



TO SHARE OR NOT TO SHARE: REGULATING DATA BROKERS



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Data has become an increasingly important input in the economy. Hence, data and access to data play an increasingly key role in the global economy and for innovation and are crucial for the competitiveness of companies and the EU economy. Data brokers benefit from this development because they collect data from a wide variety of sources and offer access to this data, as well as products and services based on it. However, there is a trade-off between realizing the benefits of data by sharing as much data as possible and protecting consumers' personal data and the intellectual property ("IP")-related data of companies. In this article, two extreme solutions have been discussed for regulating data brokers. On the one hand, there is mandatory data sharing, which is supposed to reduce the incentives for data brokers and consumers to share data. On the other hand, banning data brokers' business model decreases data sharing and represents an extreme intervention. Both options are discussed as well as the recent regulations at the EU level that affect the data economy.

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01

INTRODUCTION

Data and access to data play an increasingly important role in the global economy and for innovation. Companies that enable access to data and information derived from data benefit from this development: among those data brokers. This paper aims to feed the discussion on whether the increasing importance of data brokers also implies additional regulation, taking the form of mandatory data sharing. First, the paper defines what a data broker is. The extent of data being sold and likely problems deriving from this business model are discussed. The third section reviews the recent regulation at the level of the European Union ("EU") that affect the data economy. Section four concentrates on mandatory data sharing for data brokers since this directly affects their business model and can limit the challenges data brokers may cause. A conclusion is drawn in the last section.

02

DATA BROKERS

According to the US Federal Trade Commission (FTC, 2012, 68) data brokers "are companies that collect information, including personal information about consumers, from a wide variety of sources for the purpose of reselling such information to their customers for various purposes, including verifying an individual's identity, differentiating records, marketing products, and preventing financial fraud."² Data brokers only collect and resell or share information. Most often they do not use these data themselves (OECD, 2013, 11).³ This is how data brokers can be differentiated from digital platforms, which also collect data from different sources but mainly use these data for improving their core service: the matching between the different user groups (Büchel &

Rusche, 2021).⁴ A platform can even cover the whole data value chain, as it is the case in the online advertising market (CMA, 2020).⁵ Nevertheless, a digital platform can also act as a data broker if it resells or shares information with customers of the platform.

Since data brokers collect data from different sources, including public records, and resell these data to their customers, consumers do not directly interact with them. Consumers may not even be aware of what kind of data about them is available, collected, and at which price their data can be purchased. The OECD (2013; 2019) gives a vivid example of this nexus.⁶ Based on experiments in the United States, China, and India, it shows that consumers count their social security numbers (national identity numbers) as an example for their most valuable data and assign this information a value of 150 to 240 US-Dollars per entry (OECD, 2013, 31).⁷ At the same time, the social security number is available at a data broker for around 8 US-Dollars per entry (ibid, 25).

03

VALUE OF THE DATA MARKET AND LIKELY PROBLEMS

Before diving into the problems that might come along with the activity of data brokers, some key estimates for the value of the data market might help reflect on the magnitude of the likely identified problems.

A recent study for the European Commission (2023, 108) estimates the data market monetization, i.e. the value assigned to the data that was traded in the EU.⁸ In fact, in 2020 data for around 11.6 billion euros was traded, in 2021 this amount was 14.8 billion euros, while it is estimated to

² FTC – Federal Trade Commission, 2012, Protecting Consumer Privacy in an Era of Rapid Change, Recommendations for businesses and policymakers, FTC Report March 2012.

³ OECD, 2013, Exploring the Economics of Personal Data: A Survey of Methodologies for Measuring Monetary Value, OECD Digital Economy Papers, Nr. 220, <https://doi.org/10.1787/5k486qtxldmq-en> [14.4.2023].

⁴ Büchel, Jan & Rusche, Christian, 2021, On Gatekeepers and Structural Competition Problems, in: Intereconomics, Vol. 56, No. 4, pp. 205-210.

⁵ CMA - The Competition and Markets Authority, 2020, Online platforms and digital advertising, Market study final report 1 July 2020, London.

⁶ See *supra* note 3, and OECD, 2019, Enhancing Access to and Sharing of Data: Reconciling Risks and Benefits for Data Re-use across Societies, OECD Publishing, <https://doi.org/10.1787/276aaca8-en> [17.4.2023].

⁷ See *supra*, note 3.

⁸ European Commission, 2023, European DATA Market Study 2021 2023, D2.4 Second Report on Facts and Figures, Luxembourg.

be 18.9 billion euros last year. It is relevant to stress here that the monetization also encompasses sales by other companies, not only data brokers. Furthermore, data brokers may also offer services based on their data and, therefore, generate additional sales. Nevertheless, the estimates give a first indication of the size of the turnover generated with the sale of data in the EU. According to the study, these sales also come from organizations that “recently discovered there is a market for this” (*ibid*, 2023, 113).

The data market as whole is far larger according to the study for the European Commission (2023) because it also includes some sales of hardware, software, services related to data and positive effects induced by the activity of data companies, for example. For 2022, the data market in the EU is estimated to have a value of almost 73 billion euros (*ibid*, 157). The study also gives estimates for other countries (*ibid*): in the United States, the data market is estimated to have a value of around 289.4 billion Euro in 2022. In China the value is nearly 40 billion, while it is 46 billion Euro in Japan. Compared to 2021, the value in the EU has increased by 12.6 percent in 2022. The growth in the U.S. (+19.4 percent), China (+24.1 percent) and Japan (+16.3 percent), however, was larger.

To sum up, data monetization and the data market as a whole experience dynamic growth. Data brokers benefit from this process, although digital platforms might profit even more because of the opportunities data offers for their core business model and for entering new markets. In what follows, we identify several key concerns that call for regulating data brokers.

The example of social security numbers shows that the increasing importance of data comes with challenges. The significant difference between the value consumers put on their (personal) data and the price that these data can be bought at from a data broker shows that most of the consumers are neither aware of the category of data available nor their market price. Remaining with this example, the large gap between the valuations can be explained by the fact that the data directly relates to the life of consumers and hence is more valuable to them, while it is only a single information to a company that is using it for offering or improving a service, for example validating an identity. The fact that data are available from data brokers at a low price, not matching the value declared by consumers, raises the question of wheth-

er there is sufficient transparency and, ultimately, whether consent to data sharing was given by the consumers.

Furthermore, data are non-rival in consumption, they can be copied and shared at virtually no cost (Rusche & Scheufen, 2018).⁹ Once data is publicly available, it is hard to make it private again: once personal data is shared, for example in exchange for a service, the shared data may also be used in the future for other purposes of which the consumer is unaware. And even if the purposes are mentioned in the data privacy statement and the consumers are asked for their consent for data sharing, the consumers’ awareness of their data being shared cannot be taken for granted. In a representative study of the Institut für Demoskopie Allensbach (2019, 5) for the German magazine Focus, 77 percent of the participants stated that it is useless to read the terms because you have to give consent any way to be allowed to use the respective service.¹⁰ Furthermore, 73 percent of the participants stated that it is too tedious for them to read the clauses. The finding of the study is aligned with what was identified to be a “crisis of consent”, one aspect of which being the overabundance of information (Schermer, Custers & van der Hof, 2014).¹¹

“*The example of social security numbers shows that the increasing importance of data comes with challenges*”

Another problem was addressed by Dixon & Gellman (2013). The authors emphasize that public institutions use data brokers to circumvent privacy regulations.¹² Their analysis focuses on the U.S., however, this problem could occur anywhere else in the world. Instead of building databases in line with privacy regulations and high data protection standards to offer a service, public bodies outsource this service to a data broker or another private company, where the standards might be lower.

Furthermore, data brokers are not limited to a single country. For example, Acxiom, one of the biggest data brokers worldwide, is supposed to have information about 2.5

billion people (Lobe, 2021).¹³ This results in the following problem: data brokers can, due to their activity in different jurisdictions, circumvent stricter regulations in certain countries, or circumvent them if they rely on suppliers of data that circumvent (stricter) restrictions. Also, specific software might be used to this end. In a recent paper it is stated that “Data brokers are indeed incentivized to develop software-driven strategies to circumvent any privacy law” (Reviglio, 2022).¹⁴

Finally, data brokers might influence competition in affected markets (Delbono et al., 2021).¹⁵ This is done, for example, if data is not shared with all competitors in a market, or unjustifiably different conditions are applied to the relevant players.

04 RECENT REGULATIONS IN THE EU

On the one hand, data become an increasingly important input in the economy and using it is crucial for the competitiveness of the (European) economy. Hence, more data must be made available to as many companies as possible (Büchel & Rusche, 2019).¹⁶ On the other hand, consumers’ personal data and the IP (Intellectual Property)-related data of companies must be protected in order to maintain the trust of the consumers and the investment of the companies. Accordingly, there is a trade-off between data protection and data sharing.

Lundqvist (2023) identifies three forms of incentive systems to shape regulation, with the aim to create or collect, information and knowledge that are discussed in academia: first, a system where the creator is being rewarded or granted funds, as a prize, second, a liability system and third a property system. As we are reviewing the recent regulation efforts of the EU of which data brokers are subject, we will see that the regulatory solutions do not consistently rely on only one form of incentive.¹⁷ Rather, Lundqvist analyses the Article 6 of the Digital Markets Act as a liability solution,

compared to the PSI Directive where purchase data agreements are contracted between public sector bodies and data brokers at a marginal cost or market value.

The **General Data Protection Regulation (GDPR; Regulation (EU) 2016/679)** published 2016, defines personal data and its protection. To this end, the GDPR introduces the guideline that data processing of personal data must be lawful, fair, and done in a transparent manner. Hence, consumers must be informed and must give consent to the use of their personal data. Data brokers are directly affected by the GDPR because of the consent management and the limitations on exchanging personal data. As shown in Section 2, however, there are strong hints that the limitations introduced by the GDPR can be circumvented by data brokers.

The **Data Governance Act** (Regulation (EU) 2022/868) which was published in the Official Journal of the European Union in 2022 aims at fostering data exchange and the uptake of digital services by introducing standards for data intermediation services. Furthermore, certain kinds of data held by the public sector should be made available. Making more public data available is also the aim of the **Open Data Directive** (Revised PSI Directive, Directive (EU) 2019/1024) published in the Official Journal in 2019.

Because gatekeepers already have massive amounts of data from various sources, they can combine new data with these data and can generate more value than other companies with less data (Büchel & Rusche, 2021). The **Digital Markets Act** (Regulation (EU) 2022/1925) published in 2022 is a regulation aiming at limiting the challenges on competition by gatekeepers. The DMA targets core platform services of gatekeepers and introduces obligations to regulate the relationship between them and business users. While the DMA does not aim to protect consumers from potential abusive practices from data brokers, the Regulation includes provisions on data access and portability between gatekeepers and their business users.

The latest effort in regulating the data market is the **Data Act** proposed by the European Commission in 2022. In June 2023, the EU Commission, the Council of the European Union and the Parliament reached an agreement on the final text. This act aims at making more data available by introducing data sharing rules. The regulation concen-

9 Rusche, Christian & Scheufen, Marc, 2018, On (Intellectual) Property and other Legal Frameworks in the Digital Economy, An Economic Analysis of the Law, IW-Report, No. 48, Cologne.

10 Translation from German by the author. See Instituts für Demoskopie Allensbach, 2019, w/o title, Umfrage im Auftrag des Focus, https://d1epvft2eg9h7o.cloudfront.net/filer_public/d5/02/d5026d49-6fb4-4bc8-a188-0b68c3a23159/focus_allensbach.pdf [18.4.2023].

11 Schermer, Bart W., Bart Custers & Simone Van der Hof, 2014, The crisis of consent: How stronger legal protection may lead to weaker consent in data protection, in Ethics and Information Technology 16.

12 Dixon, Pam & Gellman, Robert, 2013, Data Brokers and the Federal Government: A New Front in the Battle for Privacy Opens, Third report in a series on Data Brokers, World Privacy Forum Report.

13 Lobe, Adrian, 2021, Ein milliardenschwerer, undurchsichtiger Markt, <https://www.deutschlandfunkkultur.de/entfesselter-datenkapitalismus-ein-milliardenschwerer-100.html> [18.4.2023].

14 Reviglio, Urbano, 2022, The untamed and discreet role of Data Brokers in surveillance capitalism: a transnational and interdisciplinary overview, in: Internet Policy Review, Vol. 11, No. 3, <https://doi.org/10.14763/2022.3.1670> [18.4.2023].

15 Delbono, Flavio; Reggiani, Carlo & Sandrini, Luca, 2021, Strategic data sales to competing firms, Joint Research Centre (JRC) of the European Commission, JRC Digital Economy Working Paper 2021-05, Seville.

16 Büchel, Jan & Rusche, Christian, 2021, On Gatekeepers and Structural Competition Problems, in: Intereconomics, Vol. 56, No. 4, pp. 205-210.

17 Lundqvist, Björn, 2023, Regulating Access and Transfer of Data, Cambridge University Press.

trates on manufacturers of products and related services and the users of these products and services. Furthermore, rules for making data available to public sector bodies and academic institutions are also introduced.

Finally, we expect the Artificial Intelligence Proposal from the EU Commission (2021) to regulate data brokers to some extent. As stated in its suggested preamble, the proposal is consistent with Union policies as “the promotion of AI-driven innovation is closely linked to the Data Governance Act, the Open Data Directive and other initiatives under the EU strategy for data, which will establish trusted mechanisms and services for the re-use, sharing and pooling of data that are essential for the development of data-driven AI models of high quality.” Despite the best recent regulation efforts at the EU level, the business model of data brokers is not subject to any specific regulation. Accordingly, Reviglio (2022) concludes that data brokers are “legally under-regulated.” The (likely) problems identified and the different regulatory approaches in the EU open a wide field of possible research. This article discusses the consequences of mandatory data sharing.

05

IS MANDATORY DATA SHARING NEEDED?

Hirshleifer (1971) already analyzed the incentives for investments in revealing information.¹⁸ Hirshleifer distinguishes between foreknowledge, that is information that will be revealed sooner or later by nature herself (e.g. football results of next weekend), and hidden properties of nature, where an investment is necessary to reveal this information (e.g., the connection between greenhouse gases and global warming). Furthermore, Hirshleifer analyzes investment in information if only pure exchange is possible and if effects in production can be caused by new information. He shows that private information, i.e., where only the inventor uses this information, has no social value. Furthermore, in a world of pure exchange there will be overinvestment in information because new information also leads to profits based on reselling information, and speculation with private information.

These negative effects can be offset by positive effects based on improvements in production which result from

¹⁸ Hirshleifer, Jack, 1971, The Private and Social Value of Information and the Reward to Inventive Activity, in: The American Economic Review, Vol. 61, No. 4, pp. 561-574.

¹⁹ Delbono, Flavio / Reggiani, Carlo / Sandrini, Luca, 2021, Strategic data sales to competing firms, Joint Research Centre (JRC) of the European Commission, JRC Digital Economy Working Paper 2021-05, Seville.

the use of new information, if not only pure exchange is considered. Accordingly, collecting information about consumers may be of no social value if this information is only available to a limited number of players because this can then be classified as private information. Furthermore, if this information about consumers does not result in changes in production, the collection of data has no social value, especially if the information is sooner or later revealed by consumers themselves, for example, by purchases in an online shop without having seen advertisements for this shop. As a consequence of the above model, policy-makers have the choice between preventing the collection of data because of overinvestment, or between mandatory data sharing at cheap prices, making all private information of data brokers public.

Delbono et al. (2021) come to a similar conclusion in their analysis of strategic data sales.¹⁹ They find that sharing data of data brokers that can be used for personalized pricing by the receiving firms with all interested firms yields the same welfare as no sharing of data (*ibid*, 16). However, they find that consumers prefer mandatory data sharing because of the fierce competition that this causes. Firms prefer not making data available at all. Data brokers, however, prefer selling data only to some firms, to yield higher prices for access to their data. Firms are willing to pay higher prices because of the exclusive right to monetize this information.

Regarding the incentives of data brokers for investing into collecting data, a mandatory data sharing might be preferred compared to prohibiting the whole business model. Because if collecting or sharing data is not allowed, there is no economic value in doing so. Furthermore, limiting the value that a data broker can create using his data by a mandatory data sharing at a low price also reduces the incentives to invest in collecting data in the first place. This is because the data broker can only generate fewer profits with the data. Mandatory data sharing, additionally, would prevent distortions to competition based on strategic data sales and opens the opportunity of using data to all competitors.

The result of Delbono et al. (2021) that consumers prefer mandatory data sharing does not necessarily hold when privacy concerns of the consumers are considered. In fact, making personal data of consumers available to all competing firms in a market might not be the first choice of consumers, even if this results in lower prices for the goods the consumers want. However, data that allow for personalized pricing are generally personal data.

06 CONCLUSION

To conclude, this paper reviewed the challenges raised by data brokers, the recent regulations efforts at the EU level, and discussed the findings from the literature on whether there is a need for mandatory data sharing.

Balancing the legal challenges and risks with the recent regulations, one might fear an under-regulation of data brokers, since, if they happened to be in scope of several regulations, none is specifically dedicated to their business model. Two extreme solutions have been discussed to regulate data brokers. The first being mandatory data sharing. However, it must be weighed against the second solution: prohibiting the business model. These options represent the above-mentioned trade-off between data protection and data sharing. Mandatory data sharing reduces the incentives of data brokers for collecting data, and likely of consumers for supplying data. However, at least some data is available while a prohibition destroys the whole market. Both options have consequences for the competitiveness of the European economy. Mandatory sharing of data is only one recent research topic when it comes to the business activity of data brokers, among others, the question of an ethical use of digital technologies and data remains open. ■

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