REPORT TEAM 8
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Antitrust remedies in big data-driven business models: a blind alley for consumers?

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1. Introduction.

The digitization process has resulted in an increase in the amount of available data in the last few years. Not only the volume and variety of data, but also the opportunities to analyze the data are multiplied. In the socio-economic context, the innovation performance is linked to the access of technology and funds from research and development collaborations. Based on these arguments, the purpose of this research is to provide a better understanding with regard to the influence of competition law on big data.

The big data ecosystem has experienced a change due to the emergence of new business models. With the application of big data–driven business models, organizations may better serve their upstream customers and the end-users in order to counter the stiff existing competition, and contribute to the big data-driven business models. Although companies based on big data claim to improve the product or service, the use of data may theoretically result in consumer harm due to (abuse of) a dominant position. So, our main question is: whether a monopoly (from the customer’s perspective) may be desirable in social media and network (big data-driven) businesses? Is the consumer in a blind alley?

There is an extensive literature on the relation between competition on the one hand and quality and innovation on the other. Some authors argue that this relation is positive because stronger competition is an incentive for suppliers to innovate and to diversify in quality dimensions as to “escape competition”. Other authors, notably Schumpeter, defend that companies need the financial means and incentives to innovate. Where monopolies exist, high profits attract challengers trying to enter the market with innovative ideas to ‘steal’ some of the profits of the incumbent. Besides, Aghion advances the idea that both classical views hold some truth and that the relation between competition and quality and innovation is likely inverse U-shaped, concluding that some degree of market power may be desirable as it induces innovation.

With regard to the topic competition law and big data, this report is focused on the following questions: (i) how does the article 102 of the Treaty on the Functioning of the European Union (hereinafter TFEU) and Antitrust law regulate new business models based on Big Data?; (ii) how monopoly operates in terms of big data; (iii) the understanding of reaction to

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antitrust measures and (iv) its impacts on consumers. This raises the question as to what are the implications of big data monopolistic businesses for innovation and for consumer welfare; and (v) the final report question to be answered is whether or not the current system is a blind alley for consumers.

Many technologies that show early promise lead up blind alleys and maybe the big data-driven business model is a road that is closed at one end. But what is the definition of the blind alley? According to the Cambridge dictionary, it is a situation or method that is not effective or will not produce results. If abuse of dominant position is found in a data-driven business or company, the application of antitrust measures could be a blind alley for consumers because it would have a negative impact as the service toward the consumers may change or may not produce the same outcome.

Based on the literature, case studies and analysis of law, the report is aimed at identifying the business models based on big data. For this analysis, a research about the state of art and the status quo is developed to understand how these business models operate in the market. Then, the most dominant companies in terms of big data collection are determined as well as the possible abusive behaviours of dominant position resulting in negative impact on innovation and potential harm to consumers. To conclude, an opinion about this concern is delivered in order to shed some light into this discussed topic.

2. Big data monopoly.

2.1. Defining the relevant market for the big data.

Defining a relevant market is useful in determining which goods or services potentially or actually compete. Considering the constant changes imposed by technological innovation and rapidly evolving digital economy, the definition of the relevant market of big data does not deal with a particular case but allows to understand the structure of market and related concerns to competition and ultimately, to the consumer.

Process of big data starts with the data capture and ends with the use of the information generated by such data. The big data relevant market can be divided into three parts, namely: 1. capture of big data; 2. storage of big data; and 3. big data analytics. Each of these stages of the big data market, as depicted in Table 1 below, includes entrepreneurs, consumers, governments, public institutions, non-profit organizations, among others. Some of them are involved in all stages of the market, while other players get involved in only one stage of the market. Big data is a set of data collected for a determining purpose and reassembled to respond to other needs, providing competitive advantage and valuable information. Such data can be private as well as public. For private data, personal information becomes an intangible asset for the purpose of creating considerable value, comparable to patents, copyrights and

goodwill. However, the private data can be viewed as the most valuable asset of an organisation and it is captured through digital services such as social networks and email and obtained allegedly for services offered “free of charge” to consumers⁹.

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This study focuses on social network or social media which is a group of Internet-based applications that employs web-based and mobile technologies to create highly interactive platforms via which individuals and communities share, discuss, modify and co-create user-generated content¹⁰. Examples include Facebook, LinkedIn, Twitter, MySpace, Snapchat, Instagram, etc. For instance, Facebook is a mobile application and website that allows users to connect, share, discover, and communicate with each other on mobile devices and personal computers. It is worth mentioning that Facebook is a double-sided platform. On one side of the platform are consumers who use Facebook for its social media functionality, posting and seeing posts within news feed. On the other side are advertisers who use the Facebook news feed (among other features) to publish advertisements. For consumers, there is no monetary cost for using Facebook. Advertisers pay Facebook for publishing their ads based on the geographical spread of users and number of active users¹¹.

2.2. Dominant place of the owner of the big data.

Under the requirement of Article 102 of the TFEU the establishment of the dominant position plays a decisive role for the judgment. As stated above, we come to the understanding that the specific definition of the relevant market of big data is difficult to construe and a case-by-case basis is needed. So the precondition of holding a dominant position is to identify the business model first, i.e., the suppliers, customers, products of the market of the big data. Then we should be able to measure the market size and the market share of a relevant company concerning relevant products or services.

Big data is non-exclusive and non-rivalrous. That is to say, every firm can collect and work on the same set of data without infringing other firms’ property rights. For example, Facebook, WhatsApp and some ordinary free apps are allowed to own the same information about same people and are legally developing further applications based on these data. Therefore, these firms share the same character of information. “Multi-homing” is thus common among internet users. In fact the more it is being used and spread, by different providers for multiple different or same services, the more deceased power it has.

As a result of the network effect, the dominant position of owners of big-data is possible and identifiable. But the leading cases about data access and data monopoly from Court of Justice of the European Union (hereinafter CJEU) are merely involved with some deficiencies of IP law and also the protection of trade secret. The most important cases are Magill and Microsoft. The conclusion of the rulings is that the dominance position of owners of big data depends on the indispensability of the data for the downstream market. It is often obvious for the machine generated data not personal data because of the characters of the data mentioned above and the highly competitive market of apps. But in the market of healthy, insurance etc., as mentioned by Daniel Berman from Maccabi Health Fund at the 19th EIPIN Congress on Innovation and Triple Helix, the situation would be largely different. The personal data in their hands are likely to be indispensable and the sole source for the downstream market. So the start-point of analyzing the dominant position for owners of big data is to consider the substitutability of the datasets. After confirming the indispensability of the personal data holding by a company or a joint venture for the downstream market, the rulings of the CJEU could give us a hint for applying the competition law. However regarding personal data, the balance of innovation and privacy should be given a significant consideration. Even though we established the dominant position and the indispensability of

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14 Case T-201/04 Microsoft Corp v Commission ECR [2007] II-3601
personal data, should the intervention of competition law be justified? Probably, the answer is no, because we need our personal data in good hands and thus the transferability of personal data is contradicting with this trust in a way. This consideration is also reflected in the objectives and principles of the General Data Protection Regulation (hereinafter GDPR), such as the objective of protection of personal data established in Article 2 and the principles of lawfulness of processing data according to Article 6.

Consequently, the possible application of Article 102 TFEU is considerable and meaning for certain market failure concerning the abusive conducts are addressing to the consumers like excessive prices, refusing to deal with consumers and stopping to provide services while there is still a consumer demand.

2.3. The application of Article 102 of the TFEU on possible abusive behaviours of the owner of the big data.

In the past few years, competition authorities have been keeping a scrutinizing eye on big data companies as it was argued that concentration of data within the control of some companies may lead to anticompetitive effects. While the collection and control of even substantial amounts of data is not illegal, the misuse of big data to gain or maintain market power might amount to a violation of competition law\(^\text{16}\), particularly under the Article 102 TFEU that prohibits the abuse of dominant position. This part analyzes in what ways the social media services could be considered as “misbehaving” by abusing their dominance.

Under the Article 102 TFEU, three main categories of abusive conduct are established: (i) exclusionary abuses, (ii) exploitative abuses and (iii) discriminatory abuses\(^\text{17}\).

In relation to the exclusionary abuses as seen from the perspective of online services providers, it is important to mention the possibility of the refusal to grant access to data. It was also identified by the French competition authority (Autorité de la Concurrence) and its German equivalent (Bundeskartellamt) in their report about Competition Law and Data\(^\text{18}\) as forms of abusive conduct that involve the exploitation of big data to foreclose the market.

Probably, the refusal to grant access to data defined as an essential facility\(^\text{19}\) is the most conceivable type of abuse under Article 102 TFEU. As seen before, the indispensability


\(^{17}\)Online Commentary on Competition Law developed by the Faculty of Law of the Freie Universität Berlin, ‘Art. 102 TFEU - concept of abuse: Types of abusive conduct’ <https://wikis.fu-berlin.de/display/oncomment/Types+of+abusive+conduct> - accessed 17.05.2018.


\(^{19}\)According to ECJ case law, in Bronner, an undertaking can request access to a facility or network if the incumbent’s refusal to grant access concerns a product which is indispensable for carrying on the business in question; a product or service being indispensable only if there are no alternative products or services and there are technical, legal or economic obstacles that make it impossible or unreasonably difficult for any undertaking
character is difficult to meet due to the non-rivalrous nature of the data. Therefore, it would be seen as an abuse and the incumbent will be obliged to grant access, only if ‘it is demonstrated that the data owned by the incumbent is truly unique and that there is no possibility for the competitor to obtain the data that it needs to perform its services’\(^{20}\).

When assessing the anticompetitive foreclosing effect of the exclusionary abuses, the competition authorities look, among other aspects, at the level of the barriers to entry. In case of online services, even if the competitor would be able to buy “third party data” in order to match the one of the incumbent, it might not be possible due to the huge quantity and quality of the data set (large base of consumers and of data)\(^{21}\). Therefore, this could result in significant barriers to entry that would strengthen the dominant position or its maintenance.

In relation to exploitative abuses, even if the European Commission has given less attention to them compared to the exclusionary type\(^ {22}\), attention should be paid to the new approach that the German competition authority has taken in the proceedings it opened against Facebook in March 2016. The proceedings refers to the zero-price side (users side) of the market of social media services and focuses on the possible exclusionary conduct of Facebook that, by taken advantage of its dominant position, imposes on its users misleading privacy terms regarding data collected from third-party websites, respectively “unfair trading conditions” as stated in Article 102 TFEU\(^ {23}\). Therefore, the German authority is contemplating a new type of anti-competitive conduct in the digital environment that supposes an interaction of data protection concerns and competition law. In such a situation, “the collection of personal data is not only the source of market power but also, if unlawful, the means of distorting or – better yet – abusing it”\(^ {24}\).

Due to the interdependence that exists between the zero-price side (user side) and the paying advertisement side, the abusive conduct occurring of the user side may lead to one more exploitative conduct on the paying side in the form of unfair price increase of ad spaces. How? As the company will have a vast amount of personal data allowing it to select more

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\(^{21}\) French-German Competition Authorities Report (n.18), p.12


precise advertisement spots, the demand of advertisers interested in their service will increase
strengthening its dominance also in this part of the market\textsuperscript{25}.

When looking at the big data companies that offer its social media or network services at a
zero price, the traditional view of antitrust harm based on price parameters must be replaced
by quality and consumer choice, as complementary parameters\textsuperscript{26}. The Commission itself has
recalled that the notion of consumer welfare is to be defined through the parameters of
“lower prices, better quality and a wider choice of new or improved goods and services”\textsuperscript{27}.

It has been put forward\textsuperscript{28} that the users appear to be locked-in in relation to the social media
services, due to the networking effects and due to the high concentration in the market, being
obliged to accept the offered conditions in order not to lose the opportunities provided by the
services, even the conditions are not clear enough and often subject to change and in the end,
not having a real possibility of switching to the services of a competitor. This means decrease
in the quality of the service and impairment of the consumers’ freedom of choice.

As we are assisting to new “appearances” of the anticompetitive behaviour in the big data-
driven economy, there is a need for an evolutionary interpretation of the conduct of abuse of
dominance and we shall see if the current legal framework is prepared to deal with this new
“phenomenon”.

3. Reaction to antitrust measures and its impact on consumers.

Chapter 3 is aimed at understanding the effects of enforcement of antitrust measures. The
analysis of the antitrust measures adopted by the European Commission and National
Competition Authorities are taken into account. Regarding this topic, a wide range of reports
and research have been developed in the last years to understand the ex-post effects of the
restraint of competition, which is the main concern of the European Commission when
dealing with antitrust practices\textsuperscript{29}. The outcome may well serve to answer the main question of
the research.

3.1. Antitrust Package from EU law.

As established in point 2.3., the European Commission may apply different measures against
acts comprising an abuse of dominant position pursuant to Article 102 of the TFUE. These
measures must have into consideration a proportionality principle, aiming at attaining the

\textsuperscript{25}Ibid, p. 224.
\textsuperscript{26}Ibid., pp.218-219.
\textsuperscript{27}Scheinder (n.24), p. 219 citing European Commission, Guidance on its Enforcement Priorities in Applying
Article 102 TFEU to Abusive Exclusionary Conduct by dominant undertakings, v 2009, OJC, 45, 7
\textsuperscript{28}Schneider, (n.24), pp.218, 224.
\textsuperscript{29}Ex-post economic evaluation of competition policy enforcement: A review of the literature, Fabienne Ilzkovitz
and Adriaan Dierx, DG Competition June 2015.
objective pursued. The commitment of the European Commission is to safeguard the public interest and to benefit consumers against acts of abuse of dominant positions, as occurred in cases such as E.ON electricity in November 2008. The remedies stated in the Regulation 1/2003 are fines and penalty payments (Articles 23(2) and 24(1), respectively); private enforcement by national courts (Article 6); and remedies (Article 7(1), 8(1) and 9(1)). All of them are divided between structural and behavioural remedies.

3.2. Antitrust remedies in big data-driven businesses.

In previous points, the research explains the grounds where a data-driven organization in the field of social media or network may be led to a position of abuse of dominance in the market. As far as this group is concerned, it has not been raised yet any case of abuse of dominant position from a European level in this sector (only at a national level such as the aforesaid Facebook case pursued in Germany). Moreover, only few articles have addressed the conflict between big data and antitrust law. Consequently, it is convenient to dig into this issue and try to foresee the possible consequences that may appear in case of applying antitrust measures on big data businesses currently.

In other sectors where antitrust law has been applied to overcome abuse of dominant position, the economic effects have been analyzed through ex-post evaluation studies focusing on either costs and benefits from the consumer or social welfare perspectives.

A thorough study conducted by Ohlhausen and Okuliar reveals that in case of harm to consumer welfare or to economic efficiency, the protection of the consumer will always prevail. In essence, the abuse of dominant position is detrimental for the economy and consumers at large. But, does the “prima facie” protection of the consumer bring a positive

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30 Case T-260/94 Air Inter v Commission [1997] ECR II-997, paragraph 144, and Case T-65/98 Van den Bergh Foods v Commission [2003] ECR II-4653, paragraph 201 and Article 7 (1) of Regulation 1/2003, the Commission is entitled, in cases of infringement of Article 101 or 102 of the TFUE, “[...] to bring such an infringement to an end. For this purpose, it may impose on them any behavioral or structural remedies which are proportionate to the infringement committed and necessary to bring the infringement effectively to an end. Structural remedies can only be imposed either where there is no equally effective behavioral remedy or where any equally effective behavioral remedy would be more burdensome for the undertaking concerned than the structural remedy. [...]”.


34 Ibid.


36 Ibid.


impact on consumer in the long term? The aforesaid authors uphold the idea that it may not afford a true benefit to consumers\(^{39}\). Users of a big data-driven service or company may be benefited after sharing their data in different ways, such as (i) economic advantages or discounts in potential purchases; (ii) improved services; (iii) prices may be lowered as companies reduce their costs in marketing\(^{40}\).

With regard to big data-driven businesses, some commentators suggest that competition law is not suitable to regulate big data as it is still unclear the relevant market for data\(^{41}\). However, provided that the market is defined, antitrust measures may apply in big data cases. As for the business’s point of view, it is said that antitrust measures may lead to the elimination of competitive incentives\(^{42}\) and that result may reduce the offer of new products\(^{43}\). Therefore, this part assumes that the aforementioned consequences of antitrust measures could diminish the consumer welfare. As stated by Lerner\(^{44}\): “Antitrust intervention in markets characterized by innovation and rapid technological change is often a questionable proposition”.

### 4. The consumer’s position.

A big data-driven business, especially concerning the personal data as we discussed, is likely to be associated with an abuse of dominant position, despite that it is hard to assess the relevant market and the market power of big data. However, due to the network effect and the ecosystem populated by surrounded users, the market is easily concentrated and thus the danger of a degradation of personal data protection or repeated violation of breaching the confidentiality or collection of excessive personal data is not potential.

In this background, certain cases of market concentration, regardless the desirability, may lead to an abuse of dominant position. This presumption is extracted from the arguments set in this report. “The economics of data favours market concentration and dominance.”\(^{45}\) In big data-driven markets there is high likelihood that the leader or monopoly will increase that dominance, turning out to be an abuse in some circumstances.

When assessing the consumer welfare in data-driven business models, attention should be paid to the fact that many of these businesses are based on free or zero-cost products, i.e. Facebook, Instagram, Google, and one cannot presume that consumers would prefer to pay


\(^{40}\)OECD, *Data-driven Innovation for Growth and Well-being, INTERIM SYNTHESIS REPORT*, (2014).


\(^{42}\)Ibid.

\(^{43}\)Ohlhausen & Okuliar, (n.37), p. 151.


\(^{45}\)OECD, (n. 40).
for those services rather than exchanging their personal data to have access to their services\textsuperscript{46}. Consequently, each case should be separately analyzed and take account of what option is more convenient for consumers. The key point of any big data antitrust case is that authorities should assess whether the potential intervention would change the quality and price of the service. If the answer is yes, from the consumer's perspective the monopoly or abuse of dominant position is desirable.

The idea that should be addressed and analysed therefore is that antitrust measures not always improve consumer welfare in the mid-long term\textsuperscript{47}, although the reason to apply them in principle is to solve a market unbalanced scenario which affects consumers.

5. Conclusion: A blind alley for consumers?

In the realm of monopolistic markets there are arguments in favour and against the situation monopoly creates. Arguments in favour are the stability of prices and services offered effectively and efficiently. On the contrary, it may be argued that a market experiencing monopoly may exploit consumers, set higher prices and inferior goods and services. In the sector of big data-driven business models analysed in this report (social media or network), the service offered is normally acceptable and prices are rather low or zero cost. Thus, under an abuse of dominant position in this sector, consumers would be situated in a blind alley (consumer welfare paradox\textsuperscript{48}). Measures applied would focus on correcting the market, but those measures would not be in favour of consumer welfare as the service would tend to change (at least affecting the offer of products as previously seen). Thus, it is possible to conclude that monopoly is desirable from the consumer's perspective in big data-driven business models.

Consequently, in big data-driven businesses\textsuperscript{49}, antitrust measures may not be the best to solve it. As argued both in literature and case law\textsuperscript{50}, the issues regarding personal data (i.e. privacy concerns) should be treated separately from the competition law as data protection and competition law serve different goals. But as we have seen, the Facebook investigation of the Bundeskartellamt\textsuperscript{is} putting forward the idea of the interaction between the two areas of law and there are justifiable reasons to do so.

In the French-German authorities report mentioned in point 2, the assessment of privacy terms from the competition law perspective was given a positive mark, pointing that privacy


\textsuperscript{47}Ohlhausen & Okuliar, (n.37), p. 151.


\textsuperscript{49}Regarding to the General Data Protection Regulation (GDPR). Regulation (EU) 2016/679 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data.

\textsuperscript{50}Case C-238/05 Asnef-Equifax and Administración del Estado [2006] ECR I-11125 and European Commission, Facebook/Whatsapp, COMP/M.7217, dated 03.10.2014, \textless http://ec.europa.eu/competition/mergers/cases/decisions/m7217_20141003_20310_3962132_EN.pdf\textgreater accessed 19.06.2018.
issues cannot be excluded from consideration under competition law simply by virtue of their nature. Collection and use of personal data can have implications in the competition area, but these implications (i.e. privacy concerns) should be considered under competition law only “whenever these policies are liable to affect competition, notably when they are implemented by a dominant undertaking for which data serves as a main input of its products or services”\textsuperscript{51}.

Therefore in the digital market, there is a call for an interaction between data protection and competition law, European Data Protection Supervisor itself suggesting “the need for a “holistic approach” in the enforcement of data protection law through a stronger cooperation between data protection, consumer protection and antitrust authorities\textsuperscript{52}.

Moreover, a different question open for further research is whether the big data needs to be accommodated as a intellectual property right or the current system is enough to embrace the ownership of the data and the investment behind business models based on big data.

The relevance and relationship of the IP system with big data has been little discussed. But as big data becomes of utmost importance, taking over every single sector of the industry, as it happened with the software, more issues regarding the scope of the IP protection will not take long to arise. If the current IP system is adequate to offer sufficient protection or there is a need to create a new form of IP right should be analysed in a further research.

\textsuperscript{51}French-German Competition authorities report (n.18), pp.23-24.
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