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# ANTITRUST, PRIVACY, AND DIGITAL PLATFORMS' USE OF BIG DATA: A BRIEF OVERVIEW

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The role of data in the provision of services on digital platforms has been attracting a lot of attention by consumers, businesses, and regulators alike. Data collection and usage is becoming central to many digital platforms, some of which reach and connect hundreds of millions of users. While these businesses have become significant conduits for commercial and social interactions, there are concerns that the access and management of user data is further cementing their power over many aspects of business-to-consumer relations. This article discusses the current challenges that extensive data collection and usage pose for antitrust regulators that aim to preserve competition and service quality for users. After describing the factors underpinning the success of many digital businesses, which include the efficient use of data, we discuss the relation between data, market power, and market entry as well as the implications for merger review. We also assess the relation between data, foreclosure and monopolization. Finally, we discuss the extent to which antitrust regulation may be useful in addressing online privacy concerns. We conclude that the impact of data collection on the competitive environment is not subject to generalizations and must in all instances be subject to a case-by-case assessment. Moreover, because data collection simultaneously affects a variety of interdependent activities on a platform, regulators should take into account the multi-sided nature of digital businesses. We also find that antitrust is probably not the right instrument to address issues raised by privacy concerns.

## I. THE ROLE OF DATA IN PLATFORM VALUE CREATION

Online digital platforms are businesses that rely on technology to aggregate content and services and connect users for the purposes of communicating, transacting or sharing.<sup>2</sup> Examples of platforms range from ones with diverse offerings—such as Amazon, Google Android, or Facebook—to those with narrower functions such as PayPal, Uber, YouTube or Booking.com. Digital platforms have dramatically reduced transaction costs in a large number of markets. They have reduced the search costs, information costs, and costs of service delivery compared to their offline counterparts by creating efficiencies that usually are idiosyncratic to platform design and technology.<sup>3</sup> Well-designed platforms provide instantaneous, large-scale connectivity between users, thereby providing a multitude of possible counterparties for transacting or sharing information within the same environment. They can also organize vast amounts of information in a tractable and useful way. This connectivity and level of service is typically provided at little or no cost to the end-user. As platforms grow in size, so does the number of interconnections that are possible between users and the number of valuable potential exchanges among

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1 Eliana Garcés and Daniel Fanaras are at The Brattle Group. The opinions expressed herein are those of the authors and do not necessarily reflect the views of the firm or its clients.

2 We use the term “users” here to refer to any type of user who engages in activities on the platform. This can include individual end-users as well as individual or business actors on the other side of the platform, such as service providers, media content suppliers and advertisers.

3 See generally Avi Goldfarb & Catherine Tucker, *Digital Economics* (Nat'l Bureau of Econ. Research, Working Paper No. 23684, Aug. 2017) (forthcoming, *Journal of Economic Literature*).

them. Having a large number of interconnected users makes it attractive for a platform to diversify its offerings by expanding into new areas over time. Platforms often benefit from economies of scope, meaning that they obtain efficiencies through offering multiple services simultaneously. Examples of such efficiencies are the provision of content delivery and communication services, retailing and payment services, or professional networking and recruiting services. Examples of growth with diversification are pervasive and include Amazon—then solely a shopping platform—launching video content in 2006 or Uber’s expansion from a ride hailing service to offering food delivery services in 2014.<sup>4</sup>

Platforms collect data in different ways. They are able to observe the specific behavior of users while they are engaged in the different activities on the platform. A platform may also elicit information by asking users to log-in or may establish partnership with other services to access or exchange user information. Whether it is searching for a particular type of product, reading a particular type of content, or voluntarily disclosing information, the behavior of users can provide platforms with valuable data revealing specific preferences and tendencies that signal the compatibility of certain users with others, including merchants and content providers. A platform that can effectively analyze this data can create additional efficiencies by creating more efficient matching between counterparties or itself providing better offers. For example, a car manufacturer will be able to advertise to a specific set of users who have been searching for cars or even to people possessing characteristics that correlate with car purchases. Knowing this, a platform will incentivize and elicit user engagement, which in turn can improve the quality of its demographic and behavioral data.

The richer the data, the higher the likelihood will be of obtaining valuable information. But the value of data is limited when considered on a standalone basis. Rather, it is the collective interplay between the data, data analytics, and the resulting innovations in content and services that creates value for a platform and its users. Know-how and data-analytics capabilities thus play a fundamental role in turning data into actionable information. A platform’s effective use of data analytics can drive innovation and help create new services using the data. For example, Google relies on user data to populate real-time traffic information within its Google Maps services. However, the relative contribution of data analytics to the value generation and success of a platform will vary depending on the nature of the services provided. Similarly, the extent to which a platform’s use of data provides a competitive advantage will vary across activities and businesses.

## II. DATA ACCUMULATION, ENTRY BARRIERS, AND MARKET POWER

The relation between data and market power is based on the idea that data can generate a “virtuous loop.” As a platform expands and diversifies, it obtains a greater ability to compile different types of data from an increasing number of users. The benefits of these additional data will provide the platform with the opportunity to develop even

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4 Press Release, Amazon.com, Amazon.com Launches Amazon Unbox(TM), a Digital Video Download Service with DVD-Quality Picture (Sept. 6, 2006), available at <http://phx.corporate-ir.net/phoenix.zhtml?c=176060&p=irol-newsArticle&ID=903244>. See also Jenn Harris, *Uber Launches \$3 Food Delivery Service UberFresh*, LOS ANGELES TIMES, Dec. 8, 2014, available at <http://www.latimes.com/food/dailydish/la-dd-uber-launches-food-delivery-service-uberfresh-20141208-story.html>.

more services and make enhancements to existing ones. Efficiency improvements further grow the user base and extent of collectible data. In this way, the platform may very well find itself in a sustained virtuous loop where success in one type of service leads to large scale data collection, which leads to more positive enhancements in services, then to further expansion, and so-on. As a result, the platform's services become superior to the similar services offered on other smaller platforms, which in some instances can turn into a significant advantage vis-à-vis rivals and perhaps a disincentive for entry. Although this "virtuous circle" has been assimilated to a network effect in some literature—because it tends to be associated with increases in the number of users—the phenomenon described here is rather the result of increasing returns to scale (and scope) in data. It operates for as long as additional data serves to make a service more efficient to every user. Note that the importance of this effect and how soon it may exhaust is a matter for empirical assessment and should not be presumed.

Rival services can face disadvantages in those cases where access to data provides efficiency advantages. The challenging part from a regulatory perspective is that rapid growth resulting from the dynamics just described, is not the result of any typical anticompetitive conduct and, as a result, does not in principle provide grounds for intervention. From a consumer welfare perspective, the size of a platform business should not be a concern if there is confidence that a more efficient service can still enter or expand and attract users. The question that appears to concern some regulators is whether some platforms benefit from an access to data such that their efficiency advantage cannot be replicated by rivals or potential entrants. Such concerns have prompted discussion in some jurisdictions (generally, non-U.S.) about whether certain types of data should be considered essential facilities for entry and operation in some markets. But even in Europe the bar is high, as regulators would have to show that a particular data is indispensable, with no actual or potential substitute available for operators wishing to enter a market.<sup>5</sup> This is likely to be a very challenging exercise in most cases as one would have to show that the entrant cannot itself collect the data.

We next examine in more detail (i) the extent to which data can represent a barrier to entry, (ii) how this needs to be taken into account in merger review, and (iii) whether data collection and usage can, in some instances, give rise to anticompetitive conduct.

## A. Data As Barrier To Entry

Some antitrust enforcers have already expressed fears that very large platforms have an insurmountable advantage in some important online sectors due to the vast amount of behavioral information they can gather.<sup>6</sup> Search and social media services are often deemed to gather highly valuable data for the purpose of targeting and user profiling as are large retail sites or navigation services. Such data, and the targeting they allow, give large platforms superior access to advertising revenues, which in turn can enable them to provide superior quality in their offers. But, when thinking about entry, it is important

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5 Case C-7/97, Oscar Bronner GmbH & Co. KG v. Mediaprint Zeitungs- und Zeitschriftenverlag GmbH & Co. KG, 1998 E.C.R. I-7791.

6 See, for example, the joint article by the French and German antitrust enforcers: Bruno Lasserre & Andreas Mundt, *Competition Law and Big Data: The Enforcers' View*, 4 ITALIAN ANTITRUST REV. 87 (2017), available at <http://iar.agcm.it/article/view/12607/11417>.

not to succumb to generalizations, as this may lead to overstating the role of data in a platform's initial and continued success. User data does not play the same role in the quality and attractiveness of all types of services, and many services have started without it and have managed to attract traffic. Likewise, there are examples of services that have managed to attain critical mass after starting from scratch, even when the quality of service depended on the amount of user generated data or network effects.<sup>7</sup> A platform does not always need to start big and can utilize different strategies to attract its first users and motivate their engagement.

For example, a platform can promote the platform among technology enthusiasts, reward the initial users, or create behavioral incentives such as 'gamification.'<sup>8</sup> The strategy used will depend on the type of user participation needed for the platform's growth. A shopping platform, for example, is more likely to use financial rewards, while another may elicit user engagement with more behavioral strategies. So whether data represents a barrier to entry in a particular market will depend on the possibility to attract the first users without the benefit of much previous user data. Important factors for successful entry include the benefits the new service provides, such as lower transaction costs, a superior interface, or novelty, as well as a firm's management skills. And some online services, irrespective of initial volume and available data, will succeed because they provide an easier, faster or better alternative or just better commercial management. These benefits may be more important to the user than the benefits brought about by the use of data and data analytics. In order to assess whether access to data represent a barrier to entry, the contribution of data to the overall quality of the service must be weighed against these factors.

In those instances where access to a particular set of data is crucial for the viability of the service, as may be the case for a particular type of advertising or targeting, one would want to examine whether it is possible to acquire the necessary data from third parties or to contract an integrated solution to improve targeting or relevance. Online publishers, for example, may contract integrated ad-serving companies that are able to target their readers with third party information.<sup>9</sup> There also is a vibrant industry of data brokers that commercialize data collected through cookies and internet tracking.<sup>10</sup> Accordingly, an assessment of whether data is indispensable to compete in a market must look at the different types of data and the different types of data sources that might be used to provide

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7 Examples are the apps Waze and WhatsApp. *Succeeding Because of Social; Learn from The Must-Try App Waze*, PEFORMLINE, <http://silverbacksocial.com/succeeding-social-learn-must-try-app-waze/>; *A Year Later, \$19 Billion For WhatsApp Doesn't Sound So Crazy*, TECHCRUNCH (Feb. 20, 2015), <https://techcrunch.com/2015/02/19/crazy-like-a-facebook-fox/?gucounter=1>.

8 Gamification is the practice of framing a platform's interface as a game while offering incentives and rewards for participation. See Juho Hamari, Jonna Koivisto, & Harri Sarsa, *Does Gamification Work?—A Literature Review of Empirical Studies on Gamification*. 2014 PROC. ANN. HAWAII INT'L CONFERENCE ON SYSTEM SCIENCES (Jan. 2014), available at <https://www.researchgate.net/publication/256743509>.

9 FED. TRADE COMM'N, *DATA BROKERS: A CALL FOR TRANSPARENCY AND ACCOUNTABILITY* (May 2014).

10 For a description of the data broker industry, see Matthew Crain, *The Limits of Transparency: Data Brokers and Commodification*, 20 NEW MEDIA & SOCIETY 88 (Jan. 2018).

the service in question with equal success.<sup>11</sup> The ability of users to multi-home may help new or alternative services collect user data as users can try and use their services without having to incur the potential costs of giving up the old one. In sum, whether data represents a barrier to entry in a particular market necessarily is a case specific analysis. This analysis must examine the relevance of the data for the quality and success of the service provided, the alternative sources of data and the alternative types of data that could be used to enhance a comparable service to the same effect, as well as consumer behavior in terms of switching and multi-homing.

## B. The Consideration Of Data During Merger Assessment

When considering the competitive effects of data in a merger context, a first consideration is whether the merger would result in an increase in market power due to the potentially increased advantages to the two merging parties by the combined data. Some have expressed concerns about whether the combined data incrementally creates or increases entry barriers such that rivals would “be required to collect a larger dataset in order to compete effectively with the merged entity than absent the merger.”<sup>12</sup> However, possessing more data in and of itself, including due to a merger: (i) does not necessarily increase the market power of a firm (as explained in the discussion of barriers above), and (ii) can also be viewed as procompetitive efficiency relating to scale and/or scope. It is possible, however, that the merging companies were competing with each other pre-merger on the basis of their data and this competition would now be eliminated by the merger.<sup>13</sup> If true, this concern would be more about the nature and extent of pre-merger competition over innovation and quality of the platform’s services than it would be about market power derived from data. And while one could theorize that a firm (or firms) has some form of market power derived from unique access to data combined with analytics, one would still have to balance that notion against the incentives of the parties to enhance their services and capabilities due to the opportunities for scope economies (see virtuous loop discussion above).

There are also discussions about whether certain data could be viewed as constituting a product market in its own right. If so, one could then consider the competitive effects of a merger in such a market, for example by looking at changes in the combined “market share” of the two parties. However, viewing the data as a product market would be difficult unless the data were actually being sold as a product to consumers or third parties—without such sales it would be challenging to perform basic demand substitution analyses between products for the purposes of defining the boundaries of the relevant market.<sup>14</sup> Unless the data are actually sold, the data are best viewed as an input, which often raises the question of whether the merger involves complementary assets. Combining

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11 For a detailed discussion on data as a barrier to entry, see Daniel L. Rubinfeld & Michal S. Gal, *Access Barriers to Big Data*, 59 ARIZ. L. REV. 339 (2017).

12 Comm’n Decision, Case M.8124 (*Microsoft/LinkedIn*) ¶ 179 (Dec. 6, 2016).

13 *Id.* ¶ 179.

14 For a discussion of these considerations, see Darren S. Tucker & Hill B. Wellford, *Big Mistakes Regarding Big Data*, ANTITRUST SOURCE, Dec. 2014, at 4–6; see also Etienne Chassaing, Charlotte Breuvert, & Anne-Sophie Perraut, *Big Data and Competition Law in the Digital Sector: Lessons from the European Commission’s Merger Control Practice and Recent National Initiatives*, 3 CONCURRENCES 41, 43–44 (2016).

complementary inputs between the parties does not translate directly into an increase in market power.

A second consideration is whether combining data between the parties can increase the risk of meaningful foreclosure by cutting off access to data for rivals or “raising rivals’ costs.” For example, due to concerns about Microsoft’s ability to foreclose LinkedIn’s rivals in professional networking services, the European Commission imposed access remedies involving pre-installed software when approving the Microsoft-LinkedIn merger in late 2016.<sup>15</sup> However, it is worth noting that this remedy did not involve providing anyone with access to the newly-acquired LinkedIn’s data—the remedy was akin to an interoperability remedy and involved granting LinkedIn’s rivals access to some data collected on the Windows platform.<sup>16</sup> In a more recent transaction, when announcing its in-depth review of the Apple-Shazam merger, the Commission expressed concern that Shazam’s data could give Apple unfair access to sensitive behavioral data.<sup>17</sup> Shazam is a developer of music recognition applications which earns commissions from referring users to digital music streaming and download services, such as Apple Music, Spotify and Deezer.<sup>18</sup> By acquiring Shazam, Apple will have access to the tastes and behavior of its rivals’ customers, which may prompt commercial targeting and give it unfair advantage on the market. The deal was ultimately cleared without conditions on the basis of the finding that Apple would not be able to foreclose rival music streamers.<sup>19</sup> As part of their scrutiny, authorities may have considered whether there are merger-specific efficiencies generated by the data and whether the combined use of data by the parties can promote innovation and consumer welfare. This assessment of efficiencies is particularly relevant for the assessment of conglomerate mergers. As data collection and analytics become the critical activity in many value chains, traditional businesses are acquiring access to user interface and user data in order to remain relevant and efficient in fast changing markets. In approving the recent vertical merger between AT&T and Time Warner, which had been challenged in court by the U.S. Department of Justice, the U.S. District Court highlighted the efficiencies that data would create for the parties stating that the data possessed by the parties individually would create synergies post-merger that would allow the combined company to better compete with innovative rivals, such as the subscription-

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15 Comm’n Decision (*Microsoft/LinkedIn*) ¶ 437.

16 The remedy involved granting rivals access to the application programming interface (API) or “all core [Microsoft] Office products” as well as Microsoft Graph, a gateway that enables developers “to build applications and services that can, subject to user consent, access data (such as contact information, calendar information, email and files) from Microsoft’s cloud services.” *Id.* ¶ 437 (a)-(b).

17 The Commission’s press release stated “at this stage, the Commission is concerned that, following the takeover of Shazam, Apple would obtain access to commercially sensitive data about customers of its competitors for the provision of music streaming services in the EEA. Access to such data could allow Apple to directly target its competitors’ customers and encourage them to switch to Apple Music.” See European Commission Press Release IP/18/3505, *Mergers: Commission Opens In-Depth Investigation into Apple’s Proposed Acquisition of Shazam*, (Apr. 23, 2018), available at [http://europa.eu/rapid/press-release\\_IP-18-3505\\_en.htm](http://europa.eu/rapid/press-release_IP-18-3505_en.htm).

18 *Id.*

19 European Commission Press Release IP/18/5662, *Mergers: Commission clears Apple’s acquisition of Shazam* (Sept. 6, 2008), available at [http://europa.eu/rapid/press-release\\_IP-18-5662\\_en.htm](http://europa.eu/rapid/press-release_IP-18-5662_en.htm)

based video programming services Netflix and Hulu.<sup>20</sup> Also, the multi-faceted use of data allows business to use data collected by acquired businesses to improve their own offer or propose new ones. In this way, a merger that combines data between two firms could also benefit from the same efficiencies that a platform experiences when it grows via additional users or expansion of new services.

### C. Data and Conduct Considerations

If platforms can successfully monetize data, they will organize their business in a way that favors data collection. This can be done by adopting strategies that increase traffic, for example by offering tracking and profiling as a service (as is done in many 'log-in' environments that provide a customized interface) or by promoting engagement so that users volunteer personal information. One way to increase traffic and user data is to offer low and even zero prices, a practice that has sometimes been characterized as predatory.<sup>21</sup> Extensive multi-sided market literature, however, explains that optimal pricing decisions may incorporate the indirect benefits to the service provider generated by a customer transaction.<sup>22</sup> When this happens, the price deviates from predictions based on average variable or marginal costs. For example in the presence of network effects, a price may be lowered to account for the fact that a customer may not only provide a direct monetary benefit to the seller but will also indirectly increase profits by increasing the overall value of the service to other customers. In a similar way, a platform that can monetize data will optimally lower prices, potentially to zero or below, if the resulting additional traffic increases profits by the monetization of data. The low price to users may well be the result of a profit maximization exercise that takes all the mechanisms of monetization of the platform into account. For example, an online platform may price a service to maximize profits taking into account the cost of the sale, the direct benefit from the transaction, the benefits from the monetization of the data, and any benefits from further user engagement such as 'eyeballs' for advertisers. The fact that the resulting price may be zero, and even negative, does not mean that the price is predatory as it may be profitable once one accounts for all aspects of the business in question. This does not invalidate the fact that low or zero pricing may sometimes be motivated by an exclusionary strategy. But to establish an antitrust violation, one should assess the pricing behavior in light of all the profit channels that are impacted by an additional customer or transaction.<sup>23</sup> The U.S. Supreme Court has already ruled that both sides of a market need to be considered

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- 20 The Court's opinion stated: "Watching vertically integrated, data-informed entities thrive as television subscriptions and advertising revenues declined, AT&T and Time Warner concluded that each had a problem that the other could solve: Time Warner could provide AT&T with the ability to experiment with and develop innovative video content and advertising offerings for AT&T's many video and wireless customers, and AT&T could afford Time Warner access to customer relationships and valuable data about its programming." *United States v. AT&T Inc.*, 310 F. Supp. 3d 161, 164 (D.D.C. 2018). As of the time of writing, this case is on appeal.
- 21 Drew Sandholm, *Amazon's Predatory Pricing Questioned*, CNBC (Jun. 30, 2014), <https://www.cnbc.com/2014/06/30/amazons-predatory-pricing-questioned.html>; Charles Arthur, *Google Faces Complaints to European Regulator over Predatory Pricing*, THE GUARDIAN (APR. 9, 2013), <https://www.theguardian.com/technology/2013/apr/09/google-faces-complaint-european-regulator-pricing>.
- 22 See, e.g., Julian Wright, *One-Sided Logic in Two-Sided Markets*, 3 REV. NETWORK ECON. 44 (2004); David S. Evans, *The Antitrust Economics of Multi-Sided Platform Markets*, 20 YALE J. REG. 325 (2003).
- 23 For a comprehensive discussion of zero pricing, see Michal S. Gal & Daniel L. Rubinfeld, D. L., *The Hidden Costs of Free Goods: Implications for Antitrust Enforcement*, 80 ANTITRUST L.J. 521 (2016).



for the analysis of markets characterized by strong indirect network effects.<sup>24</sup> In fact, a proper assessment of platform conduct should account for all types of interdependencies irrespective of their source.

Besides being used for advertising-related profiling, user data is increasingly used to increase the targeting capabilities of the platform's service. Targeting users with relevant news, relevant products, and adequate prices is bound to improve the service quality for the customer and increase profits. In the case of digital platforms that provide both a service and serve as online intermediaries for competitors, such as retail platforms or ad serving publishers, questions arise about the differential access to relevant data. In some jurisdictions a platform favoring its own service by providing differential access to user data for different business partners might create some antitrust risk if this behavior demonstrably limits competition in the market. But the standards to be met for an antitrust violation would likely be high and may require showing that the intermediary service is unavoidable and that the discrimination has a material effect on the market. Finally, the use of dominance or bargaining power to extract one sided data sharing agreements from business partners is likely to attract regulatory attention.

### III. COMPETITION, PRIVACY, AND CONSUMER WELFARE

Well before data became a source of possible antitrust concern for platforms, antitrust regulators had already looked at the privacy implications of data collection in this context. For example, in 2008 the FTC mentioned it had looked at “non price attributes of competition such as consumer privacy” in the context of the Google/DoubleClick transaction, although it found no issues.<sup>25</sup> The European Commission also noted that privacy was a dimension of competition in the Facebook/WhatsApp and Microsoft/LinkedIn clearance decisions.<sup>26</sup> The assessment of any possible detrimental effect of a merger on privacy is similar to the traditional analysis of the price effect of mergers. It centers on the analysis of incentives and ability by the service provider to degrade the privacy of its users. Privacy degradation is defined in the above mentioned merger decisions as the usage of newly accessible user data for targeted commercial services, notably advertisement. The implicit assumption is that this would be seen as a negative development by at least some of the users. Until now, however, no merger investigation of which we are aware has been imperiled by privacy concerns as a quality factor.

The FTC has been more active than the European Commission in addressing privacy effects of acquisitions, most likely because it is directly responsible for consumer protection. Under that hat, and in the context of the WhatsApp acquisition, it reminded Facebook that it needed to continue to honor WhatsApp's privacy commitments if it

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24 *Ohio v. American Express Co.*, 138 S. Ct. 2274 (2018).

25 Statement of Federal Trade Commission Concerning Google/DoubleClick FTC, File No. 071-0170. The European Commission stated that its appraisal concerned exclusively the rules of competition law without prejudice of the application of privacy laws. Comm'n Decision Case M.4731 (*Google/DoubleClick*) ¶ 368 (Mar. 11, 2008).

26 Comm'n Decision Case M.7217 (*Facebook/WhatsApp*) ¶¶ 87, 102 (Oct. 3, 2014); Comm'n Decision Case M.8124 (*Microsoft/LinkedIn*) ¶ 350 (Dec. 6, 2016).

wanted to avoid a violation of Section 5 of the Federal Trade Commission Act.<sup>27</sup> In doing so, the FTC was not identifying any harm to competition, but rather simply enforcing consumer protection legislation against misinformation and deceit.<sup>28</sup> The FTC order against Facebook is reminiscent of the newly adopted General Data Protection Regulation (GDPR) in the EU in that it requires explicit user consent for any usage of personal data. Adopted in May 2016 and in force since May 2018, the GDPR is the most ambitious privacy regulation currently in effect. It addresses any company's processing of the personal data of subjects residing in the European Union, regardless of the company's location or line of activity, and establishes that data can only be collected for specified purposes and cannot be further processed in a manner that is incompatible with those purposes, unless explicit consent is given by the data subject.<sup>29</sup> Although there is no equivalent legislation in the United States, California has recently approved a Consumer Privacy Act that would allow consumers to obtain information from a business about the personal information that is collected and the purposes for which it is being used.<sup>30</sup> These legislative initiatives are indicative of policies that try to guarantee that consumers receive transparent and truthful information about data collection and usage, and also represent an attempt to put some control of such usage in the hand of users. This "notice and choice" approach has been the general approach by U.S. regulators that have traditionally relied on transparency as the key to consumer protection.<sup>31</sup> The hypothesis is that, by making consumers more aware of the privacy implications of the digital services they use, they will make choices that impose an optimal discipline on the market. But there is currently little evidence on the relative importance of the privacy dimension in consumers' choice of digital services. Despite some digital services' attempt to build a privacy-friendly image, as of now, there does not seem to be a "race to the top" on privacy issues. The extent of users' preferences for privacy remains unclear, which complicates the integration of the privacy dimension into antitrust and merger control.

There is one interesting instance where an antitrust authority used antitrust law to address conduct relating to data collection. In March 2016, the German competition authority opened an investigation into Facebook for a possible abuse of market power

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27 Letter from Jessica L. Rich, Director, Federal Trade Commission Bureau of Consumer Protection, to Erin Egan, Chief Privacy Officer, Facebook, and to Anne Hoge, General Counsel, WhatsApp Inc. (Apr. 10, 2014). The letter also reminded Facebook of its 2012 obligations under the order against it preventing it from misrepresenting to its users the extent of its privacy and security protection and its obligation to obtain consumers' affirmative express consent before sharing their nonpublic information in a manner that materially exceeds any privacy setting signed up by users. See Fed. Trade Comm'n, *In re Facebook, Inc.*, Decision and Order, No. C-4365 (2012), available at <http://www.ftc.gov/enforcement/cases-proceedings/092-3184/facebook-inc>.

28 For the FTC analysis of the consumer protection angle of privacy, see FED. TRADE COMM'N, *BIG DATA: A TOOL FOR INCLUSION OR EXCLUSION? UNDERSTANDING THE ISSUES* (Jan. 2016).

29 Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC, 2016 O.J. (L. 119) 1.

30 Assembly Bill 375, (Cal. Jun. 28, 2018), available at [https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill\\_id=201720180AB375](https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201720180AB375).

31 FED. TRADE COMM'N, *DATA BROKERS: A CALL FOR TRANSPARENCY AND ACCOUNTABILITY* (May 2014).

incurred by an inappropriate data collection from its users.<sup>32</sup> The novelty of the case, which is being attentively followed by other antitrust authorities, lies in the attempt to establish a link between Facebook's alleged market power in the market for social networks and the procedure it follows to obtain users' agreement for data collection, which is suspected of being in violation of data privacy or consumer protection laws.<sup>33</sup> The implicit assumption is that users' lack of alternatives to Facebook leads them to accept unfavorable terms they would otherwise not accept. Presumably, the investigation is also looking at the types of consent given by users on platforms that are clearly not dominant in their markets or how the link between the abusive nature of the consent procedure and the alleged market power of Facebook is being demonstrated. Under German competition law, antitrust intervention is warranted when a contracting party is so powerful as to be able to impose contract terms in a way that abolished the contractual autonomy of the other party.<sup>34</sup> The assessment in this case consists of whether some elements of the contract violate some constitutional rights of the signing party.<sup>35</sup> Other jurisdictions may be less inclined to adopt similar standards to address privacy issues.

Moreover, linking privacy terms to harm to consumer welfare in an antitrust sense may be difficult. Privacy as a public right falls under the remit of specific regulation, which does not necessarily implicate an analysis of consumer welfare. Such an analysis requires two inquiries. First, the regulator must predict how the access to new data, the new combination of data sets, or the new usage of data by an undertaking, will affect "privacy" as a quality parameter. Second, regulators must then determine the impact of this change on consumer welfare—or at least the direction of such impact. The change in the "privacy parameter" can be approximated by changes in the amount of data collected or changes in the potential usage of that data, or both.<sup>36</sup> One could in principle assign an intrinsic value to privacy, as we do with leisure, so that a decrease in privacy, evidenced by more data being collected or used, would be considered *per-se* detrimental. Quantifying this effect would require a measurement of what users would be willing to pay to keep their privacy.<sup>37</sup> The inconsistent attitude of consumers vis-a-vis privacy complicates any attempt to quantify the value of privacy: although many consumers claim to highly value privacy, they often are quite lax about releasing personal information and are often

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32 *Bundeskartellamt Initiates Proceeding Against Facebook on Suspicion of Having Abused Its Market Power by Infringing Data Protection Rules*, (Mar. 2, 2016), [https://www.bundeskartellamt.de/SharedDocs/Meldung/EN/Pressemitteilungen/2016/02\\_03\\_2016\\_Facebook.html](https://www.bundeskartellamt.de/SharedDocs/Meldung/EN/Pressemitteilungen/2016/02_03_2016_Facebook.html).

33 The case is focusing on the collection of data by Facebook on third party sites, for which the German competition authority believes proper consent was not obtained.

34 *Bundeskartellamt, Background Information on the Facebook Proceeding* (Dec. 2017) [https://www.bundeskartellamt.de/SharedDocs/Publikation/EN/Diskussions\\_Hintergrundpapiere/2017/Hintergrundpapier\\_Facebook.pdf?\\_\\_blob=publicationFile&v=6](https://www.bundeskartellamt.de/SharedDocs/Publikation/EN/Diskussions_Hintergrundpapiere/2017/Hintergrundpapier_Facebook.pdf?__blob=publicationFile&v=6).

35 *Id.*

36 There is ongoing research on possible privacy indicators that could be used by digital platforms. See, e.g., Tran Hong Ngoc et al., *New Approach to Quantification of Privacy on Social Network Sites*, 2010 24th IEEE INT'L CONFERENCE ON ADVANCED INFORMATION NETWORKING AND APPLICATIONS, 556 (Apr. 2010).

37 See, e.g., Serge Egelman, Adrienne Porter Felt, & David Wagner, *Choice Architecture and Smartphone Privacy: There's a Price for That*, in THE ECONOMICS OF INFORMATION SECURITY AND PRIVACY 211 (Rainer Böhme ed., 2012); Juan Pablo Carrascal et al., *Your Browsing Behavior for a Big Mac: Economics of Personal Information Online*, in PROC. 22ND INT'L CONFERENCE ON WORLD WIDE WEB 189 (2013).

unwilling to pay for privacy.<sup>38</sup> Behavioral biases in privacy related decisions and consumer heterogeneity in privacy preferences may produce a market outcome in which the privacy dimension is inconsistently valued, making it difficult to measure consumer welfare.<sup>39</sup> This inconsistent and heterogeneous behavior may also explain why privacy may not become an important factor of competition.

If there are no grounds to assign an intrinsic value to privacy for antitrust purposes, then there may still be an indirect potential harm related to the disclosure of personal data, whether consumers are aware of it or not. Revealing personal information may produce economic harm if it facilitates commercial discrimination when this discrimination is detrimental to the consumer.<sup>40</sup> There is some research about bias in commercial offers that substantiates this concern.<sup>41</sup> Conversely, there is also evidence that consumers may benefit from increased targeting of commercial offers or advertising. The impact of data collection on overall consumer welfare is likely to be ambiguous, and consumers with different characteristics may experience a positive or negative impact. It is not clear whether antitrust authorities are well equipped to do a welfare analysis that would take into account such customer segmentation, even assuming regulators would be able to tell which consumers are affected in what way. More research is needed on the impact of data collection on individual commercial offers and this research will be inextricably linked to a better understanding of the use of algorithmic targeting by different services. It is probable that the usage of big data for commercial discrimination is not the exclusive remit of large platforms with market power, which brings us back to the question of whether antitrust policy is the right instrument to tackle economic harm brought about by profiling and access to personal data.

The above illustrates that the link between competition, the extent of data collection, and consumer harm is not obvious. There is instead an additional emerging tension between privacy regulations and competition. The new privacy regulation in the EU requires explicit consent for the use of personal data for any additional purpose.<sup>42</sup> There are two main implications for the competitive landscape. First, many digital services, and in particular smaller ones, rely on third party data to improve their offerings. Access to such data may become more difficult if consent needs to be obtained for such access and subsequent usage. The ability of new businesses to innovate with third party data will also be limited. Some antitrust authorities have already expressed concerns that the GDPR in Europe may actually cement rather than limit the dominant position of the large

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38 Spyros Kokolakis, *Privacy Attitudes and Privacy Behaviour: A Review of Current Research on the Privacy Paradox Phenomenon*, 64 *COMPUTERS & SECURITY* 122 (2017).

39 See, e.g., Flavius Kehr et al., *Blissfully Ignorant: the Effects of General Privacy Concerns, General Institutional Trust, and Affect in the Privacy Calculus*, 26 *INFO. SYSTEMS J.* 607 (2015); Leslie K. John, Alessandro Acquisti, & George Loewenstein, *Strangers on a Plane: Context-Dependent Willingness to Divulge Sensitive Information*, 37 *J. CONSUMER RESEARCH* 858 (2010); Alice Marwick & Eszter Hargittai, *Nothing to Hide, Nothing to Lose? Incentives and Disincentives to Sharing Information with Institutions Online*, *INFORMATION, COMMUNICATION & SOCIETY* 1(2018).

40 See Wolfgang Kerber, *Digital Markets, Data, and Privacy: Competition Law, Consumer Law and Data Protection*, 11 *J. INTELLECTUAL PROP. L. & PRACTICE* 856 (2016).

41 AnikoHannak et al., *Measuring Price Discrimination and Steering on E-commerce Web Sites*, in *PROC. 2014 CONFERENCE ON INTERNET MEASUREMENT CONFERENCE* 305 (Nov. 2014).

42 See Regulation (EU) 2016/679, *supra* note 28, at ¶ 32.

platforms. Second, the requirement to obtain consent for any new purpose in the use of data puts a strong premium on having access to an interface with the user and being able to directly interact on one's own terms with him or her. The risk exists that the role of large platforms as gatekeepers of digital markets is reinforced with these consent provisions.<sup>43</sup> Similarly, strong privacy restrictions may limit the ability of competition authorities to extract remedies in the form of access to data by competitors in those cases where data may operate as a barrier to entry.

#### IV. CONCLUSION

The extensive use of data by large platforms has prompted calls for antitrust scrutiny on the assumption that massive data collection by platforms leads to harmful entrenchment in their respective markets. But platforms, in part by use of data and related analysis, have been successful in reducing transactions costs while delivering new services to customers. The relative contribution of data to the quality of a service is a matter to be assessed on a case-by-case basis, but it is a leap too far to universally equate access to data to entry barriers. Similarly, although a merger among parties that possesses access to large data sets merits scrutiny, the essentiality of the merged data for operating in the market must be considered as well as the innovation efficiencies that the combined data may facilitate. There is still much to be learned about the use of data for commercial discrimination and the scope for unfair competition and abuse. So far, the only behavior that is evidently an antitrust issue is the possible foreclosure of competition by restricting access to commercially important data. But showing a material impact on the market may be difficult. Finally, antitrust seems to be a very imperfect tool to address privacy concerns in online markets. The inconsistent behavior of consumers with respect to their privacy and disclosure of data makes any evidence-based determination of harm or welfare analysis very difficult. The link between market power and privacy policies is also rather tenuous. In sum, although massive data collection raises many questions, it does not seem that antitrust scrutiny is the most adequate tool to address the privacy implications of data collection.

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43 For example, in its March 2018 report on online advertisement, the French competition authority called for vigilance to ensure the implementation of privacy norms does not interfere with the competitive process. In particular, the concern is that the legislation risks favoring platforms that operate on a 'log-in' basis at the expense of businesses that collect data through cookies and for which obtaining consent is more difficult. See Autorité de la Concurrence, Opinion No. 18-A-03 on the Data Processing in the Online Advertising Sector (Mar. 6, 2018), available at [http://www.autoritedelaconcurrence.fr/doc/avis18a03\\_en\\_.pdf](http://www.autoritedelaconcurrence.fr/doc/avis18a03_en_.pdf)