] 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, Brussels, 15 December 2020.

negative effects following certain conducts. The adoption of the digital market act could also contribute to increase the degree of legal certainty for market operators. Most of the conducts included in the proposal reflect practices that have been sanctioned or investigated as competition law infringements in the past few years, by the EU institution. Furthermore, the proposal for the digital markets act contains two provisions pertaining to access to gatekeepers' datasets[7]. While it would be naïve to assume that the list of conducts included in the proposal is exhaustive in this fast-changing market, the coexistence of antitrust enforcement and a sector-specific regulation would likely provide an efficient system to preserve a sufficient degree of contestability in the digital market.

Contrary to the application of article 102 TFEU, EU merger control appeared to be less effective in monitoring data-driven acquisitions. On the one hand, the threshold system currently established by the EU merger regulation failed to catch some important acquisitions that took place in the digital market. As a result, some legal systems reformed their legislations to better address the mergers taking place in this sector. Moreover, the Commission's proposal for the adoption of a digital market act requires undertakings to notify any concentration involving another provider of core platform services, or any other service provided in the digital sector[8]. On the other hand, in the cases analyzed by the Commission, the "free" side of core platform services was systematically ignored. In particular, data protection and users' choice have been regrettably overlooked in merger control, even though they represent increasingly important aspect. As we discussed, a similar approach presents the risk of harming consumers' welfare and fostering market concentration, as a result, the EU Commission should more carefully consider these aspects in the assessment of the compatibility of data-driven mergers with the internal market.

[7] The 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), cited *supra*, at article 6 letters (i) and (j). Letter (j), in particular, grants the possibility for undertakings to request access to aggregated data related to online searches held by gatekeepers.

[8] The 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), cited *supra*, at article 12.

Preserving a competitive structure in the digital market is especially important in consideration of its future perspectives. In order to boost innovation and growth, new operators must be granted the possibility to enter and survive on the market in order to provide their contribution to digital development. Competition law is and will be key in reaching this objective and, while its contribution is fundamental also in light of the width of conducts it can address, we believe that its combination with a specific regulation directed at protecting market contestability will prove to be the most efficient solution.

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