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AN OVERVIEW OF THE CONCEPTS OF 'DIGITAL ECONOMY' AND 'DIGITAL MARKETS' AS ONGOING TRENDS IN EU COMPETITION LAW

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Abstract

Although e-commerce is relatively new, it has been the cornerstone of international trade in the modern world. Broadly, e-commerce can be described as the process of buying, selling or exchanging any kinds of products, services and information via electronic channels. The economy is one of the areas directly affected by e-commerce, and as a result of this significant impact, the concept of the digital economy has emerged. It is complicated to define the concept of the digital economy as it continues to expand in scope day by day; however, its impact can broadly be experienced in many different fields. To set an example, the occurrence of the digital economy has already caused many significant changes in many areas, such as the examination of competition issues in the markets. It has significant effects on current EU competition law understanding, and it is evident that it will continue to form future prosperity. Therefore, this article aims to explain the general dynamics of the digital economy and digital markets as an important issue being discussed in EU competition law.

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Key Words
Digital Economy • EU Competition Law • E-Commerce • Digital Markets • Trade

AB REKABET HUKUKUNDA SÜREGELEN TREND OLARAK 'DİJİTAL EKONOMİ' VE 'DİJİTAL PİYASALAR' KAVRAMLARINA GENEL BİR BAKIŞ

Öz

E-ticaret her ne kadar görece yeni bir kavram olsa da, modern dünyada uluslararası ticaretin temel taşı olmuştur. Genel olarak e-ticaret, her türlü ürün, hizmet ve bilginin elektronik kanallar aracılığıyla satın alınması, satılması veya değiş tokuş edilmesi süreci olarak tanımlanabilir. Ekonomi, e-ticaretten doğrudan etkilenen alanlardan biridir ve bu önemli etkinin bir sonucu olarak dijital ekonomi kavramı ortaya çıkmıştır. Dijital ekonomi kavramını tanımlamak gün geçtikçe kapsamı genişlemeye devam etmesi sebebiyle oldukça güçtür; ancak etkisi birçok farklı alanda geniş ölçüde deneyimlenebilir. Örnek vermek gerekirse, dijital ekonominin ortaya çıkması, piyasalardaki rekabet konularının incelenmesi gibi birçok alanda şimdiden birçok önemli değişikliğe neden olmuştur. Mevcut Avrupa Birliği rekabet hukuku anlayışı üzerinde önemli etkileri vardır ve gelecekte de refahı oluşturmaya devam edeceği açıktır. Bu nedenle bu makale, AB rekabet hukukunda tartışılan önemli bir konu olarak dijital ekonominin ve dijital pazarların genel dinamiklerini açıklamayı amaçlamaktadır.

Anahtar Kelimeler
Dijital Ekonomi • AB Rekabet Hukuku • E-Ticaret • Dijital Pazarlar • Ticaret

INTRODUCTION

EU competition law which is mostly derived from Articles 101 to 109 of the Treaty on the Functioning of the European Union (TFEU) and Protocol No 27 on the internal market and competition, has been accepted as a crucial tool in recent years for dealing with the problems of trade and economic activities within the EU. Nevertheless, its role in the digital economy remains unclear.[1] This is problematic as digitisation[2] of

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1 WHISH, Richard; BAILEY, David, Competition Law, 9th Edition, Oxford University Press, 2018, 1-3.

2 Digitisation and digitalisation are two different terms which are a part of digital transformation. In many sources, these terms are often used interchangeably, but their actual meanings are wholly distinct. For that reason, a clarification on their meaning is needed. Digitisation is the act of converting some physical data into a

economic activities has been occurring since the 1990s and the digital economy is all around people in the form of the Internet and also present for undertakings that focus on e-commerce. This situation points to the existence of a new area that EU competition law should pay particular attention to.

It is very difficult to define the concept of digital economy as it continues to expand in scope day by day. Broadly, the digital economy refers to an economy which is related to online economic connections among people, undertakings, and other trade actors. These connections are generally about the trade in goods or services.[3]

The occurrence of digital economy has already caused many major changes in the examination of competition issues, and its effect can be seen in the decisions of the European Commission (EC), the General Court (GC), The Court of Justice of the European Union (CJEU) and national competition authorities (NCA) and regulations. The digital world and digital economy concepts have started to be discussed in the early 1990s in the EU and its first results was seen in the late 1990s. In *WorldCom/MCI*,[4] the term Internet, its definition, internet-related services and its function were discussed for the first time.[5] After that, in *MCI WorldCom/Sprint*, these same issues were discussed again,[6] and there it

digital form. As it is explained in the main text since 1990, many physical, economic data are transferred into digital form. On the other side, digitalisation is the act of changing existing business processes through the use of new digital technology. Regarding digitisation of economic activities, many undertakings add more value or opportunity to their businesses through modern means by offering a digital experience to their customers. As a whole, this process is called digital transformation. For more information please see BRENNEN, J. Scott; KREISS, Daniel, 'Digitalization' in Klaus Bruhn Jensen; Robert T. Craig (eds), The Wiley Blackwell-ICA International Encyclopedia of Communication Theory and Philosophy, John Wiley & Sons, 2016, 1-11.

3 SCHMIDT, Hedwig K., 'Taming the Shrew: There's No Need for a New Market Power Definition for the Digital Economy', Stockholm Faculty of Law Research Paper Series, 17, 2017, 2; EZRACHI, Ariel, 'EU Competition Law Goals and the Digital Economy', Oxford Legal Studies Research Paper Series, 17/2018, 2018, 1; Organisation for Economic Co-Operation and Development (OECD), [2012], The Digital Economy, 23.

4 Case IV/M.1069, WorldCom/MCI, [1998], OJ L 116/1.

5 Case IV/M.1069, WorldCom/MCI, paras 1–35.

6 Case COMP/M.1741, MCI WorldCom/Sprint, [2000], OJ L 300/1.

was emphasised that 'The Internet is now witnessing the development of new services such as e-commerce, online video, voice over IP etc that necessitate much more capacity than required up until today and also are provided in real time.'[7]

Considering all these changes and new discussions surrounding the digital world and digital economy, along with case decisions, specific discussions on the digital economy were initiated in many different supranational platforms. In 2000, a roundtable on e-commerce was held by the Organisation for Economic Co-operation and Development (OECD) to provide greater cooperation among NCAs. In June 2018, another roundtable was held to discuss e-commerce. Although the topics in these two roundtables were the same, the discussion points were all different. In the 2000 roundtable, e-commerce was defined broadly, and it was revealed that e-commerce had reduced business costs. However, the potential problems based on this effect could not be predicted.[8] In contrast to this, in the 2018 roundtable, rather than discussing the effects of e-commerce on the businesses, the current problems and debatable topics of e-commerce were discussed, such as online multi-sided platforms (MSP), vertical restraints and hub-and-spoke collusion.[9]

All these details show how the concept of e-commerce has seeped into the legal environment of all businesses and countries all around the world. Over a period of eighteen years, the new concept became a global phenomenon. After all, the extensive process of digitalisation has changed competition needs in the existing markets in various ways and has led to the emergence of new trends and business models.

New concepts and understandings in the economy pose new challenges to competition policy because of digitalisation. In attempting to fill the gaps mentioned above, some basic actions were taken. In the EU competition law, related rules which are in place to remove the problems

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7 Case COMP/M.1741, MCI WorldCom/Sprint, para 51.

8 Organisation for Economic Co-Operation and Development (OECD), [2000], Competition Issues in Electronic Commerce.

9 Organisation for Economic Co-Operation and Development (OECD), [2018], Implications of E-commerce for Competition Policy - Background Note, DAF/COMP(2018)3. This version of the OECD Background Note was cancelled and replaced in February 2019. For the full version of the new background note on implication of e-commerce for competition policy please look at Organisation for Economic Co-Operation and Development (OECD), [2019], Implications of E-commerce for Competition Policy - Background Note, DAF/COMP(2018)3.

within traditional markets have been adapted for the digital markets instead of setting new rules based on the needs of digital markets. In addition, debates on the relation of the digital economy and competition law have been ongoing on the basis of both EU competition law and member countries' domestic competition law. Different strategies that can offer new solutions to the problems began to be discussed. As a result of 'The global market is rapidly becoming digital' understanding of the EC, Digital Single Market Strategy (DSMS) has been launched by the Commission in 2015.[10] This new and different economic system has also become effective in the regulations. In 2017, the domestic competition regulation of Germany (*Gesetz gegen Wettbewerbsbeschränkungen*)[11] was amended in accordance with the current needs of digitalisation and economic changes in competition law.[12] Although the adequacy of these

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10 EUROPEAN COMMISSION, 'A Digital Single Market Strategy for Europe', COM (2015), 192 final, https://eur-lex.europa.eu/legal-content /EN/TXT/PDF/?uri=CELEX:52015DC0192&from=EN, Accessed 10 February 2022.

11 Gesetz gegen Wettbewerbsbeschränkungen (GWB), [26.08.1998], available at http://www.gesetze-im-internet.de/gwb/GWB.pdf, for English version is available at https://www.bundeskartellamt.de/SharedDocs/Publikation/EN/Others/GWB.pdf?__blob=publicationFile&v=6, Accessed 10 February 2022.

12 In 2017, the 9th amendment of the Act against Restraints of Competition (Competition Act – GWB) of Germany entered into force. The main aim of this amendment was explained as implementing Directive 2014/104/EU under national law and offering a solution to the problems of digitalisation. For the aim of offering a solution to the particular problems of digitalisation, new legal provisions are introduced on the topic of having a dominant position in the market and a new test in merger control. In section 18 (3a), market dominance in the case of online MSP markets and networks is specifically regulated and the new terms based on the digital economy such as multi-sidedness, direct-indirect network effects, switching cost, access to data and innovation-driven competitive pressure are used under this paragraph. Although this section was criticised for not emphasising consumer preferences and not being effective on the concept of consumer welfare, the new amendment of the German competition act was started to be discussed and the new focus would be digitalisation related institutional changes. For further information about the 9th amendment of the German competition act, please see BUDZINSKI, Oliver; STÖHR, Annika, 'Competition Policy Reform in Europe and Germany – Institutional Change in the Light of Digitization', Ilmenau University of Technology Institute of Economics Ilmenau Economics Discussion Papers, 24(117), 2018; SCHWEITZER, Heike; HAUCAP, Justus; KERBER, Wolfgang; WELKER, Robert, 'Modernisierung der Missbrauchsaufsicht für marktmächtige Unternehmen', Projekt im Auftrag des Bundesministeriums für Wirtschaft und Energie (BMWi), 66(17), 2018, 5-20, < https://www.bmwi.de/Redaktion/DE/Publikationen/Wirtschaft/modernisierungder-

amendments is debatable, it is of great importance that the effect of the digital economy on competition policy has already been realised. Based on this understanding, some changes to the regulations to adapt to the digital economy have been made. As a result of all these actions, the ongoing transformation process in terms of digital economy and digital markets in the EU showed its results in 2020. The EC released the proposal of the Digital Services Act (DSA) and the Digital Markets Act (DMA)[13], which encompassed a single set of new rules applicable across the whole of the EU regarding creating a safer digital space where the fundamental rights of users are protected and to establish a level playing field for businesses.

As all these details demonstrate, the digital economy has gained importance for all aspects of law but especially for competition law. It has major effects on current EU competition law understanding, and it is evident that it will continue to form future prosperity. While it is continuing its development process, new business models, new markets and new competition law issues will also be continuing to emerge. In finding solutions to all existing and potential problems of the EU competition law, this article focuses on the digital economy and digital markets to understand their main threats. Therefore, this article aims to explain the general dynamics of the digital economy and digital markets as an important issue being discussed in EU competition law.

In this work, after having defined the online multi-sided platforms, digital economy and digital markets, the general understanding of digital economy and digital markets will be explained and after that they all will be examined by analysing the motivations for the digital world and e-commerce popularisation. After that, the general features of digital markets will be listed, and seven main features will be discussed in detail to frame the concept of digital markets and to understand their main issues. Following explanation about the infrastructure of digital markets and the importance of innovation therein, current discussions on digital economy and digital market in EU competition law, which can be pointed

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missbrauchsaufsicht-fuer marktmaechtigeunternehmen.pdf?__blob= publicatio nFil e&v=15>, Accessed 10 February 2022.

13 European Commission – Press Release IP/20/2347, 'Europe fit for the Digital Age: Commission Proposes New Rules for Digital Platforms, (2020), <https://ec.europa.e u/commission/presscorner/detail/en/ip_20_2347 >, Accessed 10 February 2022.

as algorithms, big data, the DSMS and the regulating online multi-sided platform markets will be considered in the last section of this article.

1. ONLINE MULTI-SIDED PLATFORMS IN GENERAL

As a natural consequence of the development of the trade based on digitalisation of the economic activities, some new environments where e-trade can take place began to arise. The most important and popular one among these new environments has been online multi-sided platforms so far. Although they bring some advantages, they also introduce many new risks for organisations, consumers, governments, and the global economy as the current rules to regulate the markets in the EU are aimed to remove the problems within traditional single-sided markets which consist of a single relationship between actors. To understand the main issues in the digital economy and digital markets, the online multi-sided platforms need to be explained in detail as they are one of the main actors in the digital economy and digital markets; so this section of the article briefly explains the online MSPs.

The main aim of online MSPs is to enable two or more different groups of trade actors to come together in one of the digital markets, which can be called online MSP market, and to provide a convenient searching and matching service.[14] Online MSP markets are different than the traditional single-sided markets as they serve two or more distinct groups of customers who value each other's participation at the same time whereas traditional single-sided markets deal with only individual transactions.[15] Online MSPs bring many new and easier ways of doing daily routines such as working, studying, communicating, entertainment, and shopping for people. Now, individuals' lives and the concept of trade cannot be thought of without online MSPs. Netflix, Amazon, Google, Microsoft, Trendyol, YouTube, Uber, App Store of Apple, and booking.com are only a few examples of these MSPs.[16]

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14 EVANS, David S., 'Multi-Sided Platforms, Dynamic Competition, and The Assessment of Market Power for Internet-Based Firms', The University of Chicago Coase-Sandor Institute for Law and Economics Working Paper Series, 753, 2016, 6.

15 GAWER, Anabelle; HENDERSON, Rebecca, 'Platform Owner Entry and Innovation in Complementary Markets: Evidence from Intel', Journal of Economics & Management Strategy, 16(1), 2007, 1.

16 HOLZWEBER, Stefan, 'Market Definition for Multi-Sided Platforms: A Legal Reappraisal', World Competition, 40(4), 2017, 563.

There is no one definition which is accepted by all researchers for online MSPs[17]; however, it is accepted by almost everyone that three fundamental features must be present in an online MSP. First, online MSPs create relationships between more than one customer group with different demand structures.[18] These different customer groups have some expectations from this relationship and at the end of it all sides of the platform should have gained the benefits which they had hoped for when they entered this relationship. The other fundamental feature is existence of indirect network effect which can be basically explains like the demand on each side of an online MSP depends on each other. The details of indirect network effect will be explained later in this work. The last feature is the existence of a formation that creates inter-group relationships to indicate the role of online MSPs as an intermediary.

2. GENERAL UNDERSTANDING OF THE DIGITAL ECONOMY AND DIGITAL MARKETS

2.1. Why is the Digital Economy Developing Rapidly and Why the Digital Markets are Gaining More Importance?

The world is shifting into a stage where many daily routines can be held virtually, and this changing process has affected all different aspects of life. The economy is one of these major aspects and digitalisation is now a critical concept for it. In order to thrive in the face of the digitalisation challenge, globalisation has become one of the main aims for the

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17 Several different definitions emerged from other research. Generally, each definition has chosen one specific point of the online MSP model to focus on. For example, Rochet and Tirole underlined the price structure inside the relation of the sides of the online MSPs. In the definition by Rysman, the interdependence of the sides of the platforms and its effect were emphasized. Hagiu and Wright focused on the indirect network effect which exists in the relation between the sides of the MSPs in their definition. So, it can be said that many different definitions have been provided for online MSPs. For mor information please see ROCHET, Jean-Charles; TIROLE, Jean, 'Two-Sided Markets: A Progress Report', The RAND Journal of Economics, 37(3), 2006, 665; RYSMAN, Marc, 'The Economics of Two-Sided Markets', Journal of Economic Perspectives, 23(3), 2009, 126; HAGIU, Andre; WRIGHT, Julian, 'Multisided Platforms', International Journal of Industrial Organization, 43, 2015, 163.

18 Organisation for Economic Co-Operation and Development (OECD), [2009], Two-Sided Markets, 29.

economy,[19] and while it is working on all its aims, the new concept of the digital economy continues to develop.

The older generation has all likely experienced the impact of new technology, but the new generation has been born with it. Downloadable music destroyed CDs, online media-service providers are new substitutions of traditional broadcasting, and reading newspapers online has almost replaced reading printed versions. As an exception to all these changes, it was generally agreed by many scholars that e-books would not be able to replace printed books because people prefer to feel the books in their hands.[20] It was expected to see that readers would reject higher prices or access problems of e-books.[21] Printed books allow people to enjoy the content in any place and time they would like. This is an essential factor for people to choose printed books over e-books.[22] Zhang and Kudva's study showed that most people still read only printed books. According to this study, the rate of preference for only printed books was 57.3% while preference for only e-books was only 1.9% of the sample.[23] However, even this market, which displayed so much resistance to change, has signalled that it will succumb to digitisation over time. The statistics for 2013 and 2018 show a more than doubling of sales of e-books from 12.3% to 25.8%.[24] This is yet another indication that the electronic versions of media, culture, entertainment, and many other products will eventually replace their traditional forms. The motivations for this uptrend should be examined. After the analysis of it, some essential

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19 STIGLITZ, Joseph E., 'Competition and Competitiveness in a New Economy', Competition and Competitiveness in a New Economy Edited by Heinz Handler and Christina Burger, Austrian Federal Ministry for Economic Affairs and Labour, 2002, 15-18.

20 GOMEZ, Jeff, Print is Dead: Books in Our Digital Age, Palgrave Macmillan US, 2008, 176.

21 WILSON, Tom, 'Electronic Publishing and The Future of The Book', Information Research, 3(2), 1997.

22 ZHANG, Yin; KUDVA, Sonali, 'E-books Versus Print Books: Readers' Choices and Preferences Across Contexts', Journal of the Association for Information Science and Technology, 65(8), 2014, 1705.

23 ZHANG; KUDVA, 1699.

24 PwC, Website (primaonline.it). n.d. 'E-book Sales as a Percentage of Total Book Sales Worldwide in 2013 and 2018', (2019), <https://www.statista.com/statistics/234106/e-book-market-share-worldwide/>, Accessed 10 February 2022.

motivations can be pinpointed easily. Some of them are the popularisation of the internet and all forms of mobile devices, the existence of many trade actors brought together by digital markets, the innovative effects of consumers on products and services, and new jobs/career opportunities in the area.

● **Popularisation of the Internet and All Forms of Mobile Devices:** Due to the rapid development of the Internet and new technology, the Internet has become an integral part of all facets of life from daily routines to all different professional businesses by giving the opportunity to buy, sell, play and work online to all different actors of trade.[25] The effect of mobile devices on that change also cannot be ignored as these devices and the Internet complement each other and these devices are always needed to get benefit from the Internet. Thus, the biggest motivation of the uptrend of digital markets can be given as the popularisation of the Internet and mobile devices.

● **Existence of Many Trade Actors Brought Together by Digital Markets:** Digital markets allow many different types of trade actors like platforms, sellers, advertisers, consumers etc. to work together and create interoperability between themselves.[26] This interoperability provides an opportunity to gain knowledge about the preferences of different trade actors and especially consumers. This is because in the digital age individual consumers can easily connect to the digital markets with the help of their devices. Even though one of the most precious assets for bricks-and-mortar businesses is their consumers' preferences, it is in fact much more important for businesses in the digital economy.[27] The reason for this is that they have more effective methods and opportunities which their bricks-and-mortar predecessors never had to collect data from consumers. For example, an online hospitality platform such as booking.com or hrs.com can easily identify specific users' holiday plans with the help of their city/country search on their database, but this is more difficult for a physical travel agent. The more data are collected, the more benefits are provided to the businesses by satisfying customers'

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25 OECD, The Digital Economy, 23.

26 OECD, The Digital Economy, 11.

27 SHELANSKI, Howard A., 'Information, Innovation and Competition Policy for the Internet', University of Pennsylvania Law Review, 161, 2013, 1678.

demands.[28] For that reason, undertakings prefer to be active actors in the digital markets.

● **Innovative Effects of Consumers on Products and Services:** The ability to collect more consumer data than competitors are also useful in some other respects, such as to become informed of customers' innovation requests about digital market tools, applications and online platforms. With the help of these requests, businesses can focus on innovations and development of related digital markets components, as well as strengthen their positions in the eyes of consumers. In the rapidly developing digital environment, consumers know that they are capable of developing new methods in order to have an effect on the decisions of businesses which are trading in digital markets in accordance with their own interests.[29] In relation to this, one of the reasons for the rapid development of the digital economy and digital markets being more preferred by consumers than traditional ones is that consumers play an active role in these. This means they can be more active, and their demands can be better met.

● **New Jobs/Career Opportunities:** The new jobs enabled by digital technologies and the digital economy have only now reached a large proportion of nations and individuals, despite their emergence being predicted for about 30 years. The new economy gives individuals the opportunity to be directly integrated with business life and to set up their own trade channels to connect with other individuals. This type of e-commerce is known as consumer-to-consumer (C2C)[30] and is one of the biggest developments brought by the digital economy.[31] In addition to the new business lines that have emerged from the existence of the digital economy, most of the research has shown that many of the jobs of the future will be linked to digital technology and the digital economy[32]

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28 SÖZER, Edin Güçlü; CİVELEK, Mustafa Emre; ÇEMBERCİ, Murat, Strategic Excellence in Post-Digital Ecosystems: A B2C Perspective, Zea Books, The University of Nebraska–Lincoln Libraries, 2018, <https://digitalcommons.unl.edu/zeabook/62>, Accessed 10 February 2022, 11.

29 SHELANSKI, 1685.

30 MOURYA, S. K.; GUPTA, Shalu, E-Commerce, Alpha Science International Ltd, Oxford, 2015, 45.

31 SÖZER; CIVELEK; ÇEMBERCI, 69-70.

32 Organisation for Economic Co-Operation and Development (OECD), 'Transformative Technologies and Jobs of the Future', (2018), Background Report for

because it is believed that the digital economy has the potential to enhance productivity, income level, and social well-being. For all these reasons, the digital economy, and issues of relations between its trade actors will continue incrementally to be a problem for society and hence the law.

2.2. General Features of Digital Markets

The digital economy is an umbrella term to describe all markets which include e-commerce transactions, all relations between the actors of these markets, and the outcomes of these relations.[33] Within this wide, it is hard to determine a precise definition of digital markets, but at least the general frame of the concept can be formed by listing the general features of digital markets:

● **Generation of Value in the Digital Economy:** The first and most general feature of digital markets can be determined as generating value within the digital economy. In this context, the actors of the market must be part of e-commerce and the relationship between them should be related to the goods or services being transacted via electronic channels.[34]

The generation of economic value in the digital markets includes a payment in exchange for goods or services as is the case with traditional markets. In addition, differently from traditional markets, it can occur through the exchange of data and personal information and its monetisation through another activity.[35] In short, the main feature of digital markets is the generation of value within the e-commerce objective by means of existing and emerging digital technologies with the help of trade actors.

● **The High Level of Utilisation of Technological Devices and the Dependence on Technological Developments:** Business types in digital

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the Canadian G7 Innovation Ministers' Meeting, < https://www.oe cd.or g/innovation/transformative-technologies-and-jobs-of-the-future.pdf>, Accessed 10 February 2022; WORLD ECONOMIC FORUM, The Future of Jobs Report, (2018), < http://www3.weforum.org/docs/W EF_Future_of_Jobs_2018. pdf> Accessed 10 February 2022.

33 OECD, The Digital Economy, 5.

34 EUROPEAN COMMISSION, Expert Group on Taxation of the Digital Economy, Working Paper: Digital Economy – Facts & Figures, (2014), < https://ec.europa.eu/ taxation_customs/system/files/2016-09/2014-03-13_fact_figures.pdf>, Accessed 10 February 2022, 14.

35 EUROPEAN COMMISSION, Expert Group on Taxation of the Digital Economy, Working Paper: Digital Economy – Facts & Figures, 13.

markets can be diverse, ranging from social networking, online search engines, online retail marketplaces and operating systems to digital application-programming distribution etc. Although many trade commodities obtained through electronic channels, commercial transactions involving physical goods and services can also be conducted in these markets.[36] The Internet and development of, and innovation in, the channels which help actors stay connected with the digital economy and reach consumers is a key aspect of the undertakings that are part of e-commerce. For that reason, digital markets are characterised as including a high level of utilisation of technological devices and the dependence on technological developments.[37]

- **Availability to Create New Trade Actors and New Relations Between Them:** In digital markets, there is a need for a specific intermediary to bring the undertakings which are in the position of the seller and the buyer or other trade actors together, even if there is a relationship related to the sale of a physical product or service online. This intermediary can be a website or a channel that allows entering a mutual engagement.[38]

As explained in the first section, the most important intermediaries emerging on digital markets are online MSPs. Besides that, many sellers have also started to use their webpages to advertise and sell their products and services. All these new digital actors have their own characteristics and effects on the digital economy and international trade as they are one of the most important new environments and growing phenomena for trade.[39]

- **Removing Time and Geographical Barriers to Trade:** Digitalisation has had a meaning in terms of transformation for the society for years. Still, its progress accelerated when undertakings and individuals started to integrate with it under the concept of e-commerce.[40] E-commerce has helped accelerate the progress of digitalisation because it provides a wide radius of action to all trade actors, and for that reason

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36 KADAR, Massimiliano, "European Union Competition Law In the Digital Era", Zeitschrift für Wettbewerbsrecht, 4, 2015, 346.

37 SCHMIDT, 3.

38 KADAR, 346.

39 EUROPEAN COMMISSION, A Digital Single Market Strategy for Europe, 11.

40 SÖZER; CIVELEK; ÇEMBERCI, 9; BRENNEN; KREISS, 1-11.

removing time and geographical barriers within the concept of trade is one of the most important features of digital markets.

In digital markets, country borders are not a physical barrier to trade actors and there are no working hours within which sales agreements for goods or services provided by firms need to be signed.[41] These developments have exponentially increased the effect of general market factors with improved communications and access to markets. Besides that, these developments also resulted in increasing materials, labour, and distribution. They have enabled greater economies of scale and other efficiencies (theoretically improving product quality) and exposed competitors to global competition.

● **Openness to Network Effects:** A network effect arises as a natural consequence of digital markets' features of the high level of utilisation of technological devices and the dependence on technological developments and their availability to create new trade actors and new relations between them. This is because it is always necessary for trade actors who enter into an agreement via digital channels to be on the same platform, have the same devices or use the same intermediate system. The general issue in this relation is basic, and it is all about the more interactions between all sides of an economic transaction in a digital market.[42]

The network effect can be explained briefly as the situation in which demand is affected by the presence of different trade actors and the interaction between them in digital markets.[43] Network effects can be categorised as either direct or indirect network effects.[44] A direct network effect means the more benefit within the relationship when the more trade

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41 EZRACHI, Ariel; STUCKE, Maurice E., Virtual Competition the Promise and Perils of the Algorithm-Driven Economy, Harvard University Press, 2016, 1.

42 EVANS, David S.; SCHMALENSEE, Richard, 'Network Effects: March to the Evidence, Not to the Slogans', CPI Antitrust Chronicle, 2017, < https://www.competitionpolicyinternational.com/wp-content/uploads/2017/09/CPI-Evans-Schmalensee.pdf>, Accessed 10 February 2022, 1.

43 SPULBER, Daniel F.; YOO, Christopher S., 'Antitrust, the Internet, and the Economics of Networks', University of Pennsylvania Law School Institute for Law and Economics Research Paper Series, 13(36), 2013, 8.

44 KATZ, Michael L.; SHAPIRO, Carl, 'Network Externalities, Competition, and Compatibility', The American Economic Review, 75(3), 1985, 424; SPULBER; YOO, 14; ECONOMIDES, Nicholas, 'Competition Policy in Network Industries: An Introduction', The Networks, Electronic Commerce, and Telecommunications ("NET") Institute Working Paper Series, 04(23), 2004, 6.

actors are included there. Indirect network effect means an increase in value when more trade actors of different sides of the platform are included within the relationship.[45] The direct network effect can occur in every relation within digital markets, while the indirect network effect only occurs in online MSPs.

In addition to having a positive impact on the market such as more option and more possible interaction between different trade actors, network effects create some competition problems therein as can be called "stickiness". If a network of the required size is formed, trade actors who were already there do not seek another network. This, of course, implies a monopoly effect on the market and creates an entry barrier for competitors.[46] As a result of moving/growing fast and being attractive to customers, some more customers who are not in that platform or any e-commerce relations would also be willing to be a part of it. After this growth of that undertaking in this digital market, it will dominate the market and possibly would win all profits of the market.[47]

● **The Combination of High Fixed Costs and Low Marginal Costs:** An undertaking has many different costs to gain a place in the market. These costs are effective in understanding the markets' features and the analysing the potential status of the undertakings in the market.

As another general feature of the digital markets; undertakings in digital markets are obliged to make research in advance, develop or set up a network, be connected to the Internet, have all necessary technological devices/software. It means that the digital markets include high fixed costs but in contrast, they include low, almost zero, marginal costs as it is not expensive to produce additional units of the product or to add additional users to the service in these markets.[48]

Since all these costs are needed to enter the market and the possibility of arising continuous innovation costs because of the

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45 Case COMP/C-3/37.792, Microsoft, [24.03.2004], C (2004)900 final, para 420-421.

46 OECD, The Digital Economy, 8-9.

47 EVANS; SCHMALENSEE, 2017, 3-4.

48 UYTSEL, Steven Van; UEMURA, Yoshiteru, 'Competition Law Interference Prior to the Formation of a Digital Market -The JFTC's Enforcement Action Against DeNA', 2017, Available at SSRN: https://ssrn.com/abstract=3086449 or http://dx.doi.org/10.2139/ssrn.3086449, 5; KADAR, 347; SCHMIDT, 14.

dynamism of digital markets, fixed costs therein might imply a monopoly effect on the market and create an entry barrier for competitors.[49]

● **Predisposition to 'Winner-Takes-All' Effect:** The winner-takes-all effect can be defined as the power of an undertaking on capturing most of the benefits of the markets. In this case, remaining competitors either leave the market or must settle for a little benefit which they received.[50] Digital markets are always open to the 'winner-takes-all' effect because of their two main features. First one is the impact of indirect network effect which is used by the dominant undertaking in other words the 'winner' undertaking, and the second one is the existence of entry barriers for new undertakings which are created by high fixed costs. In today's competition among undertakings, the most important power/commercial advantage has become the ability to gather personal data and widen its network.[51] The more data an undertaking has, the stronger the network it will have the potential to create. After that the network it creates will be instrumental in removing other competitors from the market because of the main characteristics of digital markets.

In digital markets, there is always a risk of an undertaking reaching a 'tipping point' of the market. If it reaches this point, all other trade actors in that market do not need to connect another network, because they already have the highest chance to find the most beneficial trade partner for them in this one.[52] Besides that point, the fees may have already been paid to the current network or the costs to adapt to another network (switching costs) will also make the actor's exit from this network inefficient. To sum up, the economies of scale, high switching costs, having related data of consumers, always offering one of the best options of the moment to them and some other reasons lock the consumers in that relation.[53] For that reason, as it was explained by Barwise and Patkins, it can be said that the tipping point acquisition by one of the undertakings

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49 HOVENKAMP, Herbert, 'Antitrust and Information Technologies', Florida Law Review, 68(2), 2017, 428-429; UYTSEL; UEMURA, 5;

50 ROSEN, Sherwin, 'The Economics of Superstars', The American Economic Review, 71(5), 1981, 857; EUROPEAN COMMISSION, Taxation of the Digital Economy, 10.

51 HOVENKAMP, 431.

52 KADAR, 348.

53 BARWISE, Patrick; WATKINS, Leo, 'The Evolution of Digital Dominance How and Why We Got to GAFA', in Martin Moore; Damian Tambini (eds), Digital Dominance The Power of Google, Amazon, Facebook, and Apple, Oxford University Press, 2018, 22.

of the market causes monopolisation to become inevitable and causes only the undertaking in question to enjoy the efficiencies in the market.[54]

On the other hand, Evans and Schmalensee explained in their article that the winner-takes-all argument cannot be applied to the platform economy.[55] According to their argument, in digital markets, platform relations force undertakings to serve their goods and services to consumers free of charge, and because of that situation, they have another problematic relation with third parties such as advertisers and investors.[56] They need to gain money by receiving advertisements to their platforms. For example, even they have dominant power in their digital market, they have more competitors in advertising, and they must compete with other undertakings from other digital markets in the advertising market to receive more advertisement.[57] This argument is in some way meaningful, but it is also needed here to think about these dominant undertakings' dominance power on the advertisers in online MSP relationships. They will be willing to place their advertisements in the most popular online MSPs, and it means they must be in relation with dominant undertakings of each digital market. Therefore, all dominant undertakings of each digital market will be the first choice of advertisers, and indirectly they would be the winner in the advertising market among competitors from their digital market too. Competing with other markets' dominant undertakings is not a matter of discussion, because all different markets have their advertisement potential and advertisers should find a way to reach all consumers via different types of online MSPs.

2.3. Infrastructure and Digital Market Development

The general features of digital markets show that digital markets continue to exist with the help of four different bases[58] which can be defined as their infrastructure. These four bases are:

- The Internet;
- Technological Devices;
- Software and;

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54 OECD, The Digital Economy, 8-9; 141; BARWISE; PATKINS, 30-31.

55 EVANS, David S.; SCHMALENSEE, Richard, 'Why Winner-Takes-All Thinking Doesn't Apply to the Platform Economy', Harvard Business Review, 2016.

56 EVANS; SCHMALENSEE, 2016.

57 EVANS; SCHMALENSEE, 2016.

58 SHELANSKI, 1665-1666.

- Services.

All these basic points affect the existence of digital markets and also lead to rapid change in digital markets over time as they are suitable for rapid development. The Internet is fundamental for digital markets and has also become one of the most vital infrastructures around the world. The Internet has been integrated into human life through technological devices such as smart phones and computers, and all these devices are operated by software such as operating systems, computer systems and programs. The Internet, technological devices and the software that operates these devices come together to produce the services, such as social networks, e-commerce marketplaces and ride sharing, that are used all over the world.[59]

With the help of advances in technology, these four different bases, and hence the digital markets, progress. Compared to traditional markets, digital markets have more dynamic characteristics and for that reason all the dynamics therein can rapidly change and may result in the creation of new practices, needs, problems etc. In these markets where new trends are rapidly emerging, it is inevitable for undertakings to face the need to renew their products and services continuously. Innovation is therefore another key concept to discuss in terms of the status of the digital economy and digital markets in EU competition law.

2.4 Innovation in the Digital Markets and Productivity Gains

Consumers hold a crucial place in EU competition law and one of the facets of EU competition policy is explained as producing benefits and creating an opportunity to make productivity gains for consumers by providing lower prices, higher quality, rapid innovation and a wider range of opportunity products.[60] It is also the case that the Commission is

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59 SHELANSKİ, 1665-1666.

60 EUROPEAN COMMISSION, Guidelines Article 101(3), para 13; EUROPEAN COMMISSION, Guidance on the Commission's Enforcement Priorities in Applying Article 82 of the EC Treaty to Abusive Exclusionary Conduct by Dominant Undertakings, [2009], OJ C 45/02, paras 1, para 5-7; EUROPEAN COMMISSION, DG Competition Discussion Paper on the Application of Article 82 of the Treaty to Exclusionary Abuses, (2005), <http://ec.europa.eu/competition/antitrust/art82/discpaper2005.pdf>, Accessed on 10 February 2022, para 4; EUROPEAN COMMISSION, 'Making Markets Work Better', (2016), The European Union Explained: Competition Series, < https://publications.europa.eu/en/publication-detail/-/publication/8200c251-aa42-11e6-aab7-01aa75ed71a1>, Accessed on 10 February 2022, 3; Case C-209, Post

responsible for ensuring that market functions work properly and that all these functions provide opportunities to consumers in terms of productivity gains. All benefits which can be derived from markets and all productivity, which are the result of being a part of a market relation, should be fairly distributed to all consumers.[61]

Innovation is particularly important in publicly accessible markets and thus it has gained more importance in the digital markets. In digital markets, infrastructure does not get built without innovation. All the factors which influence the dynamics of the digital economy should be up to date and cater to the necessities of the time and society. Innovation in digital markets is considered to be the basic condition for delivering better results such as producing better products and offering higher quality to consumers.[62] For these reasons, innovation in digital markets is obligatory and competition law has a responsibility in this area, namely, to support innovation in these markets and take the necessary measures to ensure its development.[63]

Due to the great impact of innovation, it is very rare to encounter a product or service that continuously maintains its presence in digital markets.[64] For example, search engines have always attracted platforms in digital markets and the examples of search engines that started with Archie in 1987 have continued to increase until today. Nowadays, this area is dominated by Google. However, before Google many different platforms, such as Yahoo, MSN, Lycos, Ask Jeeves and Altavista, were also serving many different trade actors. In fact, these are not very old examples. Up until 15 years ago, they were quite popular and more common online platforms.[65] However, both these outmoded search

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Danmark A/S v Konkurrencerådet, [2012], Judgment of the Court (Grand Chamber), ECLI:EU:C:2012:172, para 22.

61 EUROPEAN COMMISSION, Guidence Article 82, para 5 and 30.

62 EUROPEAN COMMISSION, Making Markets Work Better, 3; CLEYNENBREUGEL, Pieter Van, 'Innovation in Competition Law Analysis: Making Sense of On-Going Academic and Policy Debate' in Paul Nihoul; Pieter Van Cleynenbreugel (eds), The Roles of Innovation in Competition Law Analysis, ASCOLA Competition Law Series, Edward Elgar Publishing, 2018, 3.

63 EZRACHI, 11.

64 SHELANSKI, 1684.

65 For the sake of general understanding of the market, in 2004 Google was leading the market in the US; however, the market share was less than 40%, and there was less

engines and Google's state at that time cannot be compared to the services Google currently offers. Besides this major example, MySpace and Friends Reunited were superseded by Facebook, and Last.FM lost its place to Spotify. It is very difficult to predict whether ten years from now the current batch of popular actors in digital markets will still be active. If Facebook does not undertake enough innovation to meet the expectations of the digital age and society, it may lose its dominant position in the market to another platform.

Besides the point about the need for innovation in digital markets in terms of increasing consumer welfare, another important point discussed in relation to competition law is the market power effect of innovation.[66] The network effect that will emerge as a natural result of a successful innovation on the platform or device of an undertaking will have a positive market power effect for the related undertaking. Consequently, this positive effect will bring the possibility of other competitors being pushed out of the market along. On this, the Schumpeterian school of thought posits that the basic point of competition in markets over time will be adapted to technology and innovation instead of price.[67]

As a result, it can be said that innovation, which is already quite effective in digital markets, seems to increase this effect even more over time and will have a more effective position in terms of examining and resolving competition law issues. As it is known, when a competition case

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than 5% difference between Google and its closest competitor, Yahoo. DATA HUB, 'Search Engine Market Shares', <https://datahub.io/rufuspollock/search-engine-market-shares/view/0>, Accessed 10 February 2022.

66 KATZ, Michael L.; SHELANSKI, Howard A., 'Mergers and Innovation', Antitrust Law Journal, 74(1), 2006, 14; CLEYNENBREUGEL, 3-4.

67 SHELANSKI, 1674-1675; AGHION, Philippe; AKCIGIT, Ufuk, 'Innovation and Growth: The Schumpeterian Perspective' in Laszlo Matyas; Richard Blundell; Estelle Cantillon; Barbara Chizzolini; Luigi Bocconi; Marc Ivaldi; Ramon Marimon; Frode Steen (eds), Economics without Borders Economic Research for European Policy Challenges, Cambridge University Press, 2017, 33; KATZ; SHELANSKI, 4-5; CLEYNENBREUGEL, 4. Schumpeterian School is an effective school of thought after the economist Josef Schumpeter. 'Creative Destruction' is supported by them, and it means technology replaces everything that is old. For more information, please see SCHUMPETER, Joseph A., Capitalism, Socialism & Democracy, 5th Edition, George Allen & Unwin (Publishers) Ltd, 1943 and ANTONELLI, Cristiano, 'The Economics of Innovation: From the Classical Legacies to the Economics of Complexity', Economics of Innovation and New Technology, 18(7), 2009, 619-622.

is examined, it is always started with defining the market and measuring market power based on the market share. It is possible to begin the case analysis by focusing on the competitive effect of innovation and its influence on measuring market power rather than this current beginning of case analysis.[68]

3. CURRENT DISCUSSIONS ON THE DIGITAL ECONOMY AND DIGITAL MARKETS IN EU COMPETITION LAW

The foregoing explanations on the general understanding of the digital economy and digital markets allow all people to understand that the world is moving towards a different trade environment and this change is unstoppable.

The Internet has replaced traditional trade channels and is stretching the boundaries of the market definition, market power and many other aspects of traditional markets and their relation to competition law. The widespread use of the Internet and its popularity sparked the spread of enterprise activities on it and the growth of undertakings involved in these activities. On this point, it is crucial the define and understand the main powerful concepts in digital economy. In order to this aim, it is necessary to look at the current debates in this area and their general impacts on the concept of digital economy.

For all these reasons, in this section some main topics which are related to the digital economy and digital markets will be discussed to better understand the aspects of the digital economy and digital markets. Four main topics, each of which could be the subject of separate huge research, will be explained. Briefly, these are algorithms as production and pricing mechanisms, big data, the DSMS and the discussion on regulation of online MSPs. In this work, the main purpose is to create a general view of the topics rather than offer a large amount of detail.

3.1 Algorithms as Production and Pricing Mechanisms

Technological developments have a direct impact on the interaction, communication and the way trade are conducted between different trade actors.[69] Technological developments enable undertakings

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68 SHELANSKI, 1692.

69 EZRACHI, Ariel; STUCKE, Maurice E., 'Artificial Intelligence & Collusion: When Computers Inhibit Competition', University of Illinois Law Review, 2017(5), 2017, 1778.

to collect data on consumers, competitors, or the market and to store collected data. Besides these, most importantly technological developments allow undertakings to analyse all data they collect and to decide on further steps. One of the most important of these developments is algorithms and their use in production and pricing strategies of products and services.[70]

An algorithm can be defined as a formulation or a procedure to be followed in calculations, problem-solving or any other operations, especially by a computer.[71] Algorithms which can be used in many different areas have given computers the opportunity to use more data at the same time. This opportunity has also given undertakings the opportunity to use algorithms for different practices in digital markets, such as production and pricing strategies, specifically to determine the best product price or production time and unit according to the market conditions. No doubt using algorithms resulting from the evaluation of very different data by computers will provide advantages to undertakings.[72] However, it is needed to be considered whether this complies with Article 101 TFEU and adversely affects competition in the market.

Article 101 TFEU prohibits agreements between companies which prevent, restrict or distort competition in the EU. According to first paragraph of this article, any form of coordination or agreement among rival undertakings causes an anticompetitive situation in the market and for that reason these actions would generate void agreements. All these situations, which include any form of coordination or agreement to achieve profit maximisation and indirectly harm consumers, can be accepted as collusion. Algorithms can bring about many different forms of coordination and this is termed as algorithmic collusion[73], and Ezrachi and Stucke identify four categories of algorithmic collusion as Messenger,

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70 EZRACHI; STUCKE, 2016, Chapter 9.

71 MEHRA, Salil K., 'De-Humanizing Antitrust: The Rise of the Machines and the Regulation of Competition', Temple University Legal Studies Research Paper Series, 43, 2014, 8-9.

72 Organisation for Economic Co-Operation and Development (OECD), [2017], Algorithms and Collusion: Competition Policy in the Digital Age, www.oecd.org/competition/algorithms-collusion-competition-policy-in-the-digital-age.htm, Accessed 10 February 2022, 18.

73 EZRACHI; STUCKE, 2017, 1782;

Hub and Spoke, Predictable Agent, and Digital Eye.[74] They consider the evidence of intent and horizontal agreement, and potential liability and reach a solution that all these different categories facilitate conscious parallelism and are not likely to be challenged under current laws.[75] As a result of all these, it can be indicated that algorithms have the potential to be used as a facilitating factor for collusion, such as by monitoring competitors and their behaviours without any human interaction, and can cause some anticompetitive results in the market as happened in 2011 for the selling price of the book 'Making of a Fly' was offered on Amazon. Two sellers of this book used pricing algorithms to set their price for this book on Amazon, and without their interaction, their prices for the same book started to increase simultaneously. At the end of ten days, the consumers needed to pay million dollars to buy this book.

Algorithms are becoming increasingly important, especially on online MSPs because they present a structure that will have a positive effect on the relationship between the parties of the platform. Platforms can collect data from the sides and can offer them better options based on their preferences. They can also decide prices based on their situation and match different trade actors with each other.[76] Although all these situations appear to be positive for the platform, and partly for its users, it is likely to adversely affect the competition in the market and cause possible competition law enforcement challenges.

3.2 Big Data: Using Consumer Data for Commercial Purposes

Another main issue which EU competition law is concerned with is the collection, processing, and use of consumers' data. Big data is generally defined as 'the use of large-scale computing power and technologically advanced software in order to collect, process and analyse data characterised by a large volume, velocity, variety and value'.[77]

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74 EZRACHI; STUCKE, 2017, 1782.

75 For further detail on these four categories of algorithmic collusion, please see EZRACHI; STUCKE, 2016, Part II.

76 VEZZOSO, Simonetta, 'Competition by Design', Stockholm Faculty of Law Research Paper Series, 2017, 3.

77 Organisation for Economic Co-Operation and Development (OECD), [2017], Big Data: Bringing Competition Policy to the Digital Era, < https://one.oecd.org/document/DAF/COMP/M(2016)2/ANN4/FINAL/en/pdf>, Accessed 10 February 2022, 2;

Having such data provides strategic advantages for undertakings and is therefore very important. This situation has become controversial because global trade has begun to depend on these data and the process is rapidly changing.[78]

Big data has become an indispensable asset for undertakings when they commence a new business, and it is accepted as a currency of the digital economy.[79] It helps undertakings to improve their decision-making process and achieve more beneficial results. For example, with its help undertakings can directly focus on their consumers' needs and preferences and provide better options to them or they can increase their level of innovation. In short, big data helps undertakings have a more efficient production process. In addition, having more data and being able to analyse and use it give undertakings an advantage against their competitors in the market.[80]

The drawbacks of big data are numerous and include threats to competition, such as anticompetitive agreements, the unfair gaining and abuse of market power, effects on merger control and innovation decision-making process, and threats to privacy issues and consumer protection.[81]

Big data, and especially consumers' data, are gathered by undertakings that are part of digital markets and that provide digital services. In overcoming the main issue, which is where to obtain these data, the most suitable environment that comes to mind is social media and search engines, i.e. online MSPs.[82] It is obvious that Google as a search engine and Facebook as a social media platform are really powerful, and with the help of the data they have, they have very broad network and they cause entry barriers for the other undertakings that want to join the

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PFEIFFER, Roberto Augusto Castellanos, 'Digital Economy, Big Data and Competition Law', Market and Competition Law Review, 3(1), 2019, 55-56.

78 GIANNACCARI, Andrea, 'The Big Data Competition Story: Theoretical Approaches and the First Enforcement Cases', European University Institute Working Papers, 10, 2018, 1.

79 GIANNACCARI, 1-2.

80 PFEIFFER, 59.

81 OECD, Big Data, 3.

82 BURRI, Mira, 'Understanding the Implications of Big Data and Big Data Analytics for Competition Law', (2019), New Developments in Competition Law and Economics Edited by Klaus Mathis and Avishalom Tor, Springer International Publishing, 2019, 248.

market. It is not easy to control and displace them when there is such power in their hands.[83] For this reason, online MSPs and the practices which can be created through them by using big data can be harmful to consumers and affect competition in the market.

Although big data has some benefits to market relations, consumers and undertakings, it also adversely affects competition in the market and causes potential competition law enforcement challenges.[84] As mentioned earlier, the increase in computer-based operations such as algorithms, big data, artificial intelligence etc which are part of the digital economy and which have negative competitive effects in digital markets can change the traditional market understanding and confidence in existing EU competition rules.[85] All practices that have the potential to produce results such as high prices, low quality, fewer options and slower innovation, which are contrary to consumer welfare, should be defined as a problem by EU competition law[86] and all of them need more detailed review under EU competition law.

3.3 A Connected European Digital Single Market

E-commerce has a crucial role in the EU economy, and it has been continuing growing at impressive rates for years and it is obvious that the new global economy is under the influence of digitalisation. This ongoing growth also brings about a change and leads to new problems and competition law issues such as algorithm, big data, artificial intelligence etc. New strategies and approaches should be developed to solve the problems that have emerged out of e-commerce and to keep up with digital economy and the new system it brought. The Digital Single Market is one of these strategies and belongs to the European Single Market which was issued by the EC in 2015. This area is another important

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83 KERBER, Wolfgang, 'Digital Markets, Data, and Privacy: Competition Law, Consumer Law, and Data Protection', Joint Discussion Paper Series in Economics by the Universities of Aachen, Gießen, Göttingen, Kassel, Marburg and Siegen, 14, 2016, 8.

84 BURRI, 248-249.

85 EZRACHİ; STUCKE, 2017, 1808-1809.

86 COLAPS, Anna, 'Big Data: Is EU Competition Law Ripe Enough to Meet the Challenge?', 60 Years of EU Competition Law: Stocktaking and Future Prospects Edited by Roberto Mastroianni and Amedeo Arena, Edtoriale Scientifica, Napoli, 2017, 43.

discussion of the digital economy/digital markets in EU competition law which requires attention.

The policy of the Digital Single Market can be defined as:

> […] one in which the free movement of goods, persons, services and capital is ensured and where individuals and businesses can seamlessly access and exercise online activities under conditions of fair competition, and a high level of consumer and personal data protection, irrespective of their nationality or place of residence.[87]

The DSMS pursues three fundamental aims. The first one is breaking down all the barriers in front of the trade actors who want to have a role in the digital economy and providing better access for all of them to reach all online goods and services across the Member States. The second aim is about civil enforcement and focuses on creating a suitable environment for trade of digital goods and services. It includes serving fundamental facilities and systems, a market controlled by fair and inclusive rules and a level playing field. The last one is being able to demonstrate productive results for every actor involved in the European Digital Single Market and being the world leader in the digital sector.[88]

There are many basic concepts underlying this strategy such as cross-border e-commerce rules, unjustified geo-blocking, copyright provisions, rights to use data, and the tax treatment of certain e-services. All these concepts must be revealed so that a consistent solution can be found in accordance with the digital economy. Among all these very debatable and new issues, the EC has emphasised the role of platforms in the digital economy and the DSMS.[89] A communication from the

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87 EUROPEAN COMMISSION, A Digital Single Market Strategy for Europe, 3.

88 EUROPEAN COMMISSION, A Digital Single Market Strategy for Europe, 3-4; ERIXON, Fredrik; LAMPRECHT, Philipp, 'The Next Steps for the Digital Single Market: From Where do We Start?', European Centre for International Political Economy (ECIPE) Policy Brief, 2/2018, 2018, https://ecipe.org/wp-content/uploads/2018/10/ECI_18_5F_TheNextStepsfortheDigital_2-2018_03.pdf, Accessed 10 February 2022, 3-5; FROSIO, Giancarlo F., 'Reforming Intermediary Liability in the Platform Economy: A European Digital Single Market Strategy', Northwestern University Law Review, 112(251), 2017, 21-23.

89 EUROPEAN COMMISSION, 'Online Platforms and the Digital Single Market Opportunities and Challenges for Europe', COM (2016), 288 final, < https://eur-

Commission on the subjects of online platforms and the DSMS[90] shows that the Commission acknowledges the importance of platforms in the digital economy because they have the potential for facilitating more benefits to all trade actors of the digital economy due to their characteristics, are able to enhance consumer welfare standards and can act as a bridge between consumers and undertakings.[91]

3.4 The Focus of All These Discussions: Regulating Online Multi Sided Platforms Markets

The internet and all different digital technologies and devices have an impact on transforming of the life the digital economy leads. The undertakings are more willing to adopt platform businesses to be integrated into this new and transforming life.

As emphasised in the previous sections and explained by the EC, online platforms are one of the most crucial key concepts of the digital economy. It is reasonable to argue that all current discussions of the digital economy and digital markets in EU competition law are in some way related to online MSPs.

The undertakings which desire to collect data on consumers, competitors, and the market, to store collected data and, most importantly, to analyse all data collected and to decide on their further steps in terms of using algorithms for process of production and pricing decisions need online MSPs. Consumers are the essential sides of the platform relations, and this is the easiest way to reach them and learn about their characteristics and preferences. This means that the most significant intermediaries in the emergence of the big data concept are online MSPs. The EU DSMS aims to offer an extensive play area to European trade actors and become one of the most valuable environments in the world for e-commerce, and online MSPs have a crucial role and responsibility in this strategy.[92] Hence, it would not be wrong to say that

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lex.europa.eu/legalcontent/EN/TXT/PDF/?uri=CELEX:52016DC0288&from=EN>,Accessed 10 February 2022, 2-3.

90 EUROPEAN COMMISSION, Online Platforms and the Digital Single Market Opportunities and Challenges for Europe.

91 EUROPEAN COMMISSION, Online Platforms and the Digital Single Market Opportunities and Challenges for Europe, 3.

92 FROSIO, 24.

the effects of the digital economy, emerging technological developments and innovations are taken to markets through online MSPs.

Digitalisation of the activities and the existence of the online MSPs in almost all daily routines of the consumers creates many benefits for all actors in trade; however, at the same time this transformation creates new problems for consumers, undertakings, and competition authorities. One of the problems because of this transformation is appearing tech giants in most digital markets. For instance, it can be said that Google, Amazon, Apple, or Microsoft are in lead in their markets, and it is hard for their competitors to be in the same market.

At that point, Article 102 of the TFEU can take place for these tech giants as it aims preventing undertakings who hold a dominant position in their markets from abusing their powerful position; however, EU competition law enforcement needed to be adapted to the challenges which were created by the new dynamics of the digital economy and digital markets.[93] For that reason, a discussion of need for setting new competition rules and tools which focus on the behaviour and practices of tech giants in the online MSP markets have been started for a little while. It is believed that specific rules and tools are needed to control the behaviour of some online MSPs which have strong incentives to engage in anticompetitive results. This scope is not just for the undertakings who hold a dominant position. For tech giants a broader concept has been planned to be come through.[94]

As a result of these ongoing discussions, a regulation which focuses on fairness and contestability in digital markets were released in December 2020.[95] The DMA recognizes that gatekeepers (Some large

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93 CRÉMER; Jacques; DE MONTJOYE, Yves-Alexandre; SCHWEITZER, Heike, 'Competition Policy for the Digital Era Final Report',Publications Office of the European Union, (2019), < https://ec.europa.eu/competition/publications/reports/kd0419345enn.pdf>, Accessed 10 February 2022, 69.

94 CRÉMER; DE MONTJOYE; SCHWEITZER, 37.

95 The DMA can be defined as ex-ante sector-specific regulation, resulting from the EC's many experiences in the digital economy over the years. The main aims of the DMA are to have fair economic outcomes in the digital markets and provide contestability between the undertakings present therein. For this aim, the DMA attempts to emphasise the negative consequences of the rise of some undertakings, which are seen as gatekeepers in the digital economy and it attempts to list certain practices of gatekeepers that have been already assessed as per se harmful and avoid from them. For further and detailed information regarding DMA, please see CHIRICO,

online MSPs) retain market power over essential platform services due to incumbent advantages or anticompetitive actions, thus it attempts to highlight the detrimental effects of the rise of particular undertakings that are perceived as gatekeepers in the digital economy. This approach and releasing a sector specific regulation proves how crucial the position of online MSPs in the current issues of EU competition law.

To sum up, it can be said that online MSPs occupy a key position in all these current discussions on the digital economy/digital markets in EU competition law as the regulatory issues are directly related to online MSPs.

CONCLUSION

This study has attempted to explain some of the main issues of digital economy and digital markets in EU competition law. It did so by first defining online MSPs and introducing the general current issues of digital economy. After that it continued with fundamental characteristics of digital markets, the infrastructure of digital market, the importance of innovation therein and finalise with indicating current discussions on digital economy/digital market in EU competition law.

In this article, two main results can be reached. The first one is that although digital economy seems to have positive effects in general, it has both positive and negative effects in terms of all different trade actors therein. It has advantages in terms of the network effect as a create an ability to reach many different types of trade actors and connect to them, interoperability, diversity of products and services, easy connection and lower search costs. In contrast, in terms of personal privacy, the results of network effects and winner-takes-all notion, and the threat of individual price differentiation, digital markets have some disadvantages.

The second one is understanding the key position of online MSPs in current discussions on the digital economy and digital markets in EU competition law. Collection of consumer data, store and analyse them is a process that can occur through online MSPs. They are the fundamental trade actor of digital markets, and the effects of the digital economy, emerging technological developments and innovations are taken to markets through online MSPs.

Filomena, 'Digital Markets Act: A Regulatory Perspective', Journal of European Competition Law & Practice, 12(7), 2021, 493-499.

REFERENCES

AGHION, Philippe; AKCIGIT, Ufuk, 'Innovation and Growth: The Schumpeterian Perspective' in Laszlo Matyas; Richard Blundell; Estelle Cantillon; Barbara Chizzolini; Luigi Bocconi; Marc Ivaldi; Ramon Marimon; Frode Steen (eds), Economics without Borders Economic Research for European Policy Challenges, Cambridge University Press, 2017.

ANTONELLI, Cristiano, 'The Economics of Innovation: From the Classical Legacies to the Economics of Complexity', Economics of Innovation and New Technology, 18(7), 2009.

BARWISE, Patrick; WATKINS, Leo, 'The Evolution of Digital Dominance How and Why We Got to GAFA', in Martin Moore; Damian Tambini (eds), Digital Dominance The Power of Google, Amazon, Facebook, and Apple, Oxford University Press, 2018.

BRENNEN, J. Scott; KREISS, Daniel, 'Digitalization' in Klaus Bruhn Jensen; Robert T. Craig (eds), The Wiley Blackwell-ICA International Encyclopedia of Communication Theory and Philosophy, John Wiley & Sons, 2016.

BUDZINSKI, Oliver; STÖHR, Annika, 'Competition Policy Reform in Europe and Germany – Institutional Change in the Light of Digitization', Ilmenau University of Technology Institute of Economics Ilmenau Economics Discussion Papers, 24(117), 2018.

BURRI, Mira, 'Understanding the Implications of Big Data and Big Data Analytics for Competition Law', (2019), New Developments in Competition Law and Economics Edited by Klaus Mathis and Avishalom Tor, Springer International Publishing, 2019.

Case IV/M.1069, WorldCom/MCI, [1998], OJ L 116/1.

Case COMP/M.1741, MCI WorldCom/Sprint, [2000], OJ L 300/1.

Case COMP/C-3/37.792, Microsoft, [24.03.2004], C(2004)900 final.

Case C-209, Post Danmark A/S v Konkurrencerådet, [2012], Judgment of the Court (Grand Chamber), ECLI:EU:C:2012:172.

CHIRICO, Filomena, 'Digital Markets Act: A Regulatory Perspective', Journal of European Competition Law & Practice, 12(7), 2021.

CLEYNENBREUGEL, Pieter Van, 'Innovation in Competition Law Analysis: Making Sense of On-Going Academic and Policy Debate' in Paul Nihoul; Pieter Van Cleynenbreugel (eds), The Roles of Innovation in Competition Law Analysis, ASCOLA Competition Law Series, Edward Elgar Publishing, 2018.

COLAPS, Anna, 'Big Data: Is EU Competition Law Ripe Enough to Meet the Challenge?', 60 Years of EU Competition Law: Stocktaking and Future Prospects Edited by Roberto Mastroianni and Amedeo Arena, Edtoriale Scientifica, Napoli, 2017.

CRÉMER; Jacques; DE MONTJOYE, Yves-Alexandre; SCHWEITZER, Heike, 'Competition Policy for the Digital Era Final Report',Publications Office of the European Union, (2019), < https://ec.europa.eu/competition/publications/reports/kd0419345enn.pdf>, Accessed 10 February 2022

DATA HUB, 'Search Engine Market Shares', < https://datahub.io/rufuspollock/search-engine-market-shares/view/0>, Accessed 10 February 2022.

ECONOMIDES, Nicholas, 'Competition Policy in Network Industries: An Introduction', The Networks, Electronic Commerce, and Telecommunications ("NET") Institute Working Paper Series, 04(23), 2004.

ERIXON, Fredrik; LAMPRECHT, Philipp, 'The Next Steps for the Digital Single Market: From Where do We Start?', European Centre for International Political Economy (ECIPE) Policy Brief, 2/2018, 2018, https://ecipe.org/wp-content/uploads/2018/10/ECI_18_5F_TheNextStepsfortheDigital_2-2018_03.pdf, Accessed 10 February 2022.

EUROPEAN COMMISSION, Guidance on the Commission's Enforcement Priorities in Applying Article 82 of the EC Treaty to Abusive Exclusionary Conduct by Dominant Undertakings, [2009], OJ C 45/02, paras 1, para 5-7; EUROPEAN COMMISSION, DG Competition Discussion Paper on the Application of Article 82 of the Treaty to Exclusionary Abuses, (2005), <http://ec.europa.eu/competition/antitrust/art82/discpaper2005.pdf>, Accessed on 10 February 2022.

EUROPEAN COMMISSION, 'A Digital Single Market Strategy for Europe', COM(2015), 192 final, https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52015DC0192&from=EN, Accessed 10 February 2022.

EUROPEAN COMMISSION, Expert Group on Taxation of the Digital Economy, Working Paper: Digital Economy – Facts & Figures, (2014), <

https://ec.europa.eu/taxation_customs/system/files/2016-09/2014-03-13_fact_figures.pdf >, Accessed 10 February 2022.

EUROPEAN COMMISSION, 'Making Markets Work Better', (2016), The European Union Explained: Competition Series, < https://publications.europa.eu/en/publication-detail/-/publication/8200c251-aa42-11e6-aab7-01aa75ed71a1>, Accessed on 10 February 2022.

EUROPEAN COMMISSION, 'Online Platforms and the Digital Single Market Opportunities and Challenges for Europe', COM(2016), 288 final, < https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52016DC0288&from=EN>, Accessed 10 February 2022.

EVANS, David S., 'Multi-Sided Platforms, Dynamic Competition, and The Assessment of Market Power for Internet-Based Firms', The University of Chicago Coase-Sandor Institute for Law and Economics Working Paper Series, 753, 2016.

EVANS, David S.; SCHMALENSEE, Richard, 'Why Winner-Takes-All Thinking Doesn't Apply to the Platform Economy', Harvard Business Review, 2016.

EVANS, David S.; SCHMALENSEE, Richard, 'Network Effects: March to the Evidence, Not to the Slogans', CPI Antitrust Chronicle, 2017, < https://www.competitionpolicyinternational.com/wp-content/uploads/2017/09/CPI-Evans-Schmalensee.pdf>, Accessed 10 February 2022.

EZRACHI, Ariel, 'EU Competition Law Goals and the Digital Economy', Oxford Legal Studies Research Paper Series, 17/2018, 2018.

EZRACHI, Ariel; STUCKE, Maurice E., Virtual Competition the Promise and Perils of the Algorithm-Driven Economy, Harvard University Press, 2016.

EZRACHI, Ariel; STUCKE, Maurice E., 'Artificial Intelligence & Collusion: When Computers Inhibit Competition', University of Illinois Law Review, 2017(5), 2017.

FROSIO, Giancarlo F., 'Reforming Intermediary Liability in the Platform Economy: A European Digital Single Market Strategy', Northwestern University Law Review, 112(251), 2017.

GAWER, Anabelle; HENDERSON, Rebecca, 'Platform Owner Entry and Innovation in Complementary Markets: Evidence from Intel', Journal of Economics & Management Strategy, 16(1), 2007.

Gesetz gegen Wettbewerbsbeschränkungen (GWB), [26.08.1998], available at http://www.gesetze-im-internet.de/gwb/GWB.pdf, for English version is available at https://www.bundeskartellamt.de/SharedDocs/Publikation/EN/Others/GWB.pdf?__blob=publicationFile&v=6, Accessed 10 February 2022.

GIANNACCARI, Andrea, 'The Big Data Competition Story: Theoretical Approaches and the First Enforcement Cases', European University Institute Working Papers, 10, 2018.

GOMEZ, Jeff, Print is Dead: Books in Our Digital Age, Palgrave Macmillan US, 2008.

HAGIU, Andre; WRIGHT, Julian, 'Multisided Platforms', International Journal of Industrial Organization, 43, 2015.

HOLZWEBER, Stefan, 'Market Definition for Multi-Sided Platforms: A Legal Reappraisal', World Competition, 40(4), 2017, 563.

HOVENKAMP, Herbert, 'Antitrust and Information Technologies', Florida Law Review, 68(2), 2017.

KADAR, Massimiliano, "European Union Competition Law In the Digital Era", Zeitschrift für Wettbewerbsrecht, 4, 2015.

KATZ, Michael L.; SHAPIRO, Carl, 'Network Externalities, Competition, and Compatibility', The American Economic Review, 75(3), 1985.

KATZ, Michael L.; SHELANSKI, Howard A., 'Mergers and Innovation', Antitrust Law Journal, 74(1), 2006.

KERBER, Wolfgang, 'Digital Markets, Data, and Privacy: Competition Law, Consumer Law, and Data Protection', Joint Discussion Paper Series in Economics by the Universities of Aachen, Gießen, Göttingen, Kassel, Marburg and Siegen, 14, 2016.

MEHRA, Salil K., 'De-Humanizing Antitrust: The Rise of the Machines and the Regulation of Competition', Temple University Legal Studies Research Paper Series, 43, 2014.

MOURYA, S. K.; GUPTA, Shalu, E-Commerce, Alpha Science International Ltd, Oxford, 2015.

Organisation for Economic Co-Operation and Development (OECD), [2000], Competition Issues in Electronic Commerce.

Organisation for Economic Co-Operation and Development (OECD), [2009], Two-Sided Markets.

Organisation for Economic Co-Operation and Development (OECD), [2012], The Digital Economy.

Organisation for Economic Co-Operation and Development (OECD), [2017], Algorithms and Collusion: Competition Policy in the Digital Age, www.oecd.org/competition/algorithms-collusion-competition-policy-in-the-digital-age.htm, Accessed 10 February 2022.

Organisation for Economic Co-Operation and Development (OECD), [2017], Big Data: Bringing Competition Policy to the Digital Era, < https://one.oecd.org/document/DAF/COMP/M(2016)2/ANN4/FINAL/en/pdf>, Accessed 10 February 2022,

Organisation for Economic Co-Operation and Development (OECD), [2018], Implications of E-commerce for Competition Policy - Background Note, DAF/COMP(2018)3.

Organisation for Economic Co-Operation and Development (OECD), 'Transformative Technologies and Jobs of the Future', (2018), Background Report for the Canadian G7 Innovation Ministers' Meeting, < https://www.oecd.org/innovation/transformative-technologies-and-jobs-of-the-future.pdf>, Accessed 10 February 2022.

Organisation for Economic Co-Operation and Development (OECD), [2019], Implications of E-commerce for Competition Policy - Background Note, DAF/COMP(2018)3.

PFEIFFER, Roberto Augusto Castellanos, 'Digital Economy, Big Data and Competition Law', Market and Competition Law Review, 3(1), 2019.

PwC, Website (primaonline.it). n.d. 'E-book Sales as a Percentage of Total Book Sales Worldwide in 2013 and 2018', (2019), <https://www.statista.com/statistics/234106/e-book-market-share-worldwide/>, Accessed 10 February 2022.

ROCHET, Jean-Charles; TIROLE, Jean, 'Two-Sided Markets: A Progress Report', The RAND Journal of Economics, 37(3), 2006.

ROSEN, Sherwin, 'The Economics of Superstars', The American Economic Review, 71(5), 1981.

RYSMAN, Marc, 'The Economics of Two-Sided Markets', Journal of Economic Perspectives, 23(3), 2009.

SCHMIDT, Hedwig K., 'Taming the Shrew: There's No Need for a New Market Power Definition for the Digital Economy', Stockholm Faculty of Law Research Paper Series, 17, 2017.

SCHUMPETER, Joseph A., Capitalism, Socialism & Democracy, 5th Edition, George Allen & Unwin (Publishers) Ltd, 1943.

SCHWEITZER, Heike; HAUCAP, Justus; KERBER, Wolfgang; WELKER, Robert, 'Modernisierung der Missbrauchsaufsicht für marktmächtige Unternehmen', Projekt im Auftrag des Bundesministeriums für Wirtschaft und Energie (BMWi), 66(17), 2018, 5-20, < https://www.bmwi.de/Redaktion/DE/Publikationen/Wirtschaft/modernisierung-der-missbrauchsaufsicht-fuer-marktmaechtige-unternehmen.pdf?__blob=publicationFile&v=15>, Accessed 10 February 2022.

SHELANSKI, Howard A., 'Information, Innovation and Competition Policy for the Internet', University of Pennsylvania Law Review, 161, 2013.

SÖZER, Edin Güçlü; CİVELEK, Mustafa Emre; ÇEMBERCİ, Murat, Strategic Excellence in Post-Digital Ecosystems: A B2C Perspective, Zea Books, The University of Nebraska–Lincoln Libraries, 2018, <https://digitalcommons.unl.edu/zeabook/62>, Accessed 10 February 2022.

SPULBER, Daniel F.; YOO, Christopher S., 'Antitrust, the Internet, and the Economics of Networks', University of Pennsylvania Law School Institute for Law and Economics Research Paper Series, 13(36), 2013.

STIGLITZ, Joseph E., 'Competition and Competitiveness in a New Economy', Competition and Competitiveness in a New Economy Edited by Heinz Handler and Christina Burger, Austrian Federal Ministry for Economic Affairs and Labour, 2002.

UYTSEL, Steven Van; UEMURA, Yoshiteru, 'Competition Law Interference Prior to the Formation of a Digital Market -The JFTC's Enforcement Action Against DeNA', 2017, Available at SSRN: https://ssrn.com/abstract=3086449 or http://dx.doi.org/10.2139/ssrn.3086449.

VEZZOSO, Simonetta, 'Competition by Design', Stockholm Faculty of Law Research Paper Series, 2017.

WHISH, Richard; BAILEY, David, Competition Law, 9th Edition, Oxford University Press, 2018.

WILSON, Tom, 'Electronic Publishing and The Future of The Book', Information Research, 3(2), 1997.

WORLD ECONOMIC FORUM, The Future of Jobs Report, (2018), < http://www3.weforum.org/docs/WEF_Future_of_Jobs_2018.pdf > Accessed 10 February 2022.

ZHANG, Yin; KUDVA, Sonali, 'E-books Versus Print Books: Readers' Choices and Preferences Across Contexts', Journal of the Association for Information Science and Technology, 65(8), 2014.